**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 },
```

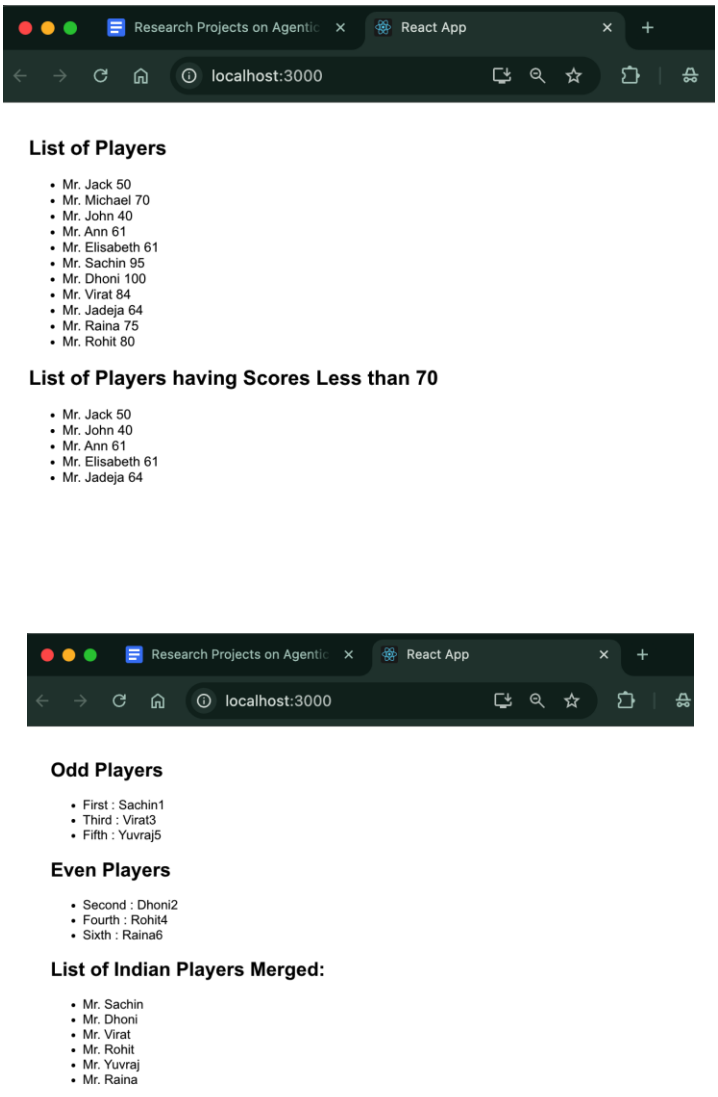
```
    { name: "Mr. Dhoni", score: 100 },
    { name: "Mr. Virat", score: 84 },
    { name: "Mr. Jadeja", score: 64 },
    { name: "Mr. Raina", score: 75 },
    { name: "Mr. Rohit", score: 80 },
  ];
  const below70 = players.filter(p => p.score < 70);
  return (
    <div>
      <h2>List of Players</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**

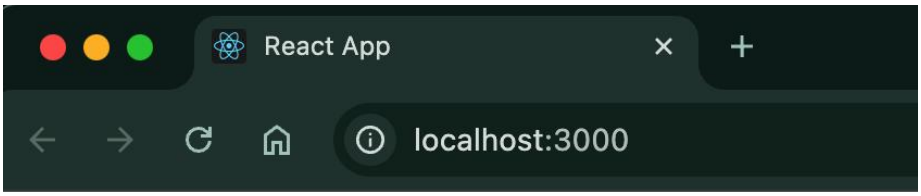
**Exercise :** JSX Rendering and Inline CSS in React with Conditional Styling

