Lesson 02 Demo 03

Create a React Application Using Event Handler

Objective: To develop a React component that binds its event handler context

Tools Required: Node terminal, React app, and Visual Studio Code

Prerequisites: Knowledge of creating a React app and understanding of the folder structure

Steps to be followed:

1. Create a new **React** app
2. Implement the **MyList** component
3. Render the **MyList** component
4. Run the app

Step 1: Create a new React app

1.1 Start by creating a new React app using the **create-react-app** command in your terminal:
npx create-react-app my-app1

```
shreemayeebhatt@ip-172-31-22-250:~$ npx create-react-app my-app1
```

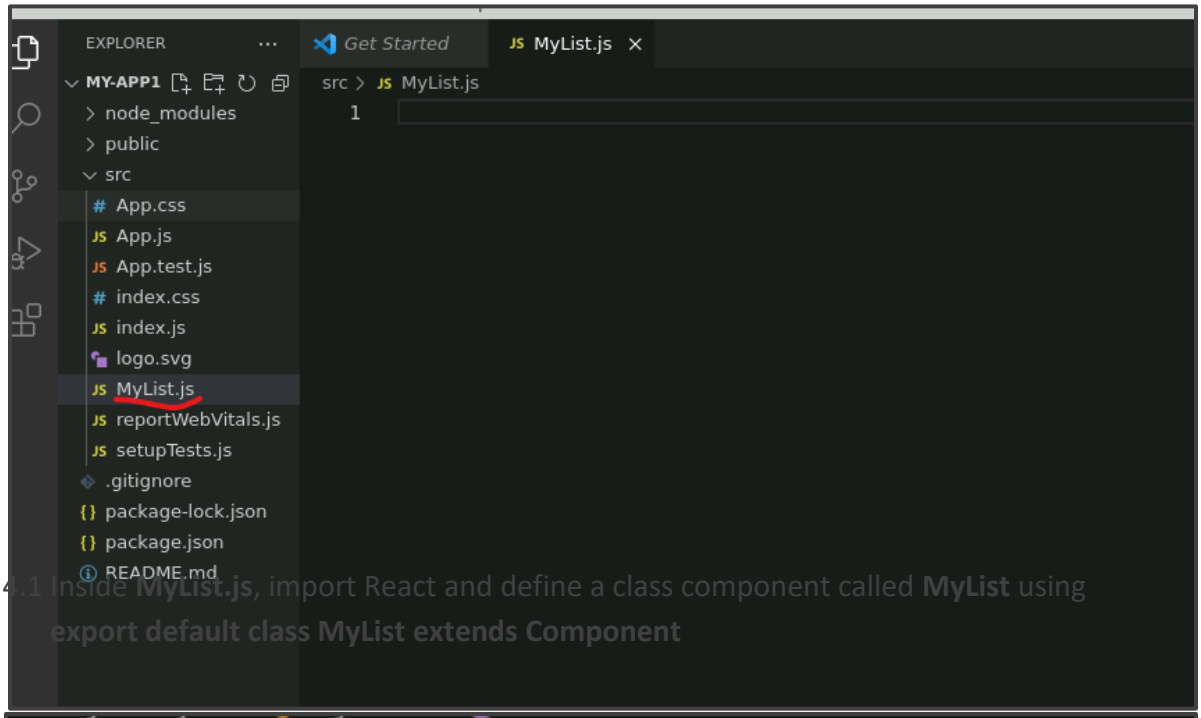
1.2 Move to the newly created directory by running the command **cd my-app1** in the terminal:

```
shreemayeebhatt@ip-172-31-22-250:~$ cd my-app1
```

Step 2: Implement the MyList component

2.1 Open the preferred code editor and navigate to the project directory

2.2 In the **src** directory, create a new file called **MyList.js**



4.1 Inside **MyList.js**, import React and define a class component called **MyList** using **export default class MyList extends Component**

```
import React, { Component } from 'react';
```

2.3 Implement the constructor method inside the **MyList** class using the **constructor()**

2.4 Call **super()** to invoke the parent class constructor

2.5 In the constructor, bind the **onClick** method to the component's context using the **this.onClick = this.onClick.bind(this);**

```
export default class MyList extends Component {
 constructor() {
   super();
   this.onClick = this.onClick.bind(this);
 }
```

2.6 Implement the **onClick method**, which takes an **id** argument and logs the name of the clicked item based on the **id** using **console.log('clicked', `"${name}"`)**

```
onClick(id) {
   const { name } = this.props.items.find(i => i.id === id);
   console.log('clicked', `"${name}"`);
 }
```

2.7 Implement the **render** method, which returns a **JSX** element representing the list using the **ul** and **li** tags

2.8 In the **render** method, map over the **items** prop using **this.props.items.map()** and create a **li** element for each item

2.9 Assign a unique **key** to each **li** element using **key={id}**

2.10 Attach an **onClick** event handler to each **li** element using **onClick={this.onClick.bind(null, id)}**

2.10 Display the **name** of each item inside the **li** element

```
render() {
  return (
    <ul>
      {/* Creates a new handler function with
          the bound "id" argument. Notice that
          the context is left as null since that
          has already been bound in the
          constructor. */}
      {this.props.items.map(({ id, name }) => (
        <li key={id} onClick={this.onClick.bind(null, id)}>
          {name}
        </li>
      ))}
    </ul>
  );
}
}
```

Step 3: Render the MyList component

3.1 Open the **index.js** file in the **src** directory

3.2 Import **React** and **{ render }** from **react-dom**

3.3 Import the **MyList** component from **./MyList**

3.4 Create an array of items to pass to the **MyList** component: **const items = [/* ... */];**

3.5 Use the **render** function to render the **MyList** component with the **items** prop:
render(<MyList items={items} />, document.getElementById('root'));

```
> JS index.js > ...
1   import React from 'react';
2   import {render} from 'react-dom';
3   import './index.css';
4   import MyList from './MyList';
5
6   const items = [
7     { id: 0, name: 'First' },
8     { id: 1, name: 'Second' },
9     { id: 2, name: 'Third' }
0   ];
1
2   render(<MyList items={items} />, document.getElementById('root'));
3
```

Step 4: Run the app

4.1 In the terminal, navigate to the project's root directory
4.2 Run the command **npm start** to start the development server

```
PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL

shreemayeebhatt@ip-172-31-22-250:~/my-app1$ npm start
```

4.3 Open your browser and navigate to **http://localhost:3000**
You should see the app with a list of items rendered