**HANDSON EXERCISES - WEEK 7**

**Skill : React**

**File : 9. ReactJS-HOL.docx**

**Exercise :** ES6 Features Demonstration in React using Cricket Player Data

**App.css :**

body {

margin: 0;

font-family: Arial, sans-serif;

}

.container {

padding-left: 40px;

padding-top: 20px;

}

**IndianPlayers.js :**

import React from 'react';

const IndianPlayers = () => {

const oddPlayers = [

{ label: "First", name: "Sachin1" },

{ label: "Third", name: "Virat3" },

{ label: "Fifth", name: "Yuvraj5" },

];

const evenPlayers = [

{ label: "Second", name: "Dhoni2" },

{ label: "Fourth", name: "Rohit4" },

{ label: "Sixth", name: "Raina6" },

];

const mergedPlayers = [

"Mr. Sachin",

"Mr. Dhoni",

"Mr. Virat",

"Mr. Rohit",

"Mr. Yuvraj",

"Mr. Raina"

];

return (

<div>

<h2>Odd Players</h2>

<ul>

{oddPlayers.map((p, i) => (

<li key={i}>{p.label} : {p.name}</li>

))}

</ul>

<h2>Even Players</h2>

<ul>

{evenPlayers.map((p, i) => (

<li key={i}>{p.label} : {p.name}</li>

))}

</ul>

<h2>List of Indian Players Merged:</h2>

<ul>

{mergedPlayers.map((p, i) => (

<li key={i}>{p}</li>

))}

</ul>

</div>

);

};

export default IndianPlayers;

**ListOfPlayers.js :**

import React from 'react';

const ListOfPlayers = () => {

const players = [

{ name: "Mr. Jack", score: 50 },

{ name: "Mr. Michael", score: 70 },

{ name: "Mr. John", score: 40 },

{ name: "Mr. Ann", score: 61 },

{ name: "Mr. Elisabeth", score: 61 },

{ name: "Mr. Sachin", score: 95 },

{ name: "Mr. Dhoni", score: 100 },

{ name: "Mr. Virat", score: 84 },

{ name: "Mr. Jadeja", score: 64 },

{ name: "Mr. Raina", score: 75 },

{ name: "Mr. Rohit", score: 80 },

];

const below70 = players.filter(p => p.score < 70);

return (

<div>

<h2>List of Players</h2>

<ul>

{players.map((player, index) => (

<li key={index}>{player.name} {player.score}</li>

))}

</ul>

<h2>List of Players having Scores Less than 70</h2>

<ul>

{below70.map((player, index) => (

<li key={index}>{player.name} {player.score}</li>

))}

</ul>

</div>

);

};

export default ListOfPlayers;

**App.js :**

import React from 'react';

import './App.css';

import ListOfPlayers from './ListOfPlayers';

import IndianPlayers from './IndianPlayers';

const flag = false; // switch to false for other view

function App() {

return (

<div className="container">

{flag ? <ListOfPlayers /> : <IndianPlayers />}

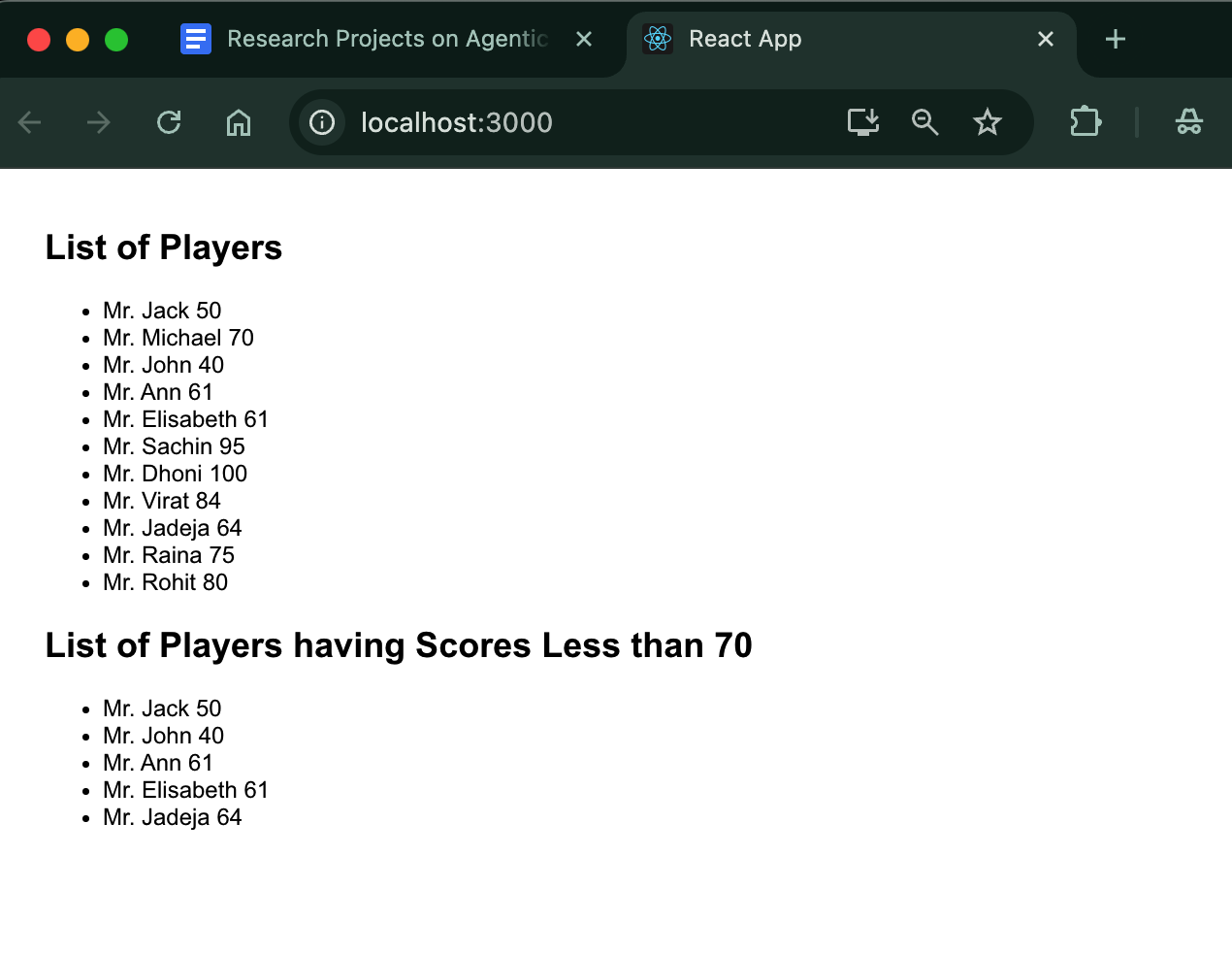
</div>

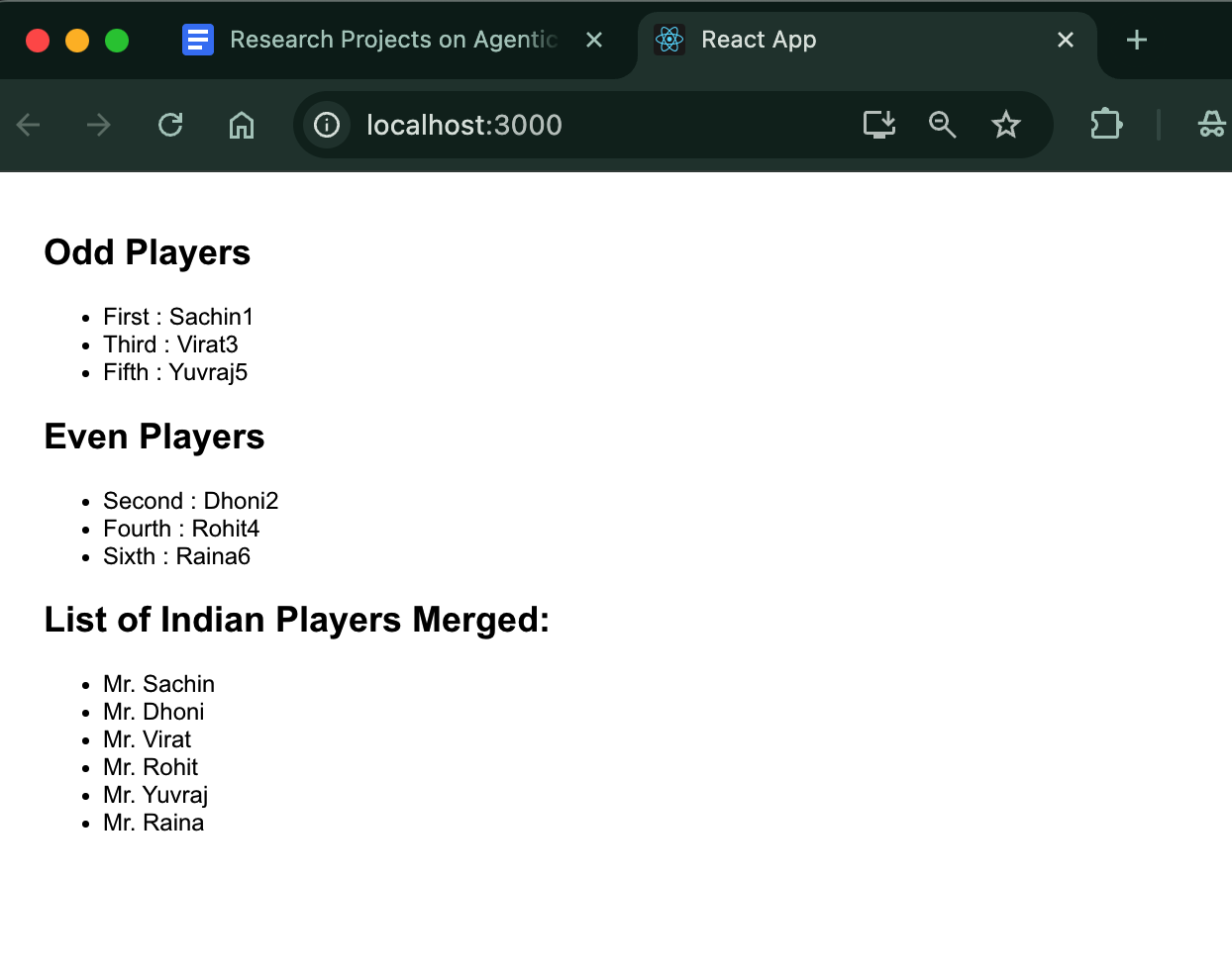
);

}

export default App;

**OUTPUT :**





**File : 10. ReactJS-HOL.docx**

**Exercise :** JSX Rendering and Inline CSS in React with Conditional Styling

**App.js :**

import React from 'react';

import './App.css';

function App() {

const heading = <h1>Office Space Rentals</h1>;

const office = {

name: "CoWork Zone",

rent: 55000,

address: "123 Business Street, Mumbai"

};

const officeList = [

{

name: "WorkHub",

rent: 45000,

address: "45 Startup Lane, Bengaluru"

},

{

name: "OfficeBay",

rent: 62000,

address: "88 Enterprise Road, Pune"

},

{

name: "SpaceX Cowork",

rent: 75000,

address: "12 Tech Park, Hyderabad"

}

];

const getRentStyle = (rent) => ({

color: rent < 60000 ? 'red' : 'green'

});

return (

<div style={{ paddingLeft: '40px', paddingTop: '20px' }}>

{heading}

<img

src="/office-space.jpg"

alt="Office Space"

style={{ width: '400px', height: '200px', marginBottom: '20px', borderRadius: '8px' }}

/>

<h2>Featured Office</h2>

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

<p><strong>Rent:</strong> <span style={getRentStyle(office.rent)}>{office.rent}</span></p>

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

<h2>Available Offices</h2>

<ul>

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

<li key={index}>

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

<p><strong>Rent:</strong> <span style={getRentStyle(o.rent)}>{o.rent}</span></p>

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

</li>

))}

</ul>

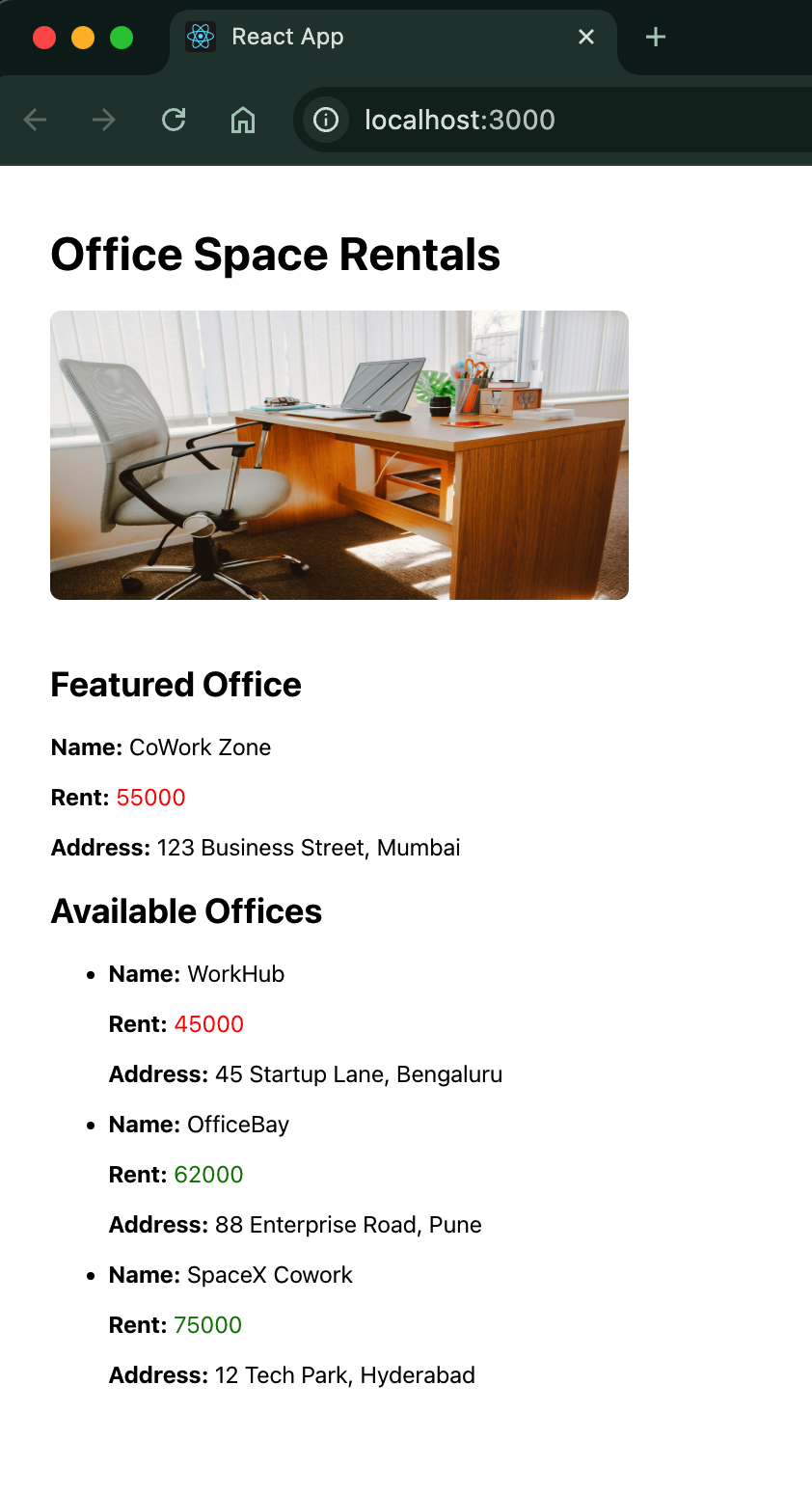
</div>

);

}

export default App;

**OUTPUT :**

****

**File : 11. ReactJS-HOL.docx**

**Exercise :** React Event Handling – Synthetic Events, Event Binding, and Currency Converter

**CurrencyConvertor.js :**

import React, { useState } from 'react';

function CurrencyConvertor() {

const [rupees, setRupees] = useState('');

const [currency, setCurrency] = useState('');

const handleSubmit = (e) => {

e.preventDefault();

const amount = parseFloat(rupees);

if (!isNaN(amount) && currency.toLowerCase() === 'euro') {

const converted = (amount \* 0.011).toFixed(2);

alert(`Converting to Euro Amount is ${converted}`);

} else {

alert("Please enter a valid INR amount and 'Euro' in the currency field.");

}

};

return (

<div style={{ marginTop: '30px' }}>

<h2 style={{ color: 'green' }}>Currency Convertor!!!</h2>

<form onSubmit={handleSubmit}>

<div>

<label htmlFor="inr">Amount:</label>&nbsp;

<input

type="text"

id="inr"

value={rupees}

onChange={(e) => setRupees(e.target.value)}

/>

</div>

<br />

<div>

<label htmlFor="currency">Currency:</label>&nbsp;

<input

type="text"

id="currency"

value={currency}

onChange={(e) => setCurrency(e.target.value)}

/>

</div>

<br />

<button type="submit">Submit</button>

</form>

</div>

);

}

export default CurrencyConvertor;

**App.js :**

import React from 'react';

import CurrencyConvertor from './Currencyconvertor';

function App() {

return (

<div style={{ paddingLeft: '40px', paddingTop: '20px' }}>

<EventDemo />

<CurrencyConvertor />

</div>

);

}

class EventDemo extends React.Component {

constructor(props) {

super(props);

this.state = {

count: 0

};

}

increment = () => {

this.setState({ count: this.state.count + 1 });

this.sayHello();

this.sayWelcomeMessage();

};

decrement = () => {

this.setState({ count: this.state.count - 1 });

};

sayHello = () => {

alert("Hello Member");

};

sayWelcomeMessage = () => {

alert("Welcome");

};

sayWelcome = (msg) => {

alert(msg);

};

handleSynthetic = (e) => {

alert("I was clicked");

console.log("Synthetic Event:", e);

};

render() {

return (

<div>

<h2>Counter: {this.state.count}</h2>

<button onClick={this.increment}>Increment</button>&nbsp;

