**WEEK 7**

**10. ReactJS-HOL**

**Theory Objectives (JSX and React Basics)**

**Define JSX**

* JSX (JavaScript XML) is a syntax extension for JavaScript used with React to describe UI.
* Example:
* const element = <h1>Hello, JSX!</h1>;

**ECMAScript (ES)**

* ECMAScript is the standard that JavaScript follows.
* ES6 introduced features like let, const, arrow functions, classes, modules, etc., which React uses heavily.

**React.createElement()**

* A method to create React elements manually:
* React.createElement('h1', {className: 'title'}, 'Hello World');
* JSX is syntactic sugar for React.createElement().

**Creating Nodes with JSX**

* JSX allows combining HTML-like syntax with JavaScript:
* const office = <div><h2>Office Space</h2></div>;

**Rendering JSX to DOM**

* You use ReactDOM.render() or in React 18+, createRoot():
* import { createRoot } from 'react-dom/client';
* const root = createRoot(document.getElementById('root'));
* root.render(<App />);

**JavaScript Expressions in JSX**

* You can embed expressions using {}:
* const rent = 50000;
* <p>Rent: ₹{rent}</p>

**Inline CSS in JSX**

* Use style={{}} with camelCase properties:
* <p style={{ color: 'red', fontWeight: 'bold' }}>₹50000</p>

**Hands-on: Create officespacerentalapp React App**

**Create React App**

npx create-react-app officespacerentalapp

cd officespacerentalapp

npm start

**App.js (Final Working Code)**

// src/App.js

import React from 'react';

function App() {

// Heading JSX

const heading = <h1 style={{ textAlign: 'center' }}> Office Space Rental App</h1>;

// Office image URL

const imageUrl = "https://via.placeholder.com/400x200?text=Office+Space";

// Object of office

const singleOffice = {

name: "Sky Tower Office",

rent: 45000,

address: "15th Floor, Sky Tower, Bengaluru"

};

// List of offices

const officeList = [

{ name: "TechPark One", rent: 55000, address: "Chennai, Tamil Nadu" },

{ name: "Cyber View", rent: 75000, address: "Hyderabad, Telangana" },

{ name: "WorkHub", rent: 30000, address: "Mumbai, Maharashtra" },

];

return (

<div style={{ padding: "20px", fontFamily: "Arial" }}>

{heading}

{/\* Image \*/}

<div style={{ textAlign: 'center' }}>

<img src={imageUrl} alt="Office Space" style={{ maxWidth: '100%', borderRadius: '8px' }} />

</div>

{/\* Single Office Object \*/}

<div style={{ marginTop: '20px' }}>

<h2>{singleOffice.name}</h2>

<p><strong>Rent:</strong> <span style={{ color: singleOffice.rent < 60000 ? 'red' : 'green' }}>₹{singleOffice.rent}</span></p>

<p><strong>Address:</strong> {singleOffice.address}</p>

</div>

{/\* List of Office Spaces \*/}

<h2 style={{ marginTop: '30px' }}> Available Offices</h2>

{officeList.map((office, index) => (

<div key={index} style={{ border: '1px solid #ddd', padding: '10px', marginBottom: '10px', borderRadius: '5px' }}>

<h3>{office.name}</h3>

<p><strong>Rent:</strong> <span style={{ color: office.rent < 60000 ? 'red' : 'green' }}>₹{office.rent}</span></p>

<p><strong>Address:</strong> {office.address}</p>

</div>

))}

</div>

);

}

export default App;