



PROGRAM-10

ReactJS – React Router, Updating the Screen

a. AIM: Write a program for routing to different pages using react router

What is React Router?

React Router is a standard library in React used for routing—i.e., navigating between different components (pages) in a single-page application (SPA) without reloading the page.

- It allows React apps to update the URL and render different components on the same page.

Key components:

- 1. <BrowserRouter> – Wraps the app to enable routing.
 - 2. <Routes> – Contains all <Route> elements.
 - 3. <Route> – Maps a URL path to a component.
 - 4. <Link> – Used for navigation between routes without page reload.
 - React Router is used to navigate between different pages/components in a React application.
 - Using BrowserRouter, Routes, and Route, we can define paths and the components to render for each path.
 - This example will show a simple 3-page application: Home, About, and Contact.

PROGRAM CODE

```
import React from "react";
import { BrowserRouter as Router, Routes, Route, Link } from "react-router-dom";

// Home Component
function Home() {
  return <h2>Welcome to the Home Page</h2>;
}

// About Component
function About() {
  return <h2>About Us Page</h2>;
}

// Contact Component
function Contact() {
  return <h2>Contact Us Page</h2>;
}

// App Component with Routing
function App() {
  return (
    <Router>
      <div style={{ textAlign: "center", marginTop: "50px" }}>
        <h1>React Router Example</h1>
      </div>
    </Router>
  );
}
```



```
/* Navigation Links */
<nav style={{ marginBottom: "20px" }}>
  <Link to="/" style={{ margin: "10px" }}>Home</Link>
  <Link to="/about" style={{ margin: "10px" }}>About</Link>
  <Link to="/contact" style={{ margin: "10px" }}>Contact</Link>
</nav>

/* Routes */
<Routes>
  <Route path="/" element={<Home />} />
  <Route path="/about" element={<About />} />
  <Route path="/contact" element={<Contact />} />
</Routes>
</div>
</Router>
);

}

export default App;
```

Output:

Initial Render (Home Page) React Router Example

[\[Home\]](#) [\[About\]](#) [\[Contact\]](#)

Welcome to the Home Page
The navigation links are at the top: Home | About | Contact.
Since the default path is /, the Home component is displayed.

After Clicking "About" Link React Router Example

[Home] [About] [Contact]

About Us Page

The URL changes to /about.

The About component is rendered without reloading the page.

After Clicking "Contact" Link

React Router Example

[Home] [About] [Contact]

Contact Us Page

The URL changes to /contact.

The Contact component is rendered dynamically.

