**Ex 10. ReactJs\_Hol**

**1.Define JSX**

JSX (JavaScript XML) is a syntax extension for JavaScript used in React. It allows you to write HTML-like code inside JavaScript.

Example:

const element = <h1>Hello, JSX!</h1>;

JSX is not valid JavaScript, so it gets transpiled by tools like Babel into React.createElement() calls.

2. **Explain about ECMAScript**

ECMAScript (ES) is the standard specification that JavaScript is based on.

Key Versions:

* ES5 (2009): Strict mode, array methods, JSON support.
* ES6 (2015): let, const, arrow functions, classes, promises, destructuring, modules, etc.

React uses many features from ES6 and newer versions for modern, clean coding.

**3. Explain React.createElement()**

React.createElement() is the method that creates a virtual DOM element.

**Syntax:**

React.createElement(type, props, ...children);

**4. How to Create React Nodes with JSX**

create React nodes using JSX by assigning HTML-like tags to variables.

Example:

const element = <p>This is a paragraph.</p>;

**5.How to Render JSX to the DOM**

JSX elements are rendered using ReactDOM.render().

Example:

const element = <h1>Hello, React!</h1>;

ReactDOM.render(

element,

document.getElementById('root')

);

This renders the element into the DOM element with id="root" in index.html.

**6. How to Use JavaScript Expressions in JSX**

Embed **JavaScript expressions** inside JSX using { }.

Example:

const name = "Joshna";

const element = <h1>Hello, {name}</h1>;

**7. How to Use Inline CSS in JSX**

React allows you to style elements inline using JavaScript objects.

Example:

<h2 style={{ color: 'red', fontWeight: 'bold' }}>Inline CSS</h2>

**Lab:**

Create a React Application named “officespacerentalapp” which uses React JSX to create elements, attributes and renders DOM to display the page.

Create an element to display the heading of the page.

Attribute to display the image of the office space

Create an object of office to display the details like Name, Rent and Address.

Create a list of Object and loop through the office space item to display more data.

To apply Css, Display the color of the Rent in Red if it’s below 60000 and in Green if it’s above 60000.

**App.js:**

import React from 'react';

function App() {

  const singleOffice = {

    name: "Cyber Tower",

    rent: 50000,

    address: "Hyderabad, India",

    image: process.env.PUBLIC\_URL + "/Image1.jpg"

  };

  const officeList = [

    {

      name: "Tech Park",

      rent: 75000,

      address: "Bangalore",

      image: process.env.PUBLIC\_URL + "/Image2.jpg"

    },

    {

      name: "WorkSpace",

      rent: 45000,

      address: "Chennai",

      image: process.env.PUBLIC\_URL + "/Image3.jpg"

    },

    {

      name: "IT Hub",

      rent: 85000,

      address: "Pune",

      image: process.env.PUBLIC\_URL + "/Image1.jpg"

    }

  ];

  return (

    <div style={{

      minHeight: "100vh",

      display: "flex",

      flexDirection: "column",

      alignItems: "center",

      backgroundColor: "#f0f0f0",

      padding: "20px"

    }}>

      <h1 style={{ color: "navy", textAlign: "center" }}>

        🏢 Office Space Rental Portal

      </h1>

      {/\* Featured Office \*/}

      <div style={{

        width: "100%",

        maxWidth: "500px",

        backgroundColor: "#fff",

        border: "2px solid #ddd",

        padding: "20px",

        margin: "20px auto",

        borderRadius: "10px",

        boxShadow: "0 2px 6px rgba(0,0,0,0.1)"

      }}>

        <h2 style={{ textAlign: "center" }}>Featured Office</h2>

        <img

          src={singleOffice.image}

          alt="Office"

          style={{ width: "100%", borderRadius: "10px" }}

        />

        <p><strong>Name:</strong> {singleOffice.name}</p>

        <p>

          <strong>Rent:</strong>{" "}

          <span style={{ color: singleOffice.rent < 60000 ? "red" : "green" }}>

            ₹{singleOffice.rent}

          </span>

        </p>

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

      </div>

      {/\* Office List \*/}

      <h2 style={{ textAlign: "center" }}>All Available Office Spaces</h2>

      <div style={{

        display: "flex",

        flexDirection: "column",

        gap: "20px",

        width: "100%",

        maxWidth: "500px"

      }}>

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

          <div

            key={index}

            style={{

              backgroundColor: "#fff",

              border: "1px solid #ccc",

              padding: "15px",

              borderRadius: "8px",

              boxShadow: "0 2px 4px rgba(0,0,0,0.1)"

            }}

          >

            <img

              src={office.image}

              alt={office.name}

              style={{ width: "100%", borderRadius: "6px" }}

            />

            <p><strong>Name:</strong> {office.name}</p>

            <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>

    </div>

  );

}

export default App;

Output:



