React Router

Routing is a process in which a user is directed to different pages based on their action or request. ReactJS Router is mainly used for developing Single Page Web Applications. React Router is used to define multiple routes in the application. When a user types a specific URL into the browser, and if this URL path matches any 'route' inside the router file, the user will be redirected to that particular route.

React Router is a standard library system built on top of the React and used to create routing in the React application using React Router Package. It provides the synchronous URL on the browser with data that will be displayed on the web page. It maintains the standard structure and behavior of the application and mainly used for developing single page web applications.

Need of React Router

React Router plays an important role to display multiple views in a single page application. Without React Router, it is not possible to display multiple views in React applications. Most of the social media websites like Facebook, Instagram uses React Router for rendering multiple views.

React Router Installation

React contains three different packages for routing. These are:

1. **react-router:** It provides the core routing components and functions for the React Router applications.
2. **react-router-native:** It is used for mobile applications.
3. **react-router-dom:** It is used for web applications design.

It is not possible to install react-router directly in your application. To use react routing, first, you need to install react-router-dom modules in your application. The below command is used to install react router dom.

1. >  npm install react-router --save
2. >  npm install react-router-native --save
3. >  npm install react-router-dom --save

About.js

**import** React from 'react'

**class** About **extends** React.Component {

  render() {

**return** <h1>About</h1>

  }

}

export **default** About

Contact.js

import React from 'react'

class Contact extends React.Component {

render() {

return <h1>Contact</h1>

}

}

export default Contact

App.js

**import** React from 'react'

**class** App **extends** React.Component {

  render() {

**return** (

      <div>

        <h1>Home</h1>

      </div>

    )

  }

}

export **default** App

Index.js

**import** React from 'react';

**import** ReactDOM from 'react-dom';

**import** { Route, Link, BrowserRouter as Router } from 'react-router-dom'

**import** './index.css';

**import** App from './App';

**import** About from './about'

**import** Contact from './contact'

**const** routing = (

  <Router>

    <div>

      <h1>React Router Example</h1>

      <Route path="/" component={App} />

      <Route path="/about" component={About} />

      <Route path="/contact" component={Contact} />

    </div>

  </Router>

)

ReactDOM.render(routing, document.getElementById('root'));

With Link

**import** React from 'react';

**import** ReactDOM from 'react-dom';

**import** { Route, Link, BrowserRouter as Router } from 'react-router-dom'

**import** './index.css';

**import** App from './App';

**import** About from './about'

**import** Contact from './contact'

**const** routing = (

  <Router>

    <div>

      <h1>React Router Example</h1>

      <ul>

        <li>

          <Link to="/">Home</Link>

        </li>

        <li>

          <Link to="/about">About</Link>

        </li>

        <li>

          <Link to="/contact">Contact</Link>

        </li>

      </ul>

      <Route exact path="/" component={App} />

      <Route path="/about" component={About} />

      <Route path="/contact" component={Contact} />

    </div>

  </Router>

)

ReactDOM.render(routing, document.getElementById('root'));

**With Activestyle:**

**import** React from 'react';

**import** ReactDOM from 'react-dom';

**import** { BrowserRouter as Router, Route, Link, NavLink } from 'react-router-dom'

**import** './index.css';

**import** App from './App';

**import** About from './about'

**import** Contact from './contact'

**const** routing = (

  <Router>

    <div>

      <h1>React Router Example</h1>

      <ul>

        <li>

          <NavLink to="/" exact activeStyle={

             {color:'red'}

          }>Home</NavLink>

        </li>

        <li>

          <NavLink to="/about" exact activeStyle={

             {color:'green'}

          }>About</NavLink>

        </li>

        <li>

          <NavLink to="/contact" exact activeStyle={

             {color:'magenta'}

          }>Contact</NavLink>

        </li>

      </ul>

      <Route exact path="/" component={App} />

      <Route path="/about" component={About} />

      <Route path="/contact" component={Contact} />

    </div>

  </Router>

)

ReactDOM.render(routing, document.getElementById('root'));

### <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

* 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 .