OBJECTIVES OF REACT JS

1. **SAP and its Benefits:**
   - SAP allows web applications that loads a single HTML page and dynamically updates it using JavaScript without refreshing the entire page.
   - **Benefits** – Allows faster navigation, better performance, reusable components.
2. **React and its working:**
   - React is a JavaScript library developed by Facebook for building user interface, dominantly SPAs.
   - **Working** – Uses components and a virtual DOM to update the UI.
3. **SPA vs MPA:**
   - **SPA: -** Loads one HTML file, uses JavaScript to update views and provide faster after initial load.
   - **MPA:** - Loads multiple HTML pages, reloads the page on each request, and slower due to multiple page loads.
4. **Advantage and Disadvantage of SPA:**
   - **Advantage -** Fast performance, better user experience, easier to debug with tools.
   - **Disadvantage –** Poor SEO, initial loading may be large, requires JavaScript.
5. **Virtual DOM:**
   - The virtual DOM is a lightweight JavaScript copy of the actual DOM.
   - React updates the Virtual DOM first, compares changes, only updates what is necessary in the real DOM.
6. **Features of React:**
   - Component-Based Architecture
   - Virtual DOM
   - One-Way Data Binding
   - JSX
   - Reusable Components
   - Fast rendering
   - Single Page Application