**Q-1) What is React Router? How does it handle routing in single-page applications?**

* React Router is a popular library in React used for handling routing (navigation between different pages).
* In a single-page application (SPA), the entire app runs on one HTML file (index.html).
* Normally, when we go to a new page, the browser reloads the whole document.
* But with React Router, instead of refreshing, it changes the URL in the address bar and shows the correct React component for that path.

This means:

* Navigation feels fast (no full reload).
* Users see different pages (/home, /about, /contact), but technically, React just swaps components.
* It gives the experience of a multi-page website inside a single-page app.

**Q-2) Difference between BrowserRouter, Route, Link, and Switch**

1. **BrowserRouter**
   * This is the main wrapper for routing.
   * It listens to the browser’s URL and passes the correct information to other Router components.
   * Example: If the URL is /about, BrowserRouter helps decide which component should be shown.
2. **Route**
   * Defines the path and the component to display when the URL matches.
   * Example:
   * <Route path="/about" component={About} />

→ This means when the URL is /about, show the About component.

1. **Link**
   * Works like an <a> tag but doesn’t reload the page.
   * It updates the URL and lets React Router show the correct component.
   * Example:
   * <Link to="/about">About</Link>
2. **Switch** (used in React Router v5)
   * Ensures only one Route is displayed at a time.
   * Without Switch, if two routes match, both might render.
   * Example:
   * <Switch>
   * <Route path="/about" component={About} />
   * <Route path="/contact" component={Contact} />
   * </Switch>

→ Only the first match will render.

* + In React Router v6, Switch is replaced with Routes.