<button onClick={this.decrement}>Decrement</button>

<br /><br />

<button onClick={() => this.sayWelcome("Welcome")}>Say Welcome</button>

<br /><br />

<button onClick={this.handleSynthetic}>Click on Me</button>

</div>

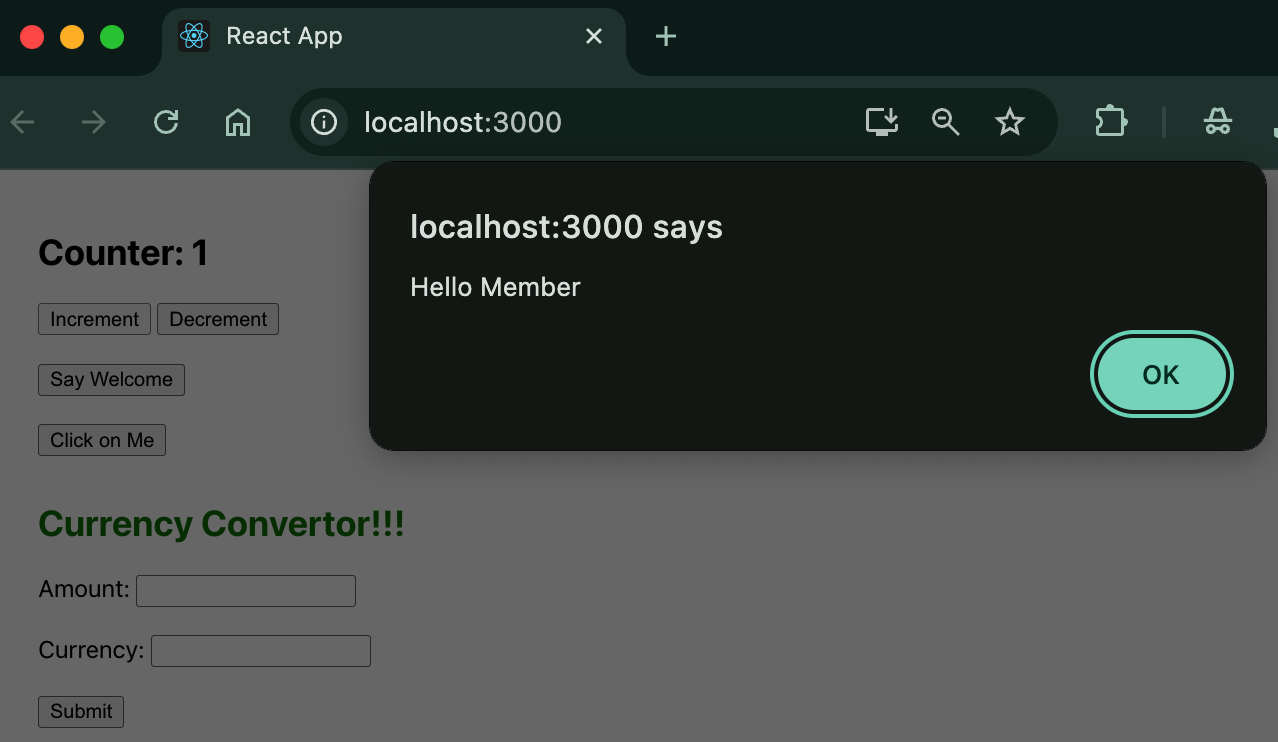
);

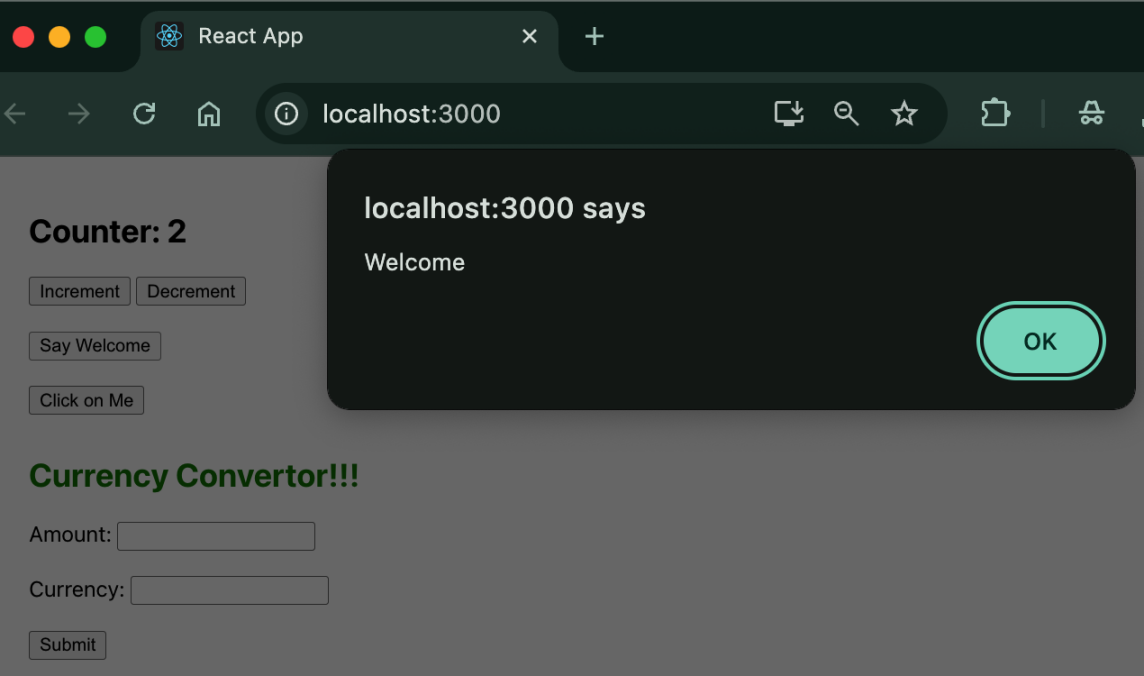
}

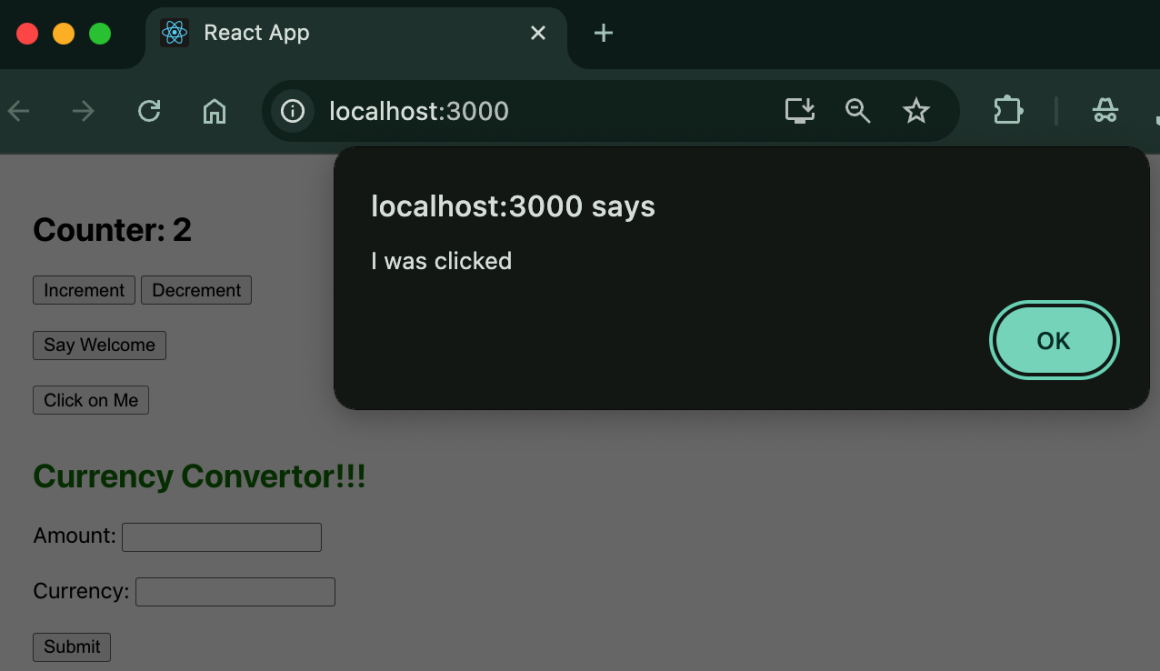
}

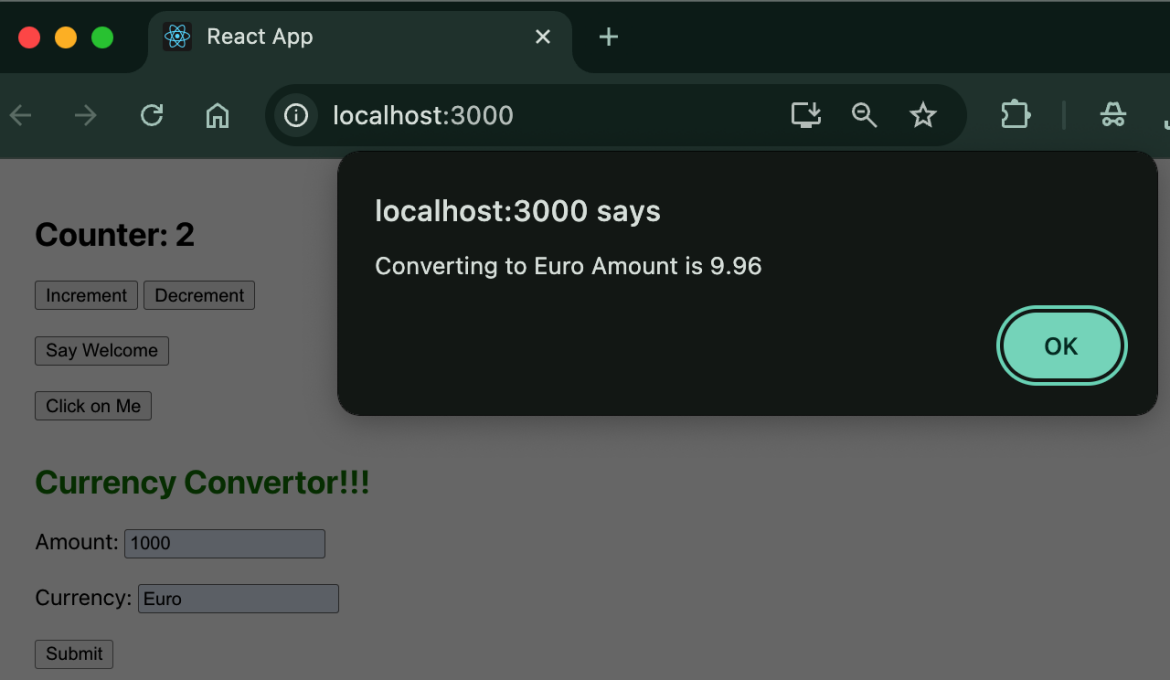
export default App;

