Experiment No: 8

Aim: WAP to handle click event by building a nav menu using router.

Theory:

1. **ReactJS:**

   React (also known as React.js or ReactJS) is a free and open-source front-end JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications. However, React is only concerned with state management and rendering that state to the DOM, so creating React applications usually requires the use of additional libraries for routing, as well as certain client-side functionality.

2. **React Router:**

   At its core, what React Router does is conditionally render certain components to display depending on the route being used in the URL (/ for the home page, /about for the about page, etc.). To install react router we need to type 'npm install react-router-dom' in the command line and it will install the react router for us. It has various components like BrowserRouter, Route & Switch. BrowserRouter is the tag where we write everything that we want to be rendered. Now comes the Switch component, this component is used to ensure that only one component is rendered at a time. Lastly the Route tag, this tag is used to simply load the component.

What is < Link> component?

This component is used to create links which allow to navigate on different URLs and render its content without reloading the webpage.

<Link> vs <NavLink>

The Link component allows navigating the different routes on the websites, whereas NavLink component is used to add styles to the active routes.

Benefits Of React Router

The benefits of React Router is given below:

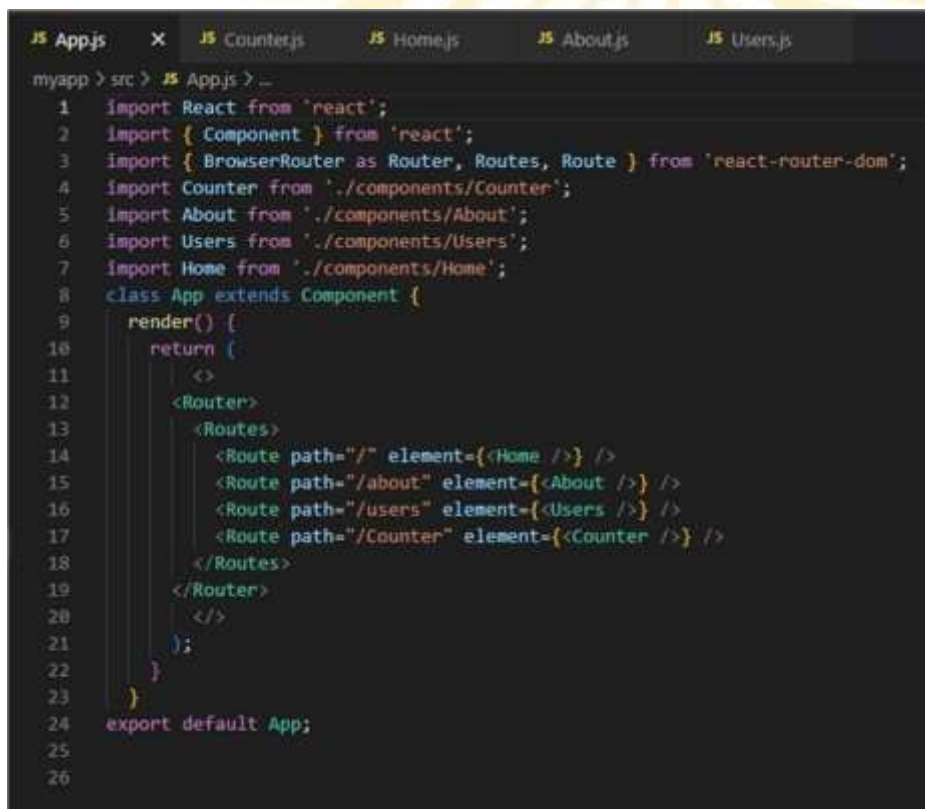In this, it is not necessary to set the browser history manually.

Link uses to navigate the internal links in the application. It is similar to the anchor tag.

It uses Switch feature for rendering.

The Router needs only a Single Child element.

In this, every component is specified in .

CODE:

```js
import React from 'react';
import { Component } from 'react';
import { BrowserRouter as Router, Routes, Route } from 'react-router-dom';
import Counter from './components/Counter';
import About from './components/About';
import Users from './components/Users';
import Home from './components/Home';
class App extends Component {
  render() {
    return (
      <>
        <Router>
          <Routes>
            <Route path="/" element={<Home />} />
            <Route path="/about" element={<About />} />
            <Route path="/users" element={<Users />} />
            <Route path="/Counter" element={<Counter />} />
          </Routes>
        </Router>
      </>
    );
  }
}
export default App;
```

```
JS App.js        JS Counter.js  ×    JS Home.js        JS About.js        JS Users.js

myapp > src > components > JS Counter.js > ⊗ Counter
  1    import React from "react";
  2    function Counter()
  3    {
  4        return(
  5            <div>
  6                <h1>This is Counter page</h1>
  7            </div>
  8            );
  9    }
 10    export default Counter;
```

```
JS App.js        JS Counter.js    JS Home.js  ×    JS About.js        JS Users.js

myapp > src > components > JS Home.js > [∅] default
  1    import React from "react";
  2    import { Link } from 'react-router-dom';
  3    function Home (){
  4
  5        return <div><nav>
  6            <ul>
  7                <li> <Link to="/">Home</Link></li>
  8                <li> <Link to="/about">About</Link></li>
  9                <li> <Link to="/users">Users</Link></li>
 10                <li> <Link to="/Counter">Count</Link></li>
 11            </ul>
 12            </nav>
 13            </div>
 14    }
 15    export default Home;
```

```
JS App.js    JS Counter.js    JS Home.js    JS About.js  ×   JS Users.js

myapp > src > components > JS About.js > ...
  1    import React from "react";
  2    function About()
  3    {
  4        return(
  5            <div>
  6                <h1>This is About page</h1>
  7            </div>
  8            );
  9    }
 10    export default About;
 11
 12    |
```

```
JS App.js    JS Counter.js    JS Home.js    JS About.js    JS Users.js  ×

myapp > src > components > JS Users.js > ⊗ Users
  1    import React from "react";
  2    function Users()
  3    {
  4        return(
  5            <div>
  6                <h1>This is Users page</h1>
  7            </div>
  8            );
  9    }
 10    export default Users;
```

- Home
- About
- Users
- Count

OUTPUT:

This is Users page

This is About page

This is Counter page

CONCLUSION:

We have successfully WAP to handle click events by building a nav Menu using Router.