**WEEK-6 ReactJS-HOL**

**SUPERSET ID 6393674**

**1. Define SPA and its Benefits**

**SPA (Single Page Application):**  
Loads a single HTML page and updates content without full reload.  
**Benefits:**  
• Faster after initial load  
• Smooth UX  
• Less server load  
• Seamless navigation  
• Uses AJAX for partial updates

**2. Define React and Its Working**

**React:** A JS library by Facebook for building UIs, especially SPAs.  
**How It Works:**  
• Uses components  
• Uses Virtual DOM  
• Updates only necessary parts of the UI

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| --- | --- | --- |
| **FEATURE** | **SPA** | **MPA** |
| Page Load | Single page | Multiple page reloads |
| Speed | Faster after load | Slower due to reload |
| User Experience | Smooth,dynamic | Flickering during nav |
| Routing | Client-side | Server-side |
| Example | Gmail | Amazon |

**3. Differences between SPA and MPA**

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| --- | --- | --- |
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**4. Pros & Cons of SPA**

**Pros:**  
• Fast  
• Good UX  
• Fewer server calls  
• Mobile app friendly

**Cons:**  
• Poor SEO  
• Slow initial load  
• Complex navigation  
• Needs JS enabled

**5. Explain React**

React is a component-based UI library for building interactive, reusable, and dynamic user interfaces, mostly used in SPAs, dashboards, and social apps.

**6. Define Virtual DOM**

Virtual DOM is a lightweight copy of the real DOM. React compares it with the previous version and updates only changed parts in the real DOM — improving performance.

**7. Features of React**

• Component-Based  
• Virtual DOM  
• JSX  
• One-Way Data Binding  
• Declarative UI  
• React Hooks

**1.Create a new React Application with the name “myfirstreact”, Run the application to print “welcome to the first session of React” as heading of that page.**

**SOLUTION :**

**APP.JS**

import React from 'react';

function App(){

  return(

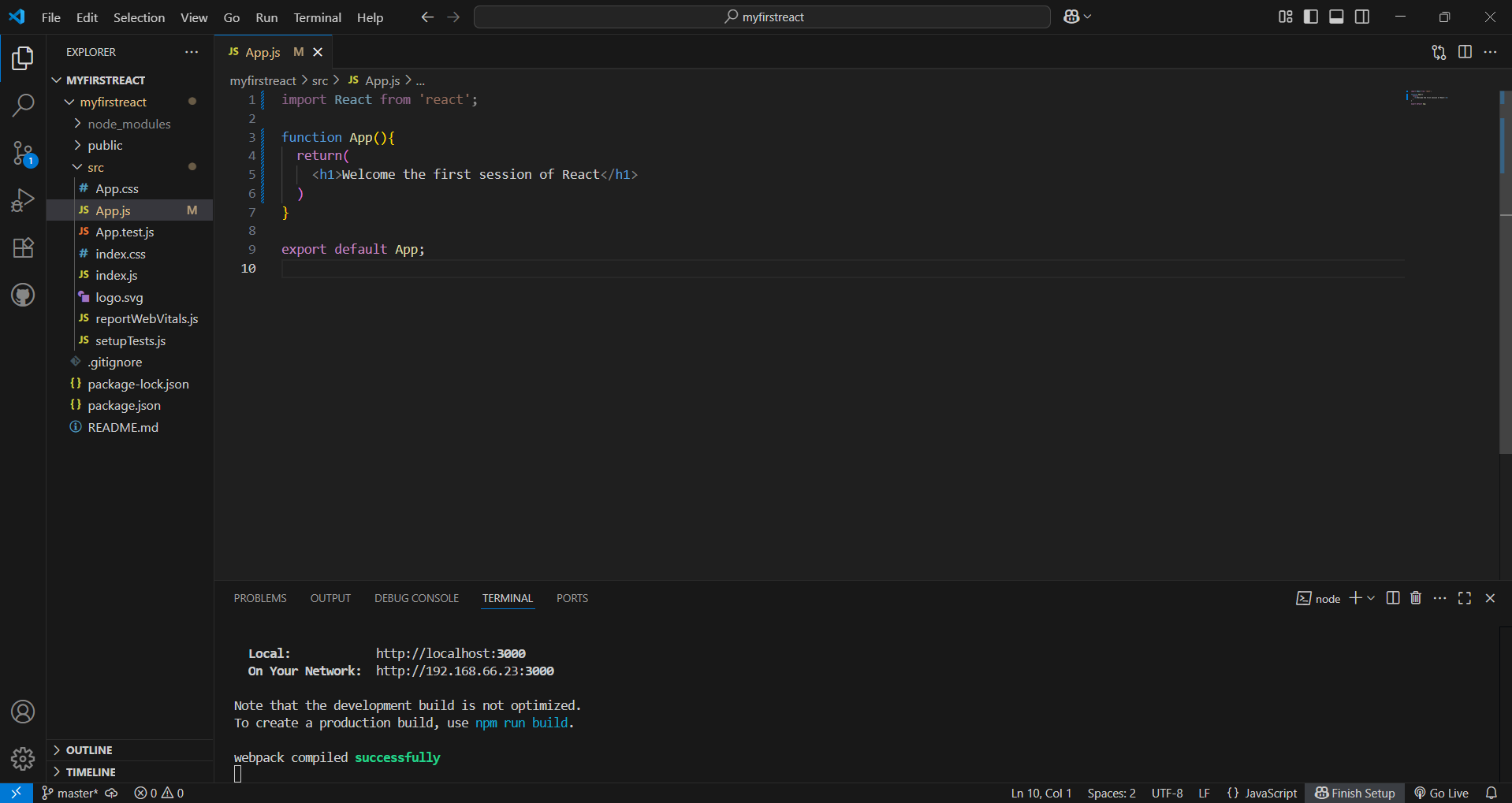
    <h1>Welcome the first session of React</h1>

  )

}

export default App;

**OUTPUT**

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