**OUTPUT :**

****

****

****

****

**File : 12. ReactJS-HOL.docx**

**Exercise :** Conditional Rendering – Ticket Booking App for Guest & Logged- in User

**App.js :**

import React, { useState } from 'react';

import Guest from './Guest';

import User from './User';

function App() {

**const [isLoggedIn, setIsLoggedIn] = useState(false);**

const handleLogin = () => setIsLoggedIn(true);

const handleLogout = () => setIsLoggedIn(false);

**const content = isLoggedIn ? <User /> : <Guest />;**

return (

<div style={{ paddingLeft: '40px', paddingTop: '20px' }}>

<h1>Ticket Booking App</h1>

{isLoggedIn ? (

<button onClick={handleLogout}>Logout</button>

) : (

<button onClick={handleLogin}>Login</button>

)}

<hr />

{content}

</div>

);

}

export default App;

**Guest.js :**

import React from 'react';

function Guest() {

return (

<div>

**<h2>Please sign up.</h2>**

<p>You can view flight details below:</p>

<ul>

<li>Flight: AI202 – Mumbai to Delhi – 10:00 AM</li>

<li>Flight: 6E305 – Bangalore to Pune – 1:45 PM</li>

<li>Flight: SG908 – Chennai to Kolkata – 5:30 PM</li>

</ul>

</div>

);

}

export default Guest;

**User.js :**

import React from 'react';

function User() {

return (

<div>

**<h2>Welcome back</h2>**

<p>You can now book your tickets.</p>

<button>Book Now</button>

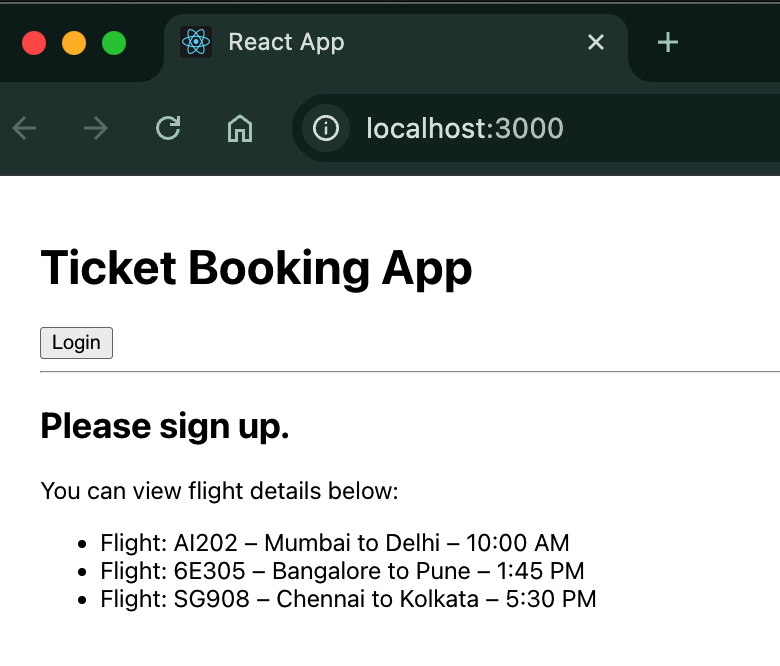
</div>

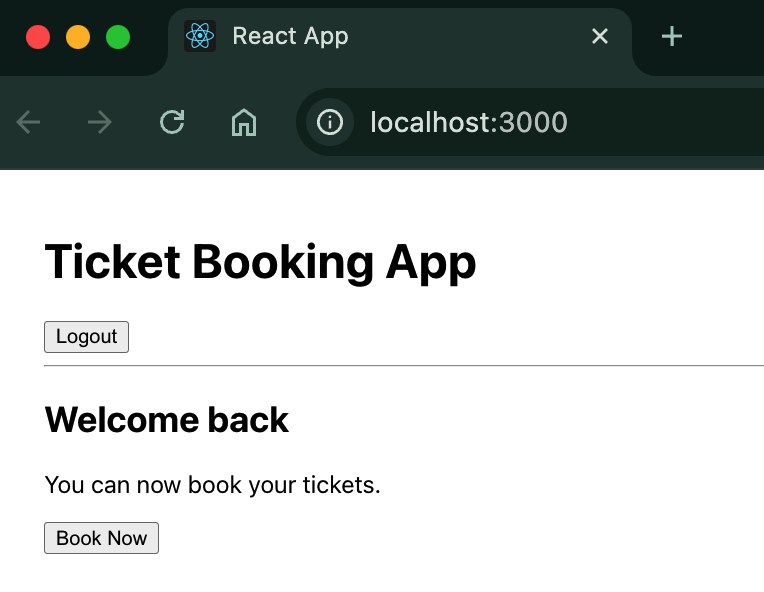
);

}

export default User;

**OUTPUT :**

****

****

**File : 13. ReactJS-HOL.docx**

**Exercise :** Displaying Course, Book, and Blog Data Using Components & Conditional Rendering

**BlogDetails.js :**

import React from 'react';

function BlogDetails() {

const blogs = [

{

title: 'React Learning',

author: 'Stephen Biz',

content: 'Welcome to learning React!'

},

{

title: 'Installation',

author: 'Schwezdenier',

content: 'You can install React from npm.'

}

];

return (

<div className="section">

<h2>Blog Details</h2>

{blogs.map((blog, index) => (

<div key={index}>

<p><strong>{blog.title}</strong></p>

<p>{blog.author}</p>

<p>{blog.content}</p>

</div>

))}

</div>

);

}

export default BlogDetails;

**BookDetails.js :**

import React from 'react';

function BookDetails() {

const books = [

{ title: 'Master React', price: 670 },

{ title: 'Deep Dive into Angular 11', price: 800 },

{ title: 'Mongo Essentials', price: 450 }

];

return (

<div className="section">

<h2>Book Details</h2>

{books.map((book, index) => (

<div key={index}>

<p><strong>{book.title}</strong></p>

<p>{book.price}</p>

</div>

))}

</div>

);

}

export default BookDetails;

**CourseDetails.js :**

import React from 'react';

function CourseDetails() {

const courses = [

{ name: 'Angular', date: '4/5/2021' },

{ name: 'React', date: '6/3/2020' }

];

return (

<div className="section">

<h2>Course Details</h2>

{courses.map((course, index) => (

<div key={index}>

<p><strong>{course.name}</strong></p>

<p>{course.date}</p>

</div>

))}

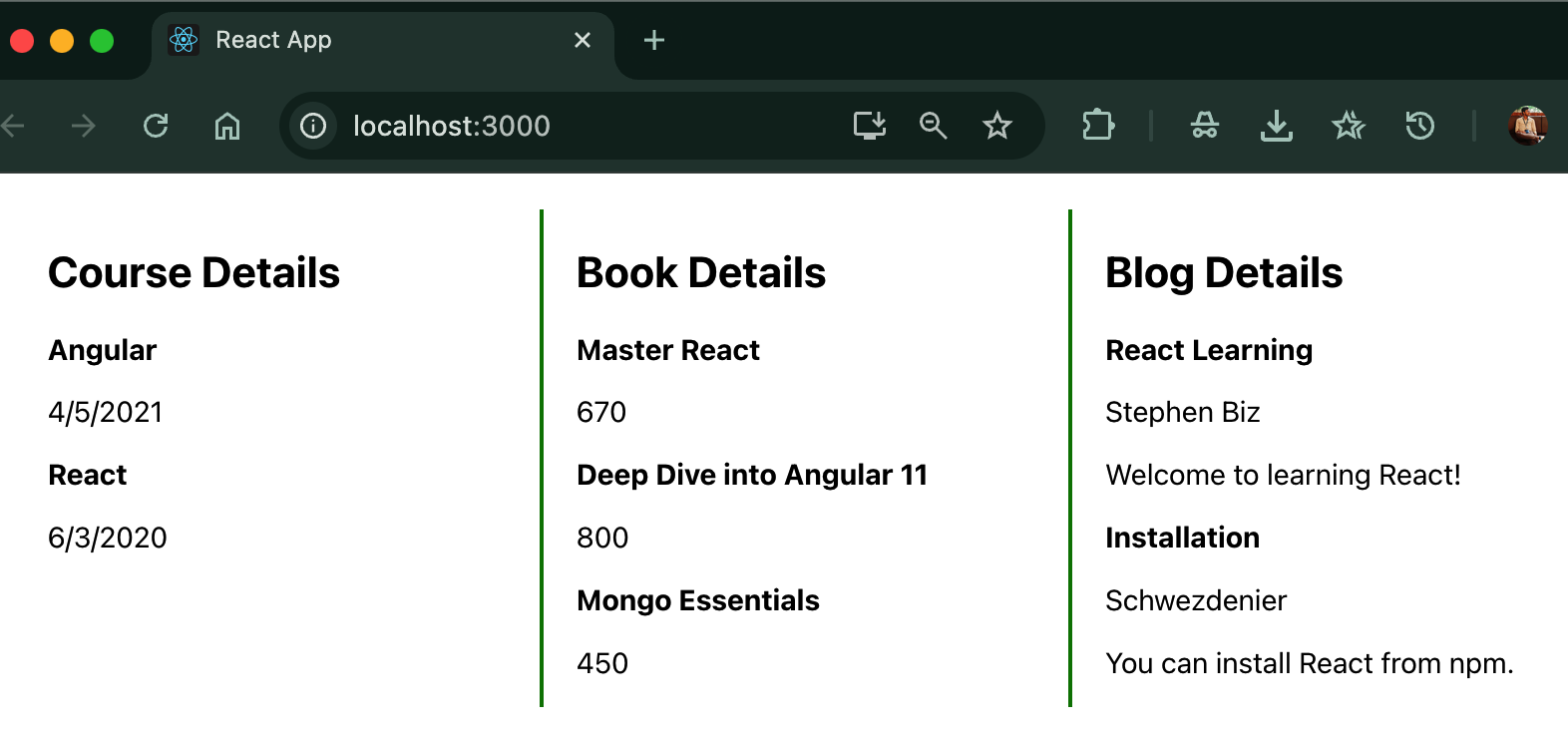
</div>

);

