**Module-16 React Routing Assignment Styling**

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

* React Router is a **library** used for handling navigation in **React applications.**
* It allows developers to create and manage **routes** for their apps, making it easier to build **single-page applications** with multiple views or pages.
* **How does React Router handle Routing in SPAs:-**
* the entire application runs on a **single HTML file**.
* React Router provides a way to display different components (or views) based on the **URL** without reloading the page.
* **URL Matching: -**
* React Router listens to changes in the URL (e.g., /home,/about) and determines which component to display.
* **No Full Reloads:-**
* Instead of reloading the page, React Router updates the DOM to display the required component.

**2. Explain the difference between BrowserRouter, Route, Link, and Switch components in React Router.**

1. **Browser Router: -**

* It is the main wrapper for your React app to enable routing.
* It listens to the browser’s URL changes and renders the appropriate components.

**2. Route: -**

* It defines **what to display** (which component) when the URL matches a specific path.

**3. Link: -**

* It is used to navigate between routes **without refreshing** the page. It replaces the traditional <a> tag.

**4. Switch (Older React Router Version): -**

* It was used to ensure **only one route is rendered at a time**.