React Router

Mohamed Mukthar Ahmed

161

React Router

Outline
Need for Routing

Installing React Router

Folder Structure

Layout Component

Different Page Components

The index.js File

Dissecting index.js File

Q&A

Mohamed Mukthar Ahmed

162

React Router

- Create React App doesn't include **page routing**.

- **React Router** is the most popular solution.

- To add **React Router** to your application, run this command in the terminal from the root directory of the application:

```
npm i -D react-router-dom
```

Mohamed Mukthar Ahmed

163

Folder Structure

- To create an application with multiple page routes, let's first start with the folder structure.

- Within the **src** folder, we'll create a folder named **pages** with several files:

```
C:\TRAINING\REACT\ROUTING\SRC
│   index.js
│
└───pages
        Blogs.js
        Contact.js
        Home.js
        Layout.js
        NoPage.js
```

- Each file will contain a very basic React component.:

Mohamed Mukthar Ahmed

164

2

Layout Component

- The Layout component has **<Outlet>** and **<Link>** elements.

  - The **<Outlet>** renders the current route selected.
  - **<Link>** is used to set the URL and keep track of browsing history.

- Anytime we link to an internal path, we will use **<Link>** instead of **<a href="">**.

- The "layout route" is a shared component that inserts common content on all pages, such as a navigation menu.

Mohamed Mukthar Ahmed

165

Layout Component

```
1    import { Outlet, Link } from "react-router-dom";
2
3    const Layout = () => {
4      return (
5        <>
6          <nav>
7            <ul>
8              <li>
9                <Link to="/">Home</Link>
10             </li>
11             <li>
12               <Link to="/blogs">Blogs</Link>
13             </li>
14             <li>
15               <Link to="/contact">Contact</Link>
16             </li>
17           </ul>
18         </nav>
19
20         <Outlet />
21       </>
22     )
23   };
24
25   export default Layout;
```

Mohamed Mukthar Ahmed

166

3

Different Page Components

- Home.js

```
const Home = () => {
  return <h1>Home</h1>;
};

export default Home;
```

- Similarly, we can create the **'Contact**', **'Blogs**' and **'NoPage**' components.

Mohamed Mukthar Ahmed

167

The index.js File

```
1   import ReactDOM from "react-dom/client";
2   import { BrowserRouter, Routes, Route } from "react-router-dom";
3   import Layout from "./pages/Layout";
4   import Home from "./pages/Home";
5   import Blogs from "./pages/Blogs";
6   import Contact from "./pages/Contact";
7   import NoPage from "./pages/NoPage";
8
9   export default function App() {
10    return (
11      <BrowserRouter>
12        <Routes>
13          <Route path="/" element={<Layout />}>
14            <Route index element={<Home />} />
15            <Route path="blogs" element={<Blogs />} />
16            <Route path="contact" element={<Contact />} />
17            <Route path="*" element={<NoPage />} />
18          </Route>
19        </Routes>
20      </BrowserRouter>
21    );
22  }
23
24  const root = ReactDOM.createRoot(document.getElementById('root'));
25  root.render(<App />);
```

Mohamed Mukthar Ahmed

168

4

The index.js File

- Let's dissect what is there in the **index.js** file

- We wrap our content first with **<BrowserRouter>** component.

- Then we define our **<Routes>**.
  - An application can have multiple <Routes>. Our basic example only uses one.

- **<Route>**s can be nested.
  - The first **<Route>** has a path of **/** and renders the **Layout** component.
  - The nested **<Route>**s inherit and add to the parent route. So the **blogs** path is combined with the parent and becomes **/blogs**.
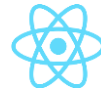
Mohamed Mukthar Ahmed

169

The index.js File

- Let's dissect what is there in the **index.js** file

- The **Home** component route does not have a path but has an **index** attribute.
  - It specifies this route as the default route for the parent route, which is **/**.

- Setting the path to ***** will act as a catch-all for any undefined URLs.
  - This is great for a 404 error page.

Mohamed Mukthar Ahmed

170

shutterstock.com · 1506580442

Mohamed Mukthar Ahmed

171