}

export default CourseDetails;

**OUTPUT :**

****

**File : 14. ReactJS-HOL.docx**

**Exercise :** Using React Context API for Theme Switching

**ThemeContext.js :**

import { createContext } from 'react';

const ThemeContext = createContext('light');

export default ThemeContext;

**App.js :**

import logo from './logo.svg';

import './App.css';

import { EmployeesData } from './Employee';

import EmployeesList from './EmployeesList';

import { useState } from 'react';

import ThemeContext from './ThemeContext';

function App() {

const Employees = EmployeesData;

const [theme, setTheme] = useState('light');

return (

<ThemeContext.Provider value={theme}>

<div>

<label>SELECT A THEME </label>

<select onChange={(e) => setTheme(e.target.value)} value={theme}>

<option value='light'>Light</option>

<option value='dark'>Dark</option>

</select>

</div>

<EmployeesList employees={Employees} />

</ThemeContext.Provider>

);

}

export default App;

**EmployeesList.js :**

import EmployeeCard from './EmployeeCard';

function EmployeesList(props) {

return (

<div>

<h1>Employees List</h1>

{props.employees.map(employee => (

<EmployeeCard employee={employee} key={employee.id} />

))}

</div>

);

}

export default EmployeesList;

**EmployeeCard.js :**

import Styles from './EmployeeCard.module.css';

import { useContext } from 'react';

import ThemeContext from './ThemeContext';

function EmployeeCard(props) {

const theme = useContext(ThemeContext);

return (

<div className={Styles.Card}>

<h3>{props.employee.name}</h3>

<p>{props.employee.email}</p>

<p>{props.employee.phone}</p>

<p>

<a href="#" className={theme}>Edit</a>{' '}

<a href="#" className={theme}>Delete</a>

</p>

</div>

);

}

export default EmployeeCard;

**App.css :**

a {

display: inline-block;

margin: 3px 5px;

padding: 5px 10px;

border-radius: 3px;

text-decoration: none;

font-weight: bold;

}

/\* Light theme style \*/

a.light {

background-color: #eee;

color: #333;

border: 1px solid #ccc;

}

/\* Dark theme style \*/

a.dark {

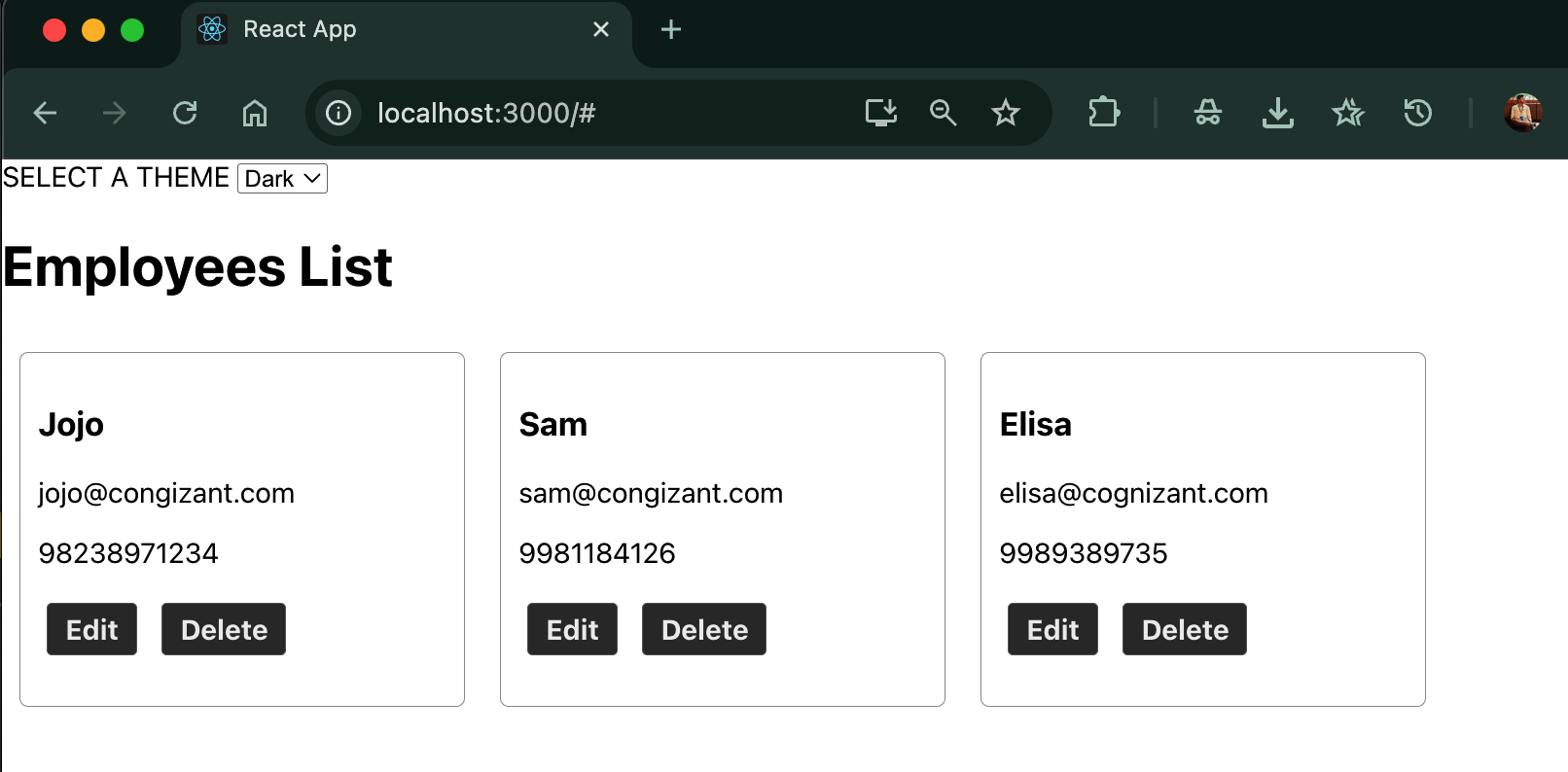
background-color: #333;

color: #eee;

border: 1px solid #666;

}

**OUTPUT :**

****

**File : 15. ReactJS-HOL.docx**

**Exercise :** React Forms – Complaint Registration App

**ComplainRegister.js :**

import React, { useState } from 'react';

function ComplaintRegister() {

const [employeeName, setEmployeeName] = useState('');

const [complaint, setComplaint] = useState('');

const handleSubmit = (e) => {

e.preventDefault();

const referenceNumber = Math.floor(Math.random() \* 900000 + 100000); // 6-digit ref

alert(

`Complaint Registered!\n\nEmployee Name: ${employeeName}\nComplaint: ${complaint}\nReference Number: ${referenceNumber}`

);

// Clear form

setEmployeeName('');

setComplaint('');

};

return (

<div style={{ margin: '20px', padding: '20px', maxWidth: '500px', border: '1px solid #ccc' }}>

<h2>Raise a Complaint</h2>

<form onSubmit={handleSubmit}>

<div style={{ marginBottom: '15px' }}>

<label>Employee Name:</label><br />

<input

type="text"

value={employeeName}

onChange={(e) => setEmployeeName(e.target.value)}

required

style={{ width: '100%', padding: '8px' }}

/>

</div>

<div style={{ marginBottom: '15px' }}>

<label>Complaint:</label><br />

<textarea

value={complaint}

onChange={(e) => setComplaint(e.target.value)}

required

rows={4}

style={{ width: '100%', padding: '8px' }}

/>

</div>

<button type="submit" style={{ padding: '8px 16px' }}>Submit</button>

</form>

</div>

);

}

export default ComplaintRegister;