## App.js :

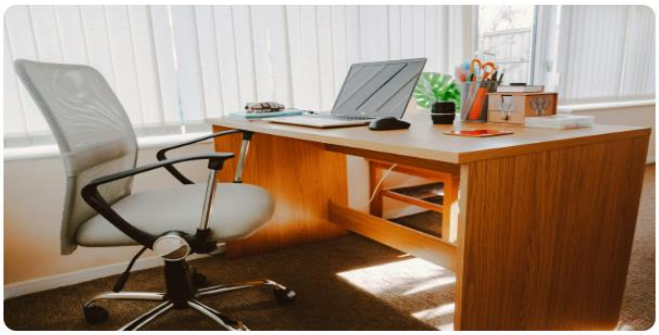
```
import React from 'react';
import './App.css';

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 :**




# Office Space Rentals



## Featured Office

**Name:** CoWork Zone

**Rent:** 55000

**Address:** 123 Business Street, Mumbai

## Available Offices

- **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

**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> 
          <input
            type="text"
            id="inr"
            value={rupees}
            onChange={(e) => setRupees(e.target.value)}
          />
        </div>
        <br />
        <div>
          <label htmlFor="currency">Currency:</label> 
          <input
            type="text"
            id="currency"
            value={currency}
            onChange={(e) => setCurrency(e.target.value)}
          />
        </div>
        <br />
        <button type="submit">Submit</button>
      </form>
```

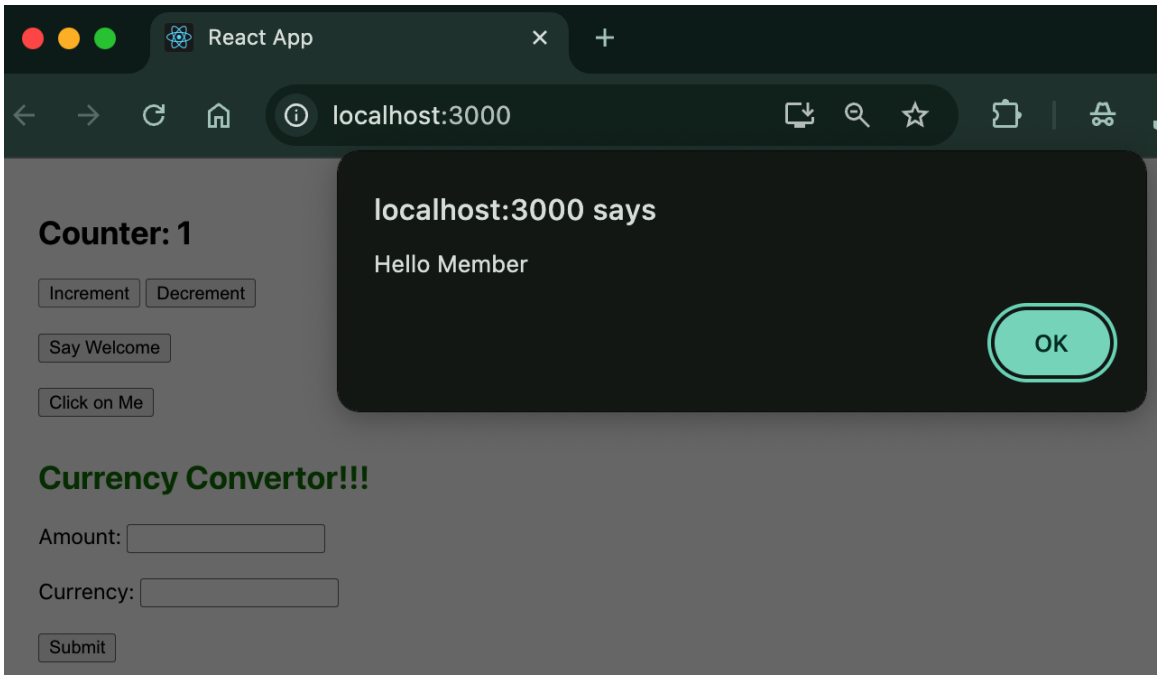
```
    </div>
  );
}

export default CurrencyConvertor;
```

