Name: SASHMITHA R

Superset ID: 6387562

1.React.js - HOL

1. Define SPA and Its Benefits

SPA (Single-Page Application):

A web app that loads a single HTML page and dynamically updates content without reloading the page.

Benefits:

- Faster navigation and user experience
- Less server load after initial load
- Efficient data loading with AJAX
- Smooth transitions between views

2. Define React and Identify Its Working

React:

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

How React Works:

- Uses components to build UIs
- Maintains a virtual DOM for efficient updates
- Handles UI rendering declaratively

3. Differences Between SPA and MPA

Feature	SPA	IVIPA
Page Reloads	No	Yes
Speed	Faster	Slower
SEO Support	Poor (needs extra config)	Better

Feature SPA MPA	4
-----------------	---

Navigation	Client-side routing	Full page reload

Development Focus Frontend-heavy Balanced frontend/backend

4. Pros & Cons of Single-Page Applications

Pros:

- Fast user experience
- Reusable components
- Easy to debug using tools like React DevTools
- Mobile-friendly structure

Cons:

- SEO is more complex
- Initial load time can be long
- Requires JavaScript to be enabled
- More complex state management

5. Explain About React

React is:

- A declarative, component-based JavaScript library
- Maintains its own virtual DOM
- Used for building scalable front-end apps
- Works with tools like Redux, React Router, etc.

6. Define Virtual DOM

Virtual DOM:

A lightweight copy of the real DOM. React updates the virtual DOM first and then syncs only the changed parts with the real DOM using a process called reconciliation.

7. Features of React

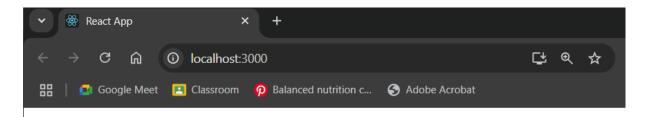
- Component-Based Architecture
- Virtual DOM
- JSX (JavaScript + XML)
- One-way data binding
- React Hooks for functional components
- Reusable components
- Fast rendering performance

Command: npx create-react-app myfirstreact

App.js

Command: npm start

OUTPUT:



Welcome to the first session of React