**App.js :**

import React from 'react';

import ComplaintRegister from './ComplaintRegister';

function App() {

return (

<div className="App">

<ComplaintRegister />

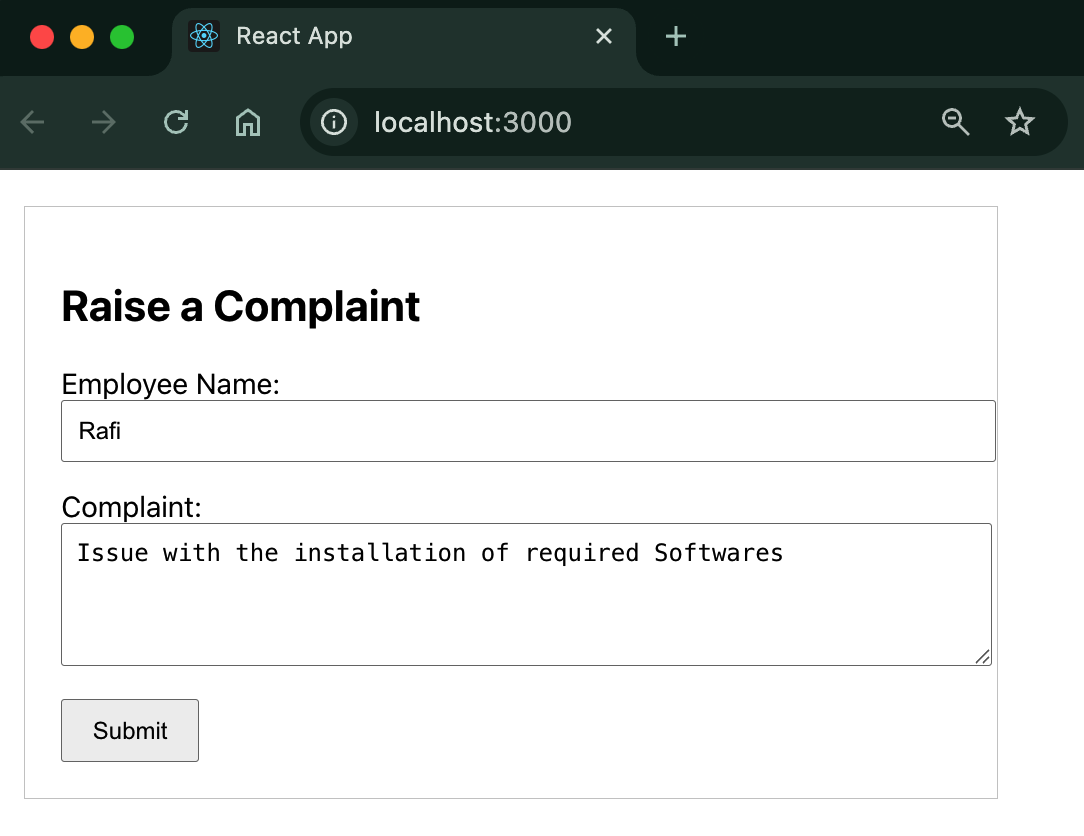
</div>

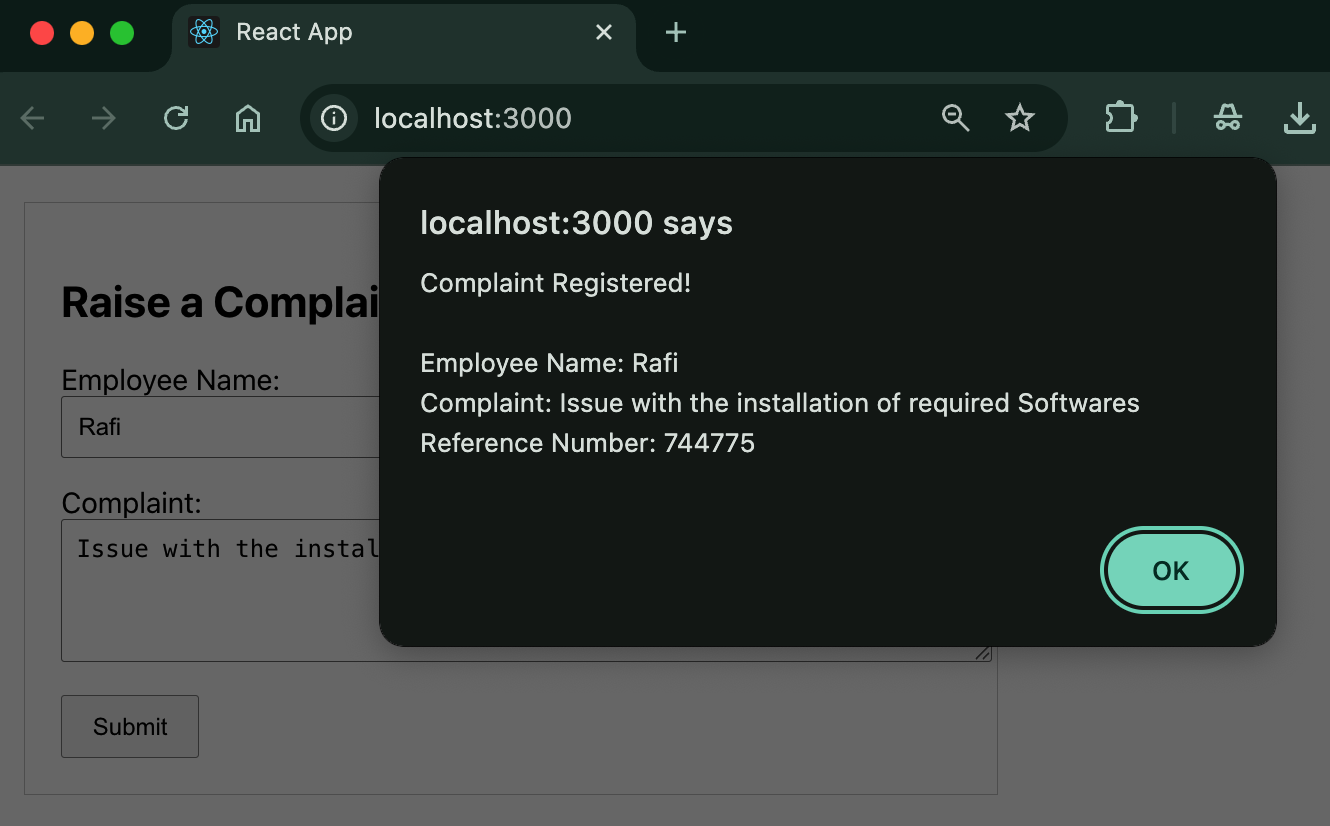
);

}

export default App;

**OUTPUT :**

****

****

**File : 16. ReactJS-HOL.docx**

**Exercise :** React Form Validation with Alerts

**register.js :**

import React, { useState } from 'react';

function Register() {

const [form, setForm] = useState({

fullName: '',

email: '',

password: '',

});

const [errors, setErrors] = useState({

fullName: '',

email: '',

password: '',

});

const handleChange = (e) => {

const { name, value } = e.target;

setForm({ ...form, [name]: value });

let updatedErrors = { ...errors };

switch (name) {

case 'fullName':

updatedErrors.fullName =

value.length < 5 ? 'Full Name must be 5 characters long!' : '';

break;

case 'email':

const validEmailRegex = RegExp(

/^[^\s@]+@[^\s@]+\.[^\s@]+$/ );

updatedErrors.email = validEmailRegex.test(value)

? ''

: 'Email is not valid!';

break;

case 'password':

updatedErrors.password =

value.length < 8 ? 'Password must be at least 8 characters!' : '';

break;

default:

break;

}

setErrors(updatedErrors);

};

const validateForm = () => {

return (

errors.fullName === '' &&

errors.email === '' &&

errors.password === ''

);

};

const handleSubmit = (event) => {

event.preventDefault();

if (validateForm()) {

alert('Valid Form');

alert(

`Registration Successful!\n\nName: ${form.fullName}\nEmail: ${form.email}`

);

setForm({ fullName: '', email: '', password: '' });

setErrors({ fullName: '', email: '', password: '' });

} else {

if (errors.fullName !== '') alert(errors.fullName);

if (errors.email !== '') alert(errors.email);

if (errors.password !== '') alert(errors.password);

}

};

return (

<div style={{ maxWidth: '400px', margin: '20px auto', padding: '20px', border: '1px solid #ccc' }}>

<h2>Register</h2>

<form onSubmit={handleSubmit}>

<div>

<label>Full Name:</label><br />

<input

type="text"

name="fullName"

value={form.fullName}

onChange={handleChange}

style={{ width: '100%', padding: '8px' }}

/>

</div>

<div>

<label>Email:</label><br />

<input

type="email"

name="email"

value={form.email}

onChange={handleChange}

style={{ width: '100%', padding: '8px' }}

/>

</div>

<div>

<label>Password:</label><br />

<input

type="password"

name="password"

value={form.password}

onChange={handleChange}

style={{ width: '100%', padding: '8px' }}

/>

</div>

<button type="submit" style={{ marginTop: '10px', padding: '8px 16px' }}>

Register

</button>

</form>

</div>

);

}

export default Register;