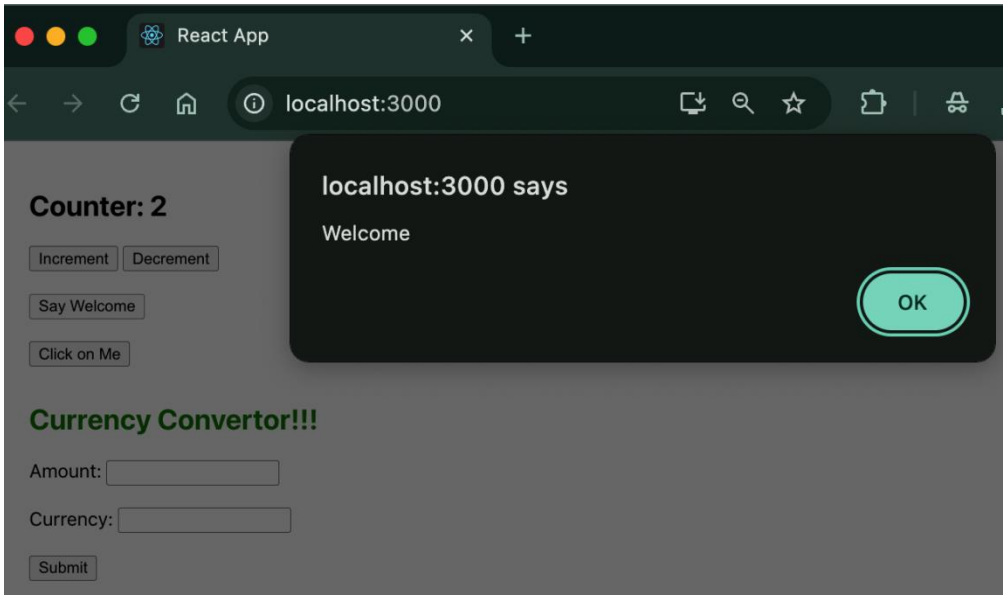
## App.js :

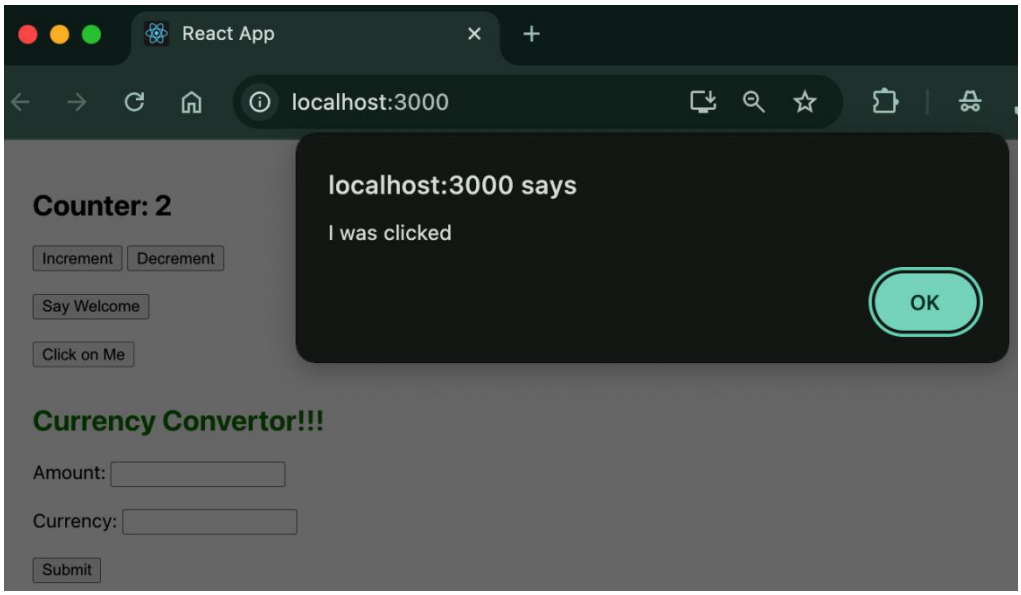
```
import React from 'react';
import CurrencyConvertor from './Currencyconvertor';

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");
```

