

## **react routing:**

Routing in React.js refers to the process of displaying different pages or components based on the URL path — without reloading the entire webpage.

It allows us to build a Single Page Application (SPA), where navigation feels smooth like a mobile app.

We use libraries like react-router-dom to implement routing.

### ◆ Real-Life Example:

Think of routing like a restaurant menu — when you click “Home,” you see the home dishes; click “About,” you see the chef’s story — all on the same screen, just changing views, not changing the whole restaurant.

### ◆ Basic Code Example Using react-router-dom:

Step 1: Install the router

npm install react-router-dom

```
import React from 'react';
import Home from './pages/Home';
import About from './pages/About';
import Error from './pages/Error';
import { BrowserRouter, Route, Routes } from 'react-router-dom';
const ReactRouter = () => {
  return (
    <BrowserRouter>
      <Routes>
        <Route path="/" element={<Home/>}/>
        <Route path="/about" element={<About/>}/>
        <Route path="*" element={<Error/>}/>
      </Routes>
    </BrowserRouter>
  )
}

export default ReactRouter;
```

### ◆ How it Works:

- BrowserRouter – wraps your app to enable routing
- Routes – holds all routes
- Route – defines a path and its corresponding component

### ◆ Navigation (Link Example):

```
import { Link } from 'react-router-dom';
```

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

### 🧠 Memory Trick:

Routing in React is like:

📌 "Change the view based on the URL path — not the whole page."

### ✅ Tick Checklist for Interview:

- ☒ Routing enables SPA (Single Page Application)
- ☒ Uses react-router-dom
- ☒ No full page reload
- ☒ Routes are mapped to components
- ☒ <Link> used instead of <a>
- ☒ Works with useNavigate, useParams for navigation and dynamic routing