**WEEK – 6(HandsOn)**

**React**

**2. ReactJS-HOL**

## **Objectives:**

**React Components**

* A component is a **reusable building block** in React.
* It can be a **function** or a **class** that returns JSX.

### **Difference: Components vs JS Functions:**

| **JavaScript Function** | **React Component** |
| --- | --- |
| Returns values (numbers, etc.) | Returns JSX (UI elements) |
| No lifecycle | Has lifecycle (class comp.) |
| Used for logic | Used for UI rendering |

**Types of Components:**

* **Functional Component** (Most commonly used)
* **Class Component** (Older, supports lifecycle methods)

**Class Component:**

* Uses ES6 class syntax and render() method
* Can maintain **state** and use **lifecycle methods**

**Function Component:**

* Simple JS function returning JSX
* Uses React hooks for state and side effects

**Component Constructor:**

In React Class Components, the constructor is a special method used to:

* Initialize the component’s state
* Bind methods (if needed)
* Access props

**Syntax:**

class MyComponent extends React.Component {

constructor(props) {

super(props); // call to base class constructor

// initialize state

this.state = {

name: 'React Student'

};

}

render() {

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

}

}

**render() Function:**

The render() function is mandatory in class components.  
It tells what to display on the UI — i.e., it returns JSX.

**Syntax:**

class MyComponent extends React.Component {

render() {

return (

<div>

<h2>This is rendered by the render() function</h2>

</div>

);

}

}

**CODE:**

**src/Components/Home.js:**

import React from 'react';

function Home() {

return (

<div>

<h2>Welcome to the Home page of Student Management Portal</h2>

</div>

);

}

export default Home;

**src/Components/About.js:**

import React from 'react';

function About() {

return (

<div>

<h2>Welcome to the About page of the Student Management Portal</h2>

</div>

);

}

export default About;

src/Components/Contact.js:

import React from 'react';

function Contact() {

return (

<div>

<h2>Welcome to the Contact page of the Student Management Portal</h2>

</div>

);

}

export default Contact;

**src/App.js:**

import React from 'react';

import Home from './Components/Home';

import About from './Components/About';

import Contact from './Components/Contact';

function App() {

return (

<div>

<Home />

<About />

<Contact />

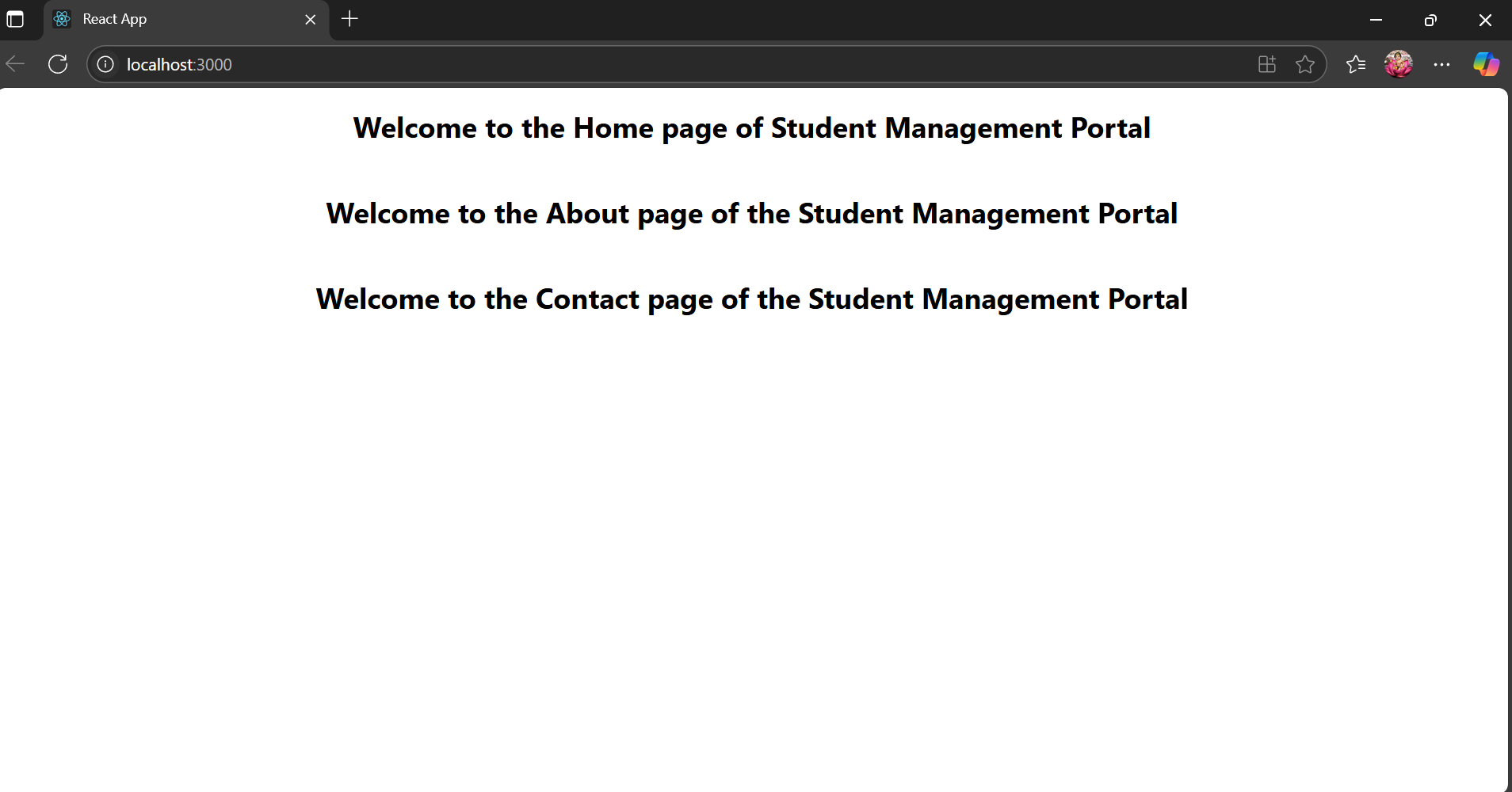
</div>

);

}

export default App;

**OUTPUT:**

****