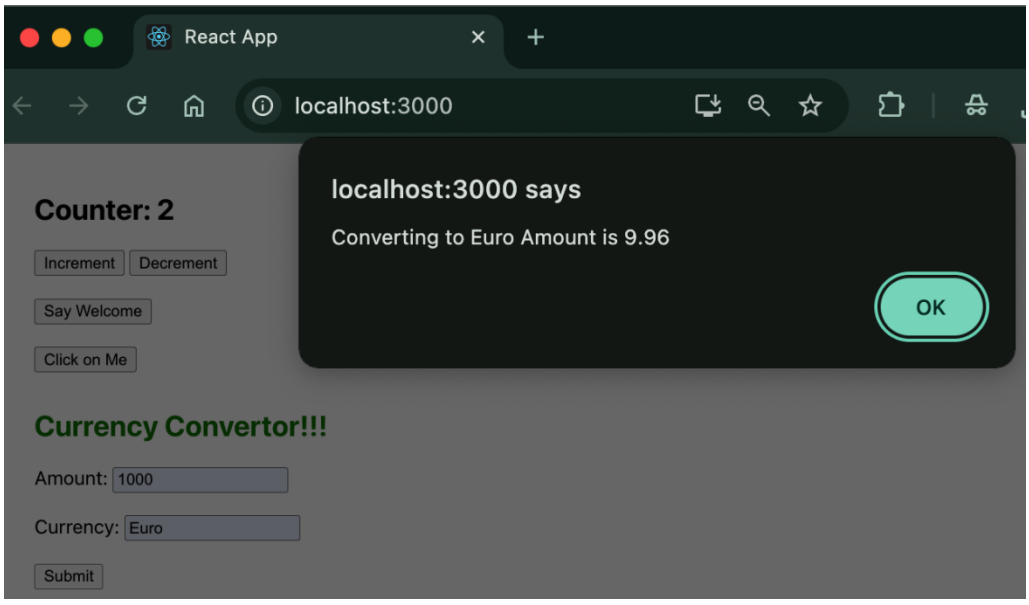
```
    console.log("Synthetic Event:", e);
  };

  render() {
    return (
      <div>
        <h2>Counter: {this.state.count}</h2>
        <button onClick={this.increment}>Increment</button> 
        <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 :**




React App
localhost:3000
Counter: 2
Increment
Decrement
Say Welcome
Click on Me
Currency Convertor!!!
Amount:
Currency:
Submit
localhost:3000 says
Welcome
OK


React App
localhost:3000
Counter: 2
Increment
Decrement
Say Welcome
Click on Me
Currency Convertor!!!
Amount:
Currency:
Submit
localhost:3000 says
I was clicked
OK


React App
localhost:3000
Counter: 2
Increment
Decrement
Say Welcome
Click on Me
Currency Convertor!!!
Amount: 1000
Currency: Euro
Submit
localhost:3000 says
Converting to Euro Amount is 9.96
OK

**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;
```