**App.js :**

import React from 'react';

import Register from './register';

function App() {

return (

<div className="App">

<Register />

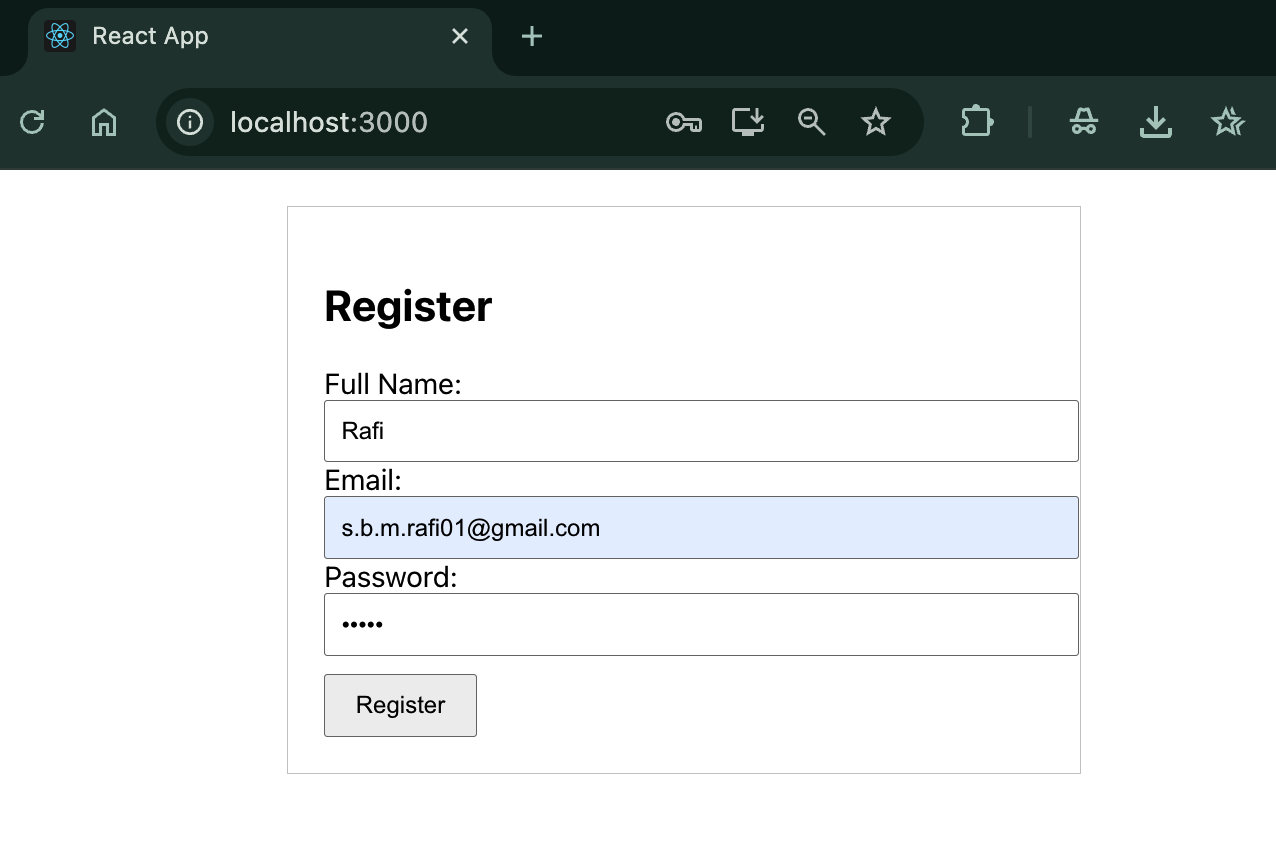
</div>

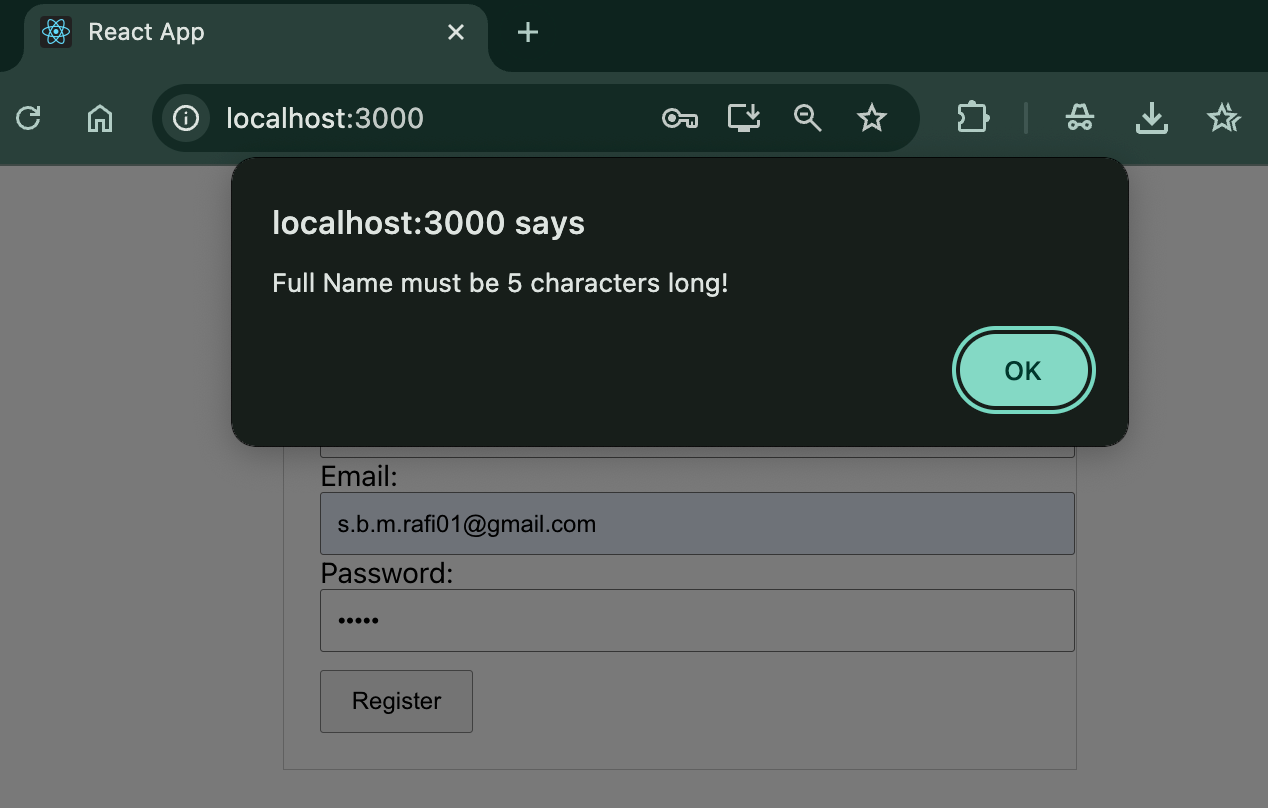
);

