**WEEK – 6(Additional HandsOn)**

**React**

**8. ReactJS-HOL**

**Explain React State:**

State in React refers to an object that holds data or information about a component that can change over time. Unlike props (which are passed from parent to child and are read-only), state is managed within the component itself and can be updated based on user actions, network responses, or other events.

Key Points about React State

* Mutable internal data: State allows a component to create, store, and update its own data.
* Triggers re-render: When state changes using the setState method (class component) or React Hooks (useState in function components), React automatically re-renders the component to reflect the updated data.
* Local to the component: State is private and fully controlled by the component in which it is declared. While several components can have their own state, the data is NOT shared between them unless "lifted" up to a common ancestor.
* Examples of state: Form inputs, toggle switches, tabs, modals, and responses from APIs, etc.

Example: Using State in a Function Component

import React, { useState } from "react";

function Counter() {

const [count, setCount] = useState(0);

return (

<div>

<p>You clicked {count} times.</p>

<button onClick={() => setCount(count + 1)}>Click me</button>

</div>

);

}

* Here, count is a piece of state.
* The setCount function updates the state, triggering React to re-render the component with the new count.

**CODE:**

**src/CountPeople.js:**

import React, { Component } from 'react';

class CountPeople extends Component {

constructor(props) {

super(props);

this.state = {

entryCount: 0,

exitCount: 0

};

}

updateEntry = () => {

this.setState(prevState => ({

entryCount: prevState.entryCount + 1

}));

};

updateExit = () => {

this.setState(prevState => ({

exitCount: prevState.exitCount + 1

}));

};

render() {

const buttonStyle = {

padding: '10px 20px',

fontSize: '16px',

backgroundColor: '#4CAF50',

color: 'white',

border: '2px solid green',

borderRadius: '5px',

marginRight: '10px',

cursor: 'pointer'

};

const containerStyle = {

display: 'flex',

justifyContent: 'center',

alignItems: 'center',

gap: '50px',

marginTop: '100px'

};

return (

<div style={containerStyle}>

<div>

<button style={buttonStyle} onClick={this.updateEntry}>Login</button>

<span style={{ fontSize: '18px', marginLeft: '10px' }}>

{this.state.entryCount} People Entered!!!

</span>

</div>

<div>

<button style={buttonStyle} onClick={this.updateExit}>Exit</button>

<span style={{ fontSize: '18px', marginLeft: '10px' }}>

{this.state.exitCount} People Left!!!

</span>

</div>

</div>

);

}

}

export default CountPeople;

**src/App.js:**

import React from 'react';

import './App.css';

import CountPeople from './CountPeople';

function App() {

return (

<div className="App">

<CountPeople />

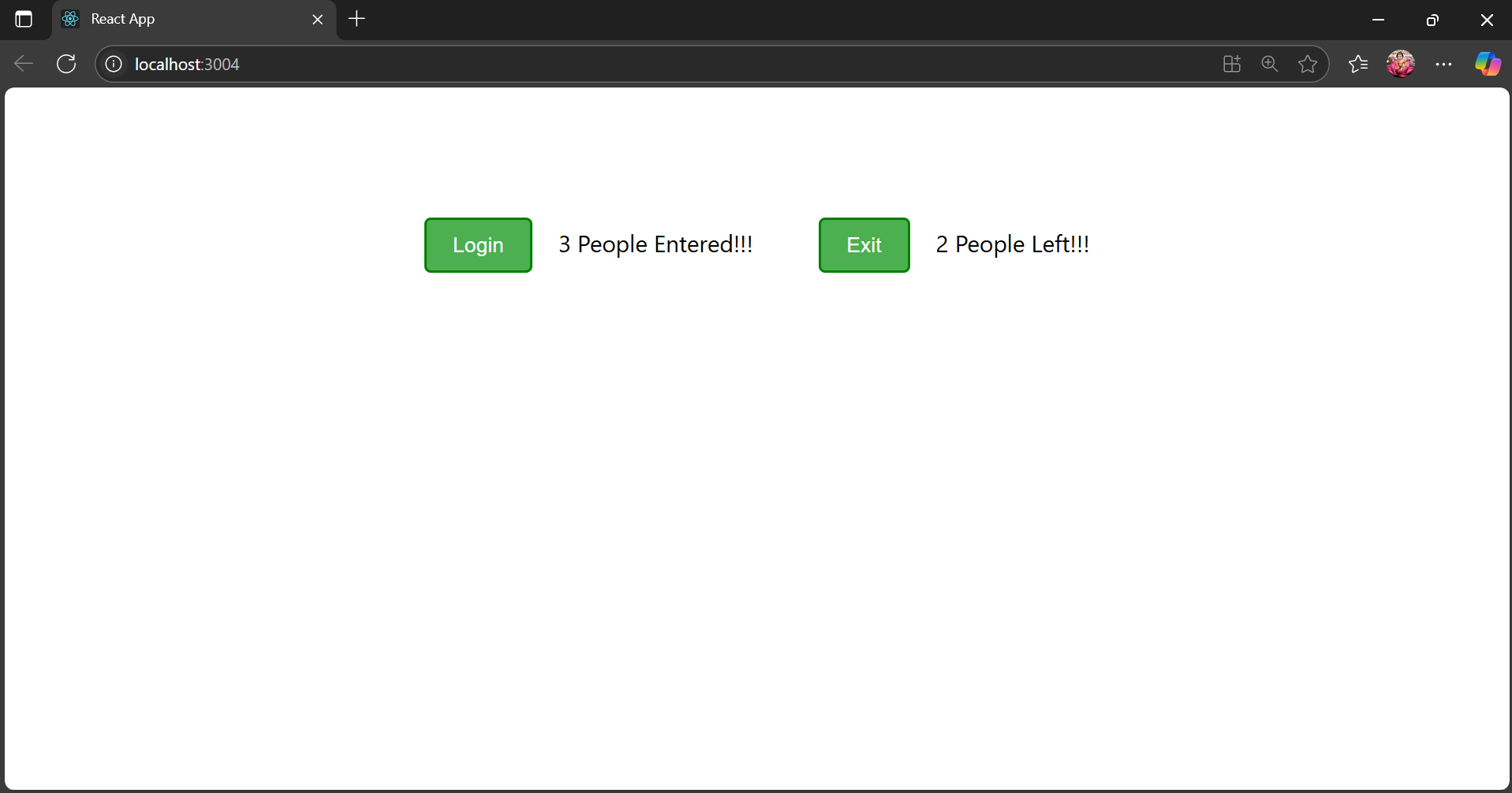
</div>

);

}

export default App;

**OUTPUT:**

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