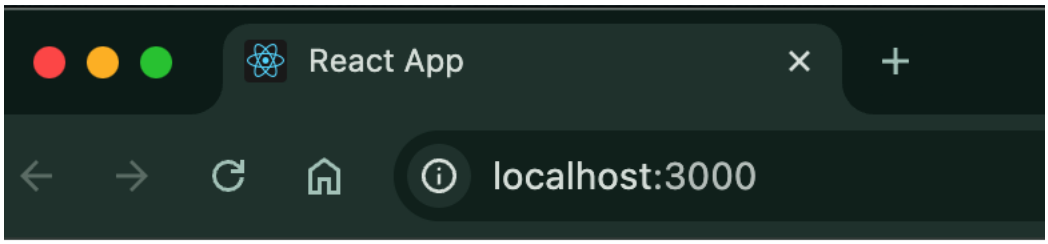
## Guest.js :

```
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 :**




# Ticket Booking App

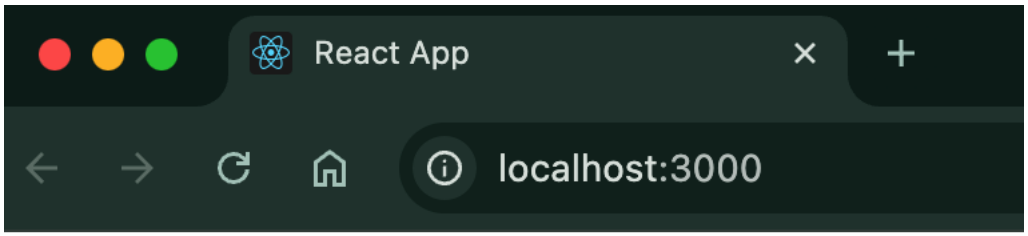
Login

---

## Please sign up.

You can view flight details below:

- Flight: AI202 – Mumbai to Delhi – 10:00 AM
- Flight: 6E305 – Bangalore to Pune – 1:45 PM
- Flight: SG908 – Chennai to Kolkata – 5:30 PM




# Ticket Booking App

Logout

---

## Welcome back

You can now book your tickets.

Book Now

**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 :

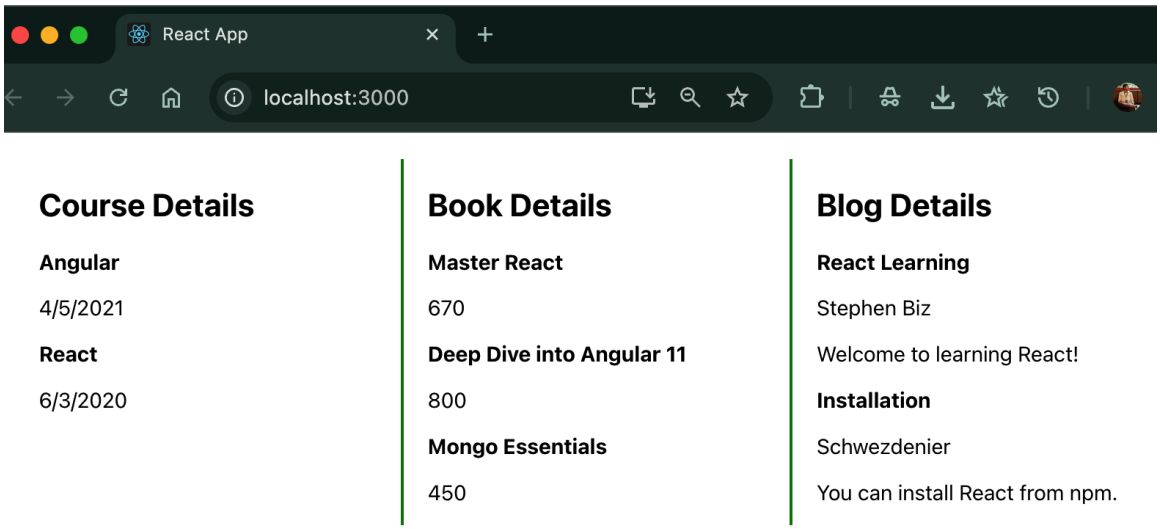
```
import React from 'react';

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 :


React App
localhost:3000
Course Details
Angular
4/5/2021
React
6/3/2020
Book Details
Master React
670
Deep Dive into Angular 11
800
Mongo Essentials
450
Blog Details
React Learning
Stephen Biz
Welcome to learning React!
Installation
Schwezdenier
You can install React from npm.

**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 :

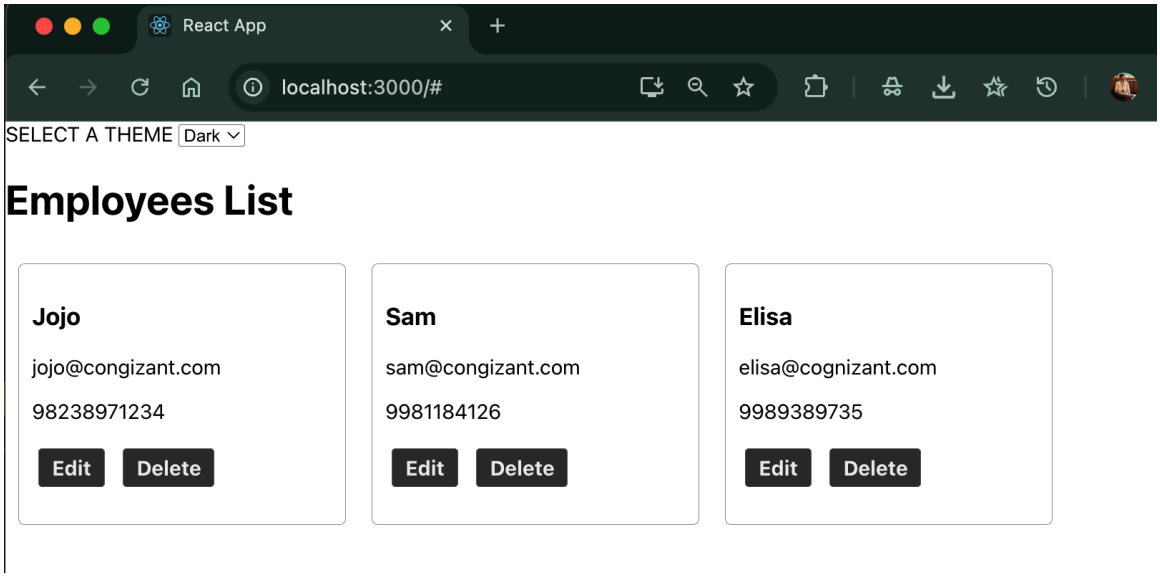
```
import Styles from './EmployeeCard.module.css';
import { useContext } from 'react';
import ThemeContext from './ThemeContext';

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 :

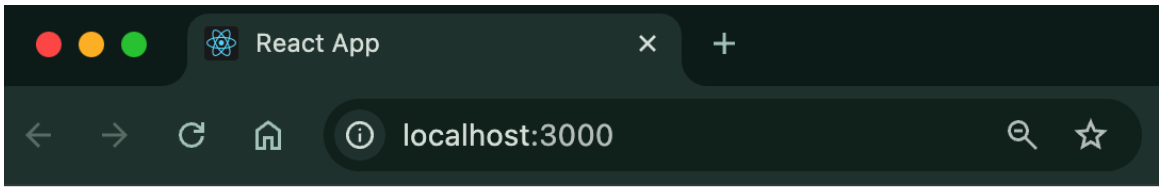
```
import React, { useState } from 'react';