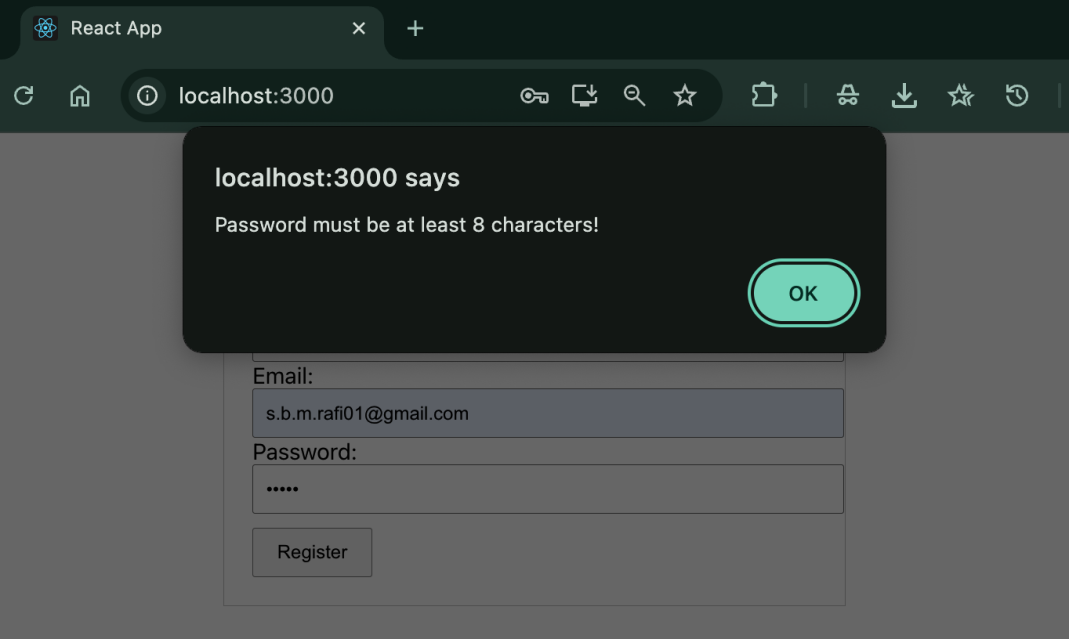
}

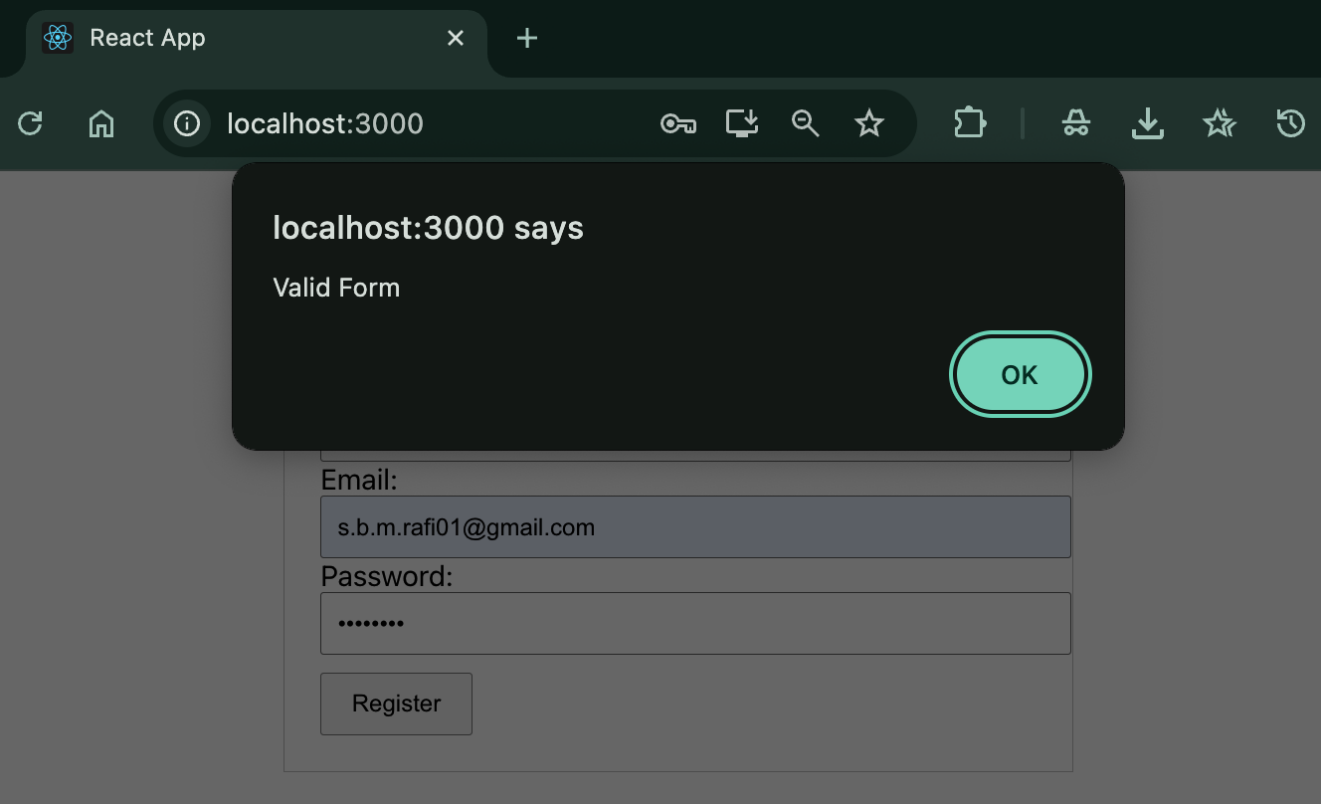
export default App;

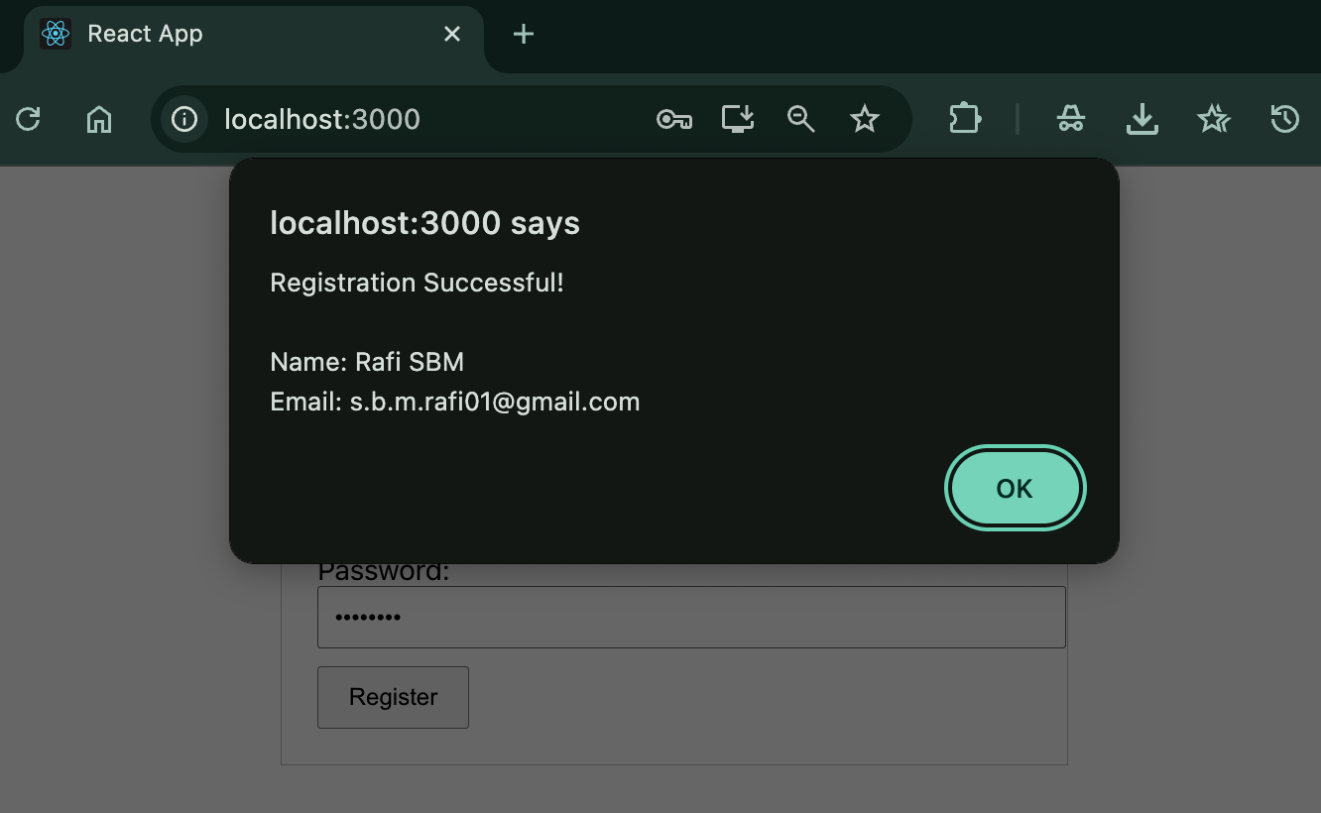
**OUTPUT :**

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**File : 17. ReactJS-HOL.docx**

**Exercise :** Fetching User Data from REST API

**Getuser.js :**

import React, { Component } from 'react';

class Getuser extends Component {

constructor() {

super();

this.state = {

user: null,

};

}

componentDidMount() {

fetch('https://api.randomuser.me/')

.then((res) => res.json())

.then((data) => {

this.setState({ user: data.results[0] });

})

.catch((error) => {

console.error('Error fetching user:', error);

});

}

render() {

const { user } = this.state;

return (

<div style={{ textAlign: 'center', padding: '20px' }}>

<h2>User Information</h2>

{user ? (

<div>

<p>

Name: {user.name.title} {user.name.first}

</p>

<img src={user.picture.large} alt="User" style={{ borderRadius: '50%' }} />

</div>

) : (

<p>Loading user...</p>

)}

</div>

);

}

}

export default Getuser;

**App.js :**

import React from 'react';

import Getuser from './Getuser';

function App() {

return (

<div className="App">

<Getuser />

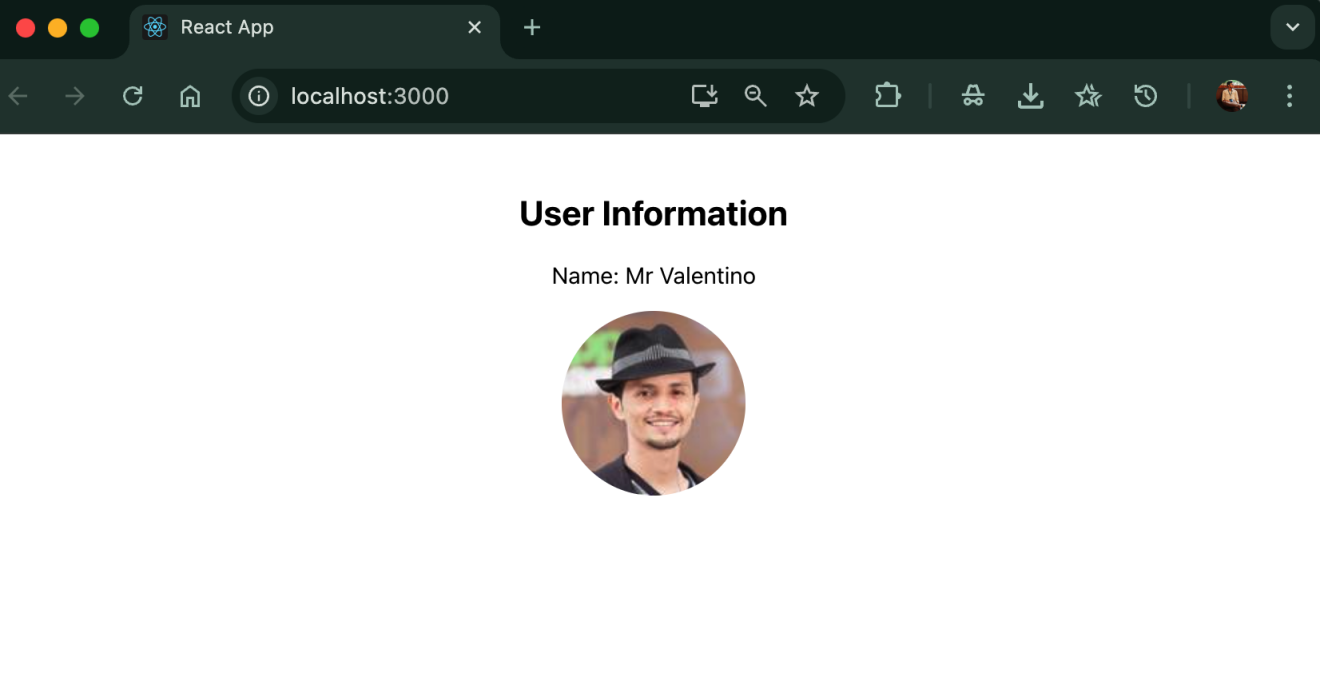
</div>

);

}

export default App;

**OUTPUT :**

****