**WEEK-6 ReactJS -HOL 2**

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**OBJECTIVES**

**• Explain React components**

React components are reusable building blocks of a React application that define how a UI should appear. Each component returns JSX and can manage its own logic and state.

**• Identify the differences between components and JavaScript functions**

|  |  |  |
| --- | --- | --- |
| **Feature** | **React Component** | **JavaScript Function** |
| Returns JSX | Yes | No(typically return values) |
| Lifecycle methos | Yes(for class components) | No |
| React features(Hooks) | Available in function components | Not available in plain functions |

**• Identify the types of components**

1. **Class Components** – ES6 classes with lifecycle methods and state.

2. **Function Components** – Simple functions that can use Hooks to manage state and side effects.

**• Explain class component**

A class component is a JavaScript class that extends React.Component and uses a render() method to return JSX.

**jsx**

class Welcome extends React.Component {

render() {

return <h1>Hello, {this.props.name}</h1>;

}

}

**• Explain function component**

A function component is a plain JavaScript function that returns JSX. With Hooks, it can manage state and lifecycle logic.

**jsx**

function Welcome(props) {

return <h1>Hello, {props.name}</h1>;

}

**• Define component constructor**

The constructor() is a special method in class components used to initialize state and bind methods.

**jsx**

|constructor(props) {

super(props);

this.state = { count: 0 };

}

**• Define render() function**

The render() method is required in class components. It describes what should be displayed on the screen.

**jsx**

render() {

return <div>Hello World</div>;

}

**2. Create a react app for Student Management Portal named StudentApp and create a component named Home which will display the Message “Welcome to the Home page of Student Management Portal”. Create another component named About and display the Message “Welcome to the About page of the Student Management Portal”. Create a third component named Contact and display the Message “Welcome to the Contact page of the Student Management Portal”. Call all the three components.**

**SOLUTION:**

**Home.js**

import React, { Component } from 'react';

class Home extends Component {

  render() {

    return (

      <div style={styles.container}>

        <h3>Welcome to the Home page of Student Management Portal</h3>

      </div>

    );

  }

}

const styles = {

  container: {

    display: 'flex',

    justifyContent: 'center',  // horizontal center

    alignItems: 'center',      // vertical center

    height: '5vh',           // full viewport height

    textAlign: 'center'        // optional: center the text itself

  }

};

export default Home;

**About.js**

import React, { Component } from 'react';

class About extends Component {

  render() {

    return (

      <div style={styles.container}>

        <h3>Welcome to the About page of Student Management Portal</h3>

      </div>

    );

  }

}

const styles = {

  container: {

    display: 'flex',

    justifyContent: 'center',  // horizontally center the content

    alignItems: 'center',      // vertically center the content

    height: '1vh',           // full screen height

    textAlign: 'center'        // center text within the box

  }

};

export default About;

**Contact.js**

import React, { Component } from 'react';

class Contact extends Component {

  render() {

    return (

      <div style={styles.container}>

        <h3>Welcome to the Contact page of Student Management Portal</h3>

      </div>

    );

  }

}

const styles = {

  container: {

    display: 'flex',

    justifyContent: 'center',  // horizontally center the content

    alignItems: 'center',      // vertically center the content

    height: '5vh',           // full screen height

    textAlign: 'center'        // center text within the box

  }

};

export default Contact;

**App.js**

import React from 'react';

import './App.css';

import Home from './component/Home';

import About from './component/About';

import Contact from './component/Contact';

function App() {

  return (

    <div className="container">

      <Home />

      <About />

      <Contact />

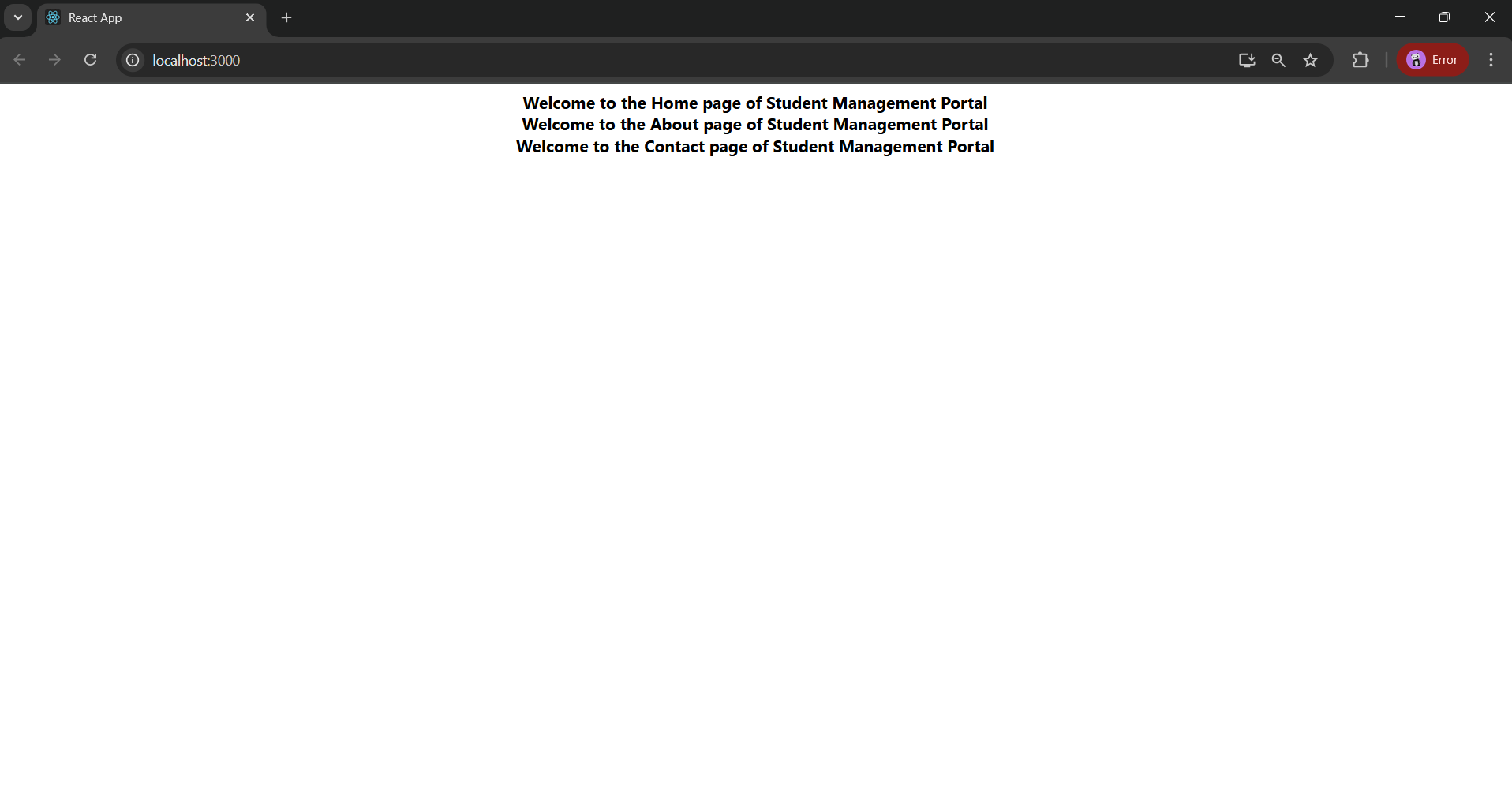
    </div>

  );

}

export default App;

**OUTPUT**

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