1. Define SPA and its Benefits

SPA (Single Page Application):

- A SPA loads a single HTML page and dynamically updates content without refreshing the page.
  Benefits:

- Fast loading after initial load

- Smooth user experience

- Reduces server load

- Efficient data transfer using APIs

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2. Define React and Identify its Working

React:

- A JavaScript library for building user interfaces, developed by Facebook.
  Working:

- React creates components and uses a Virtual DOM to efficiently update the UI.

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3. Difference Between SPA and MPA

Feature	SPA (Single Page App)	MPA (Multi Page App)
Page Loading	Single HTML page, dynamic content	Loads a new page from server
Speed	Faster after first load	Slower due to full-page reloads
Technologies Used	React, Angular, Vue.js	PHP, JSP, ASP.NET, etc.
User Experience	Smooth and interactive	Traditional experience

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4. Pros and Cons of SPA

Pros:

- Fast performance

- Great UX

- Easier to debug with React dev tools

Cons:

- SEO limitations

- Longer initial load

- Can be complex to secure

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5. Explain React

React is:

- Component-based
- Declarative
- Efficient (uses Virtual DOM)
- Maintains unidirectional data flow

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6. Define Virtual DOM

Virtual DOM:

- A lightweight copy of the actual DOM.
- React compares (diffs) the virtual DOM with previous versions and updates the real DOM only where necessary — improving performance.

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7. Features of React

- JSX (JavaScript XML)
- Components
- Virtual DOM
- Unidirectional data flow
- Hooks for managing state and side effects
- Reusable and testable code