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 :**




## Raise a Complaint

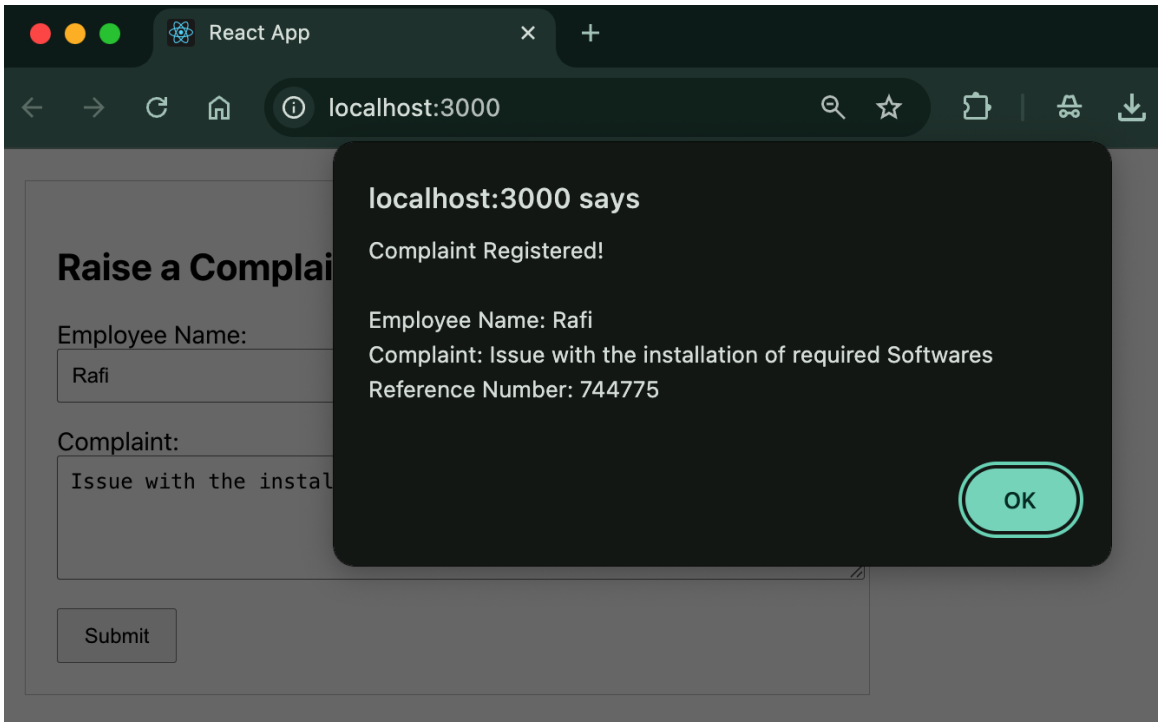
Employee Name:

Rafi

Complaint:

Issue with the installation of required Softwares

Submit



**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: '' });
```

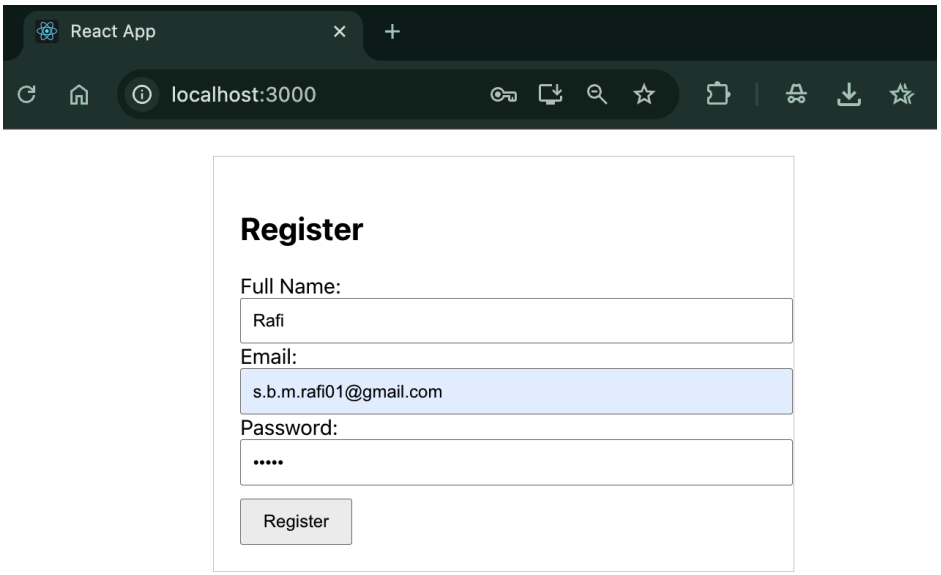
```
    } else {
      if (errors.fullName !== '') alert(errors.fullName);
      if (errors.email !== '') alert(errors.email);
      if (errors.password !== '') alert(errors.password);
    }
  };

  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>
```

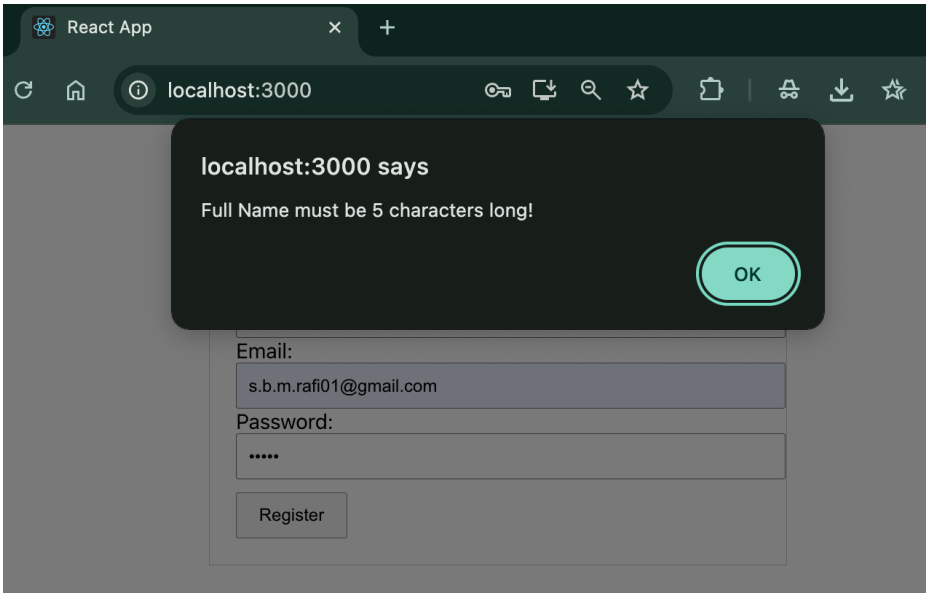
```
        <div>
          <label>Password:</label><br />
          <input
            type="password"
            name="password"
            value={form.password}
            onChange={handleChange}
            style={{ width: '100%', padding: '8px' }}
          />
        </div>

        <button type="submit" style={{ marginTop: '10px', padding: '8px 16px' }}>
          Register
        </button>
      </form>
    </div>
  );
}

export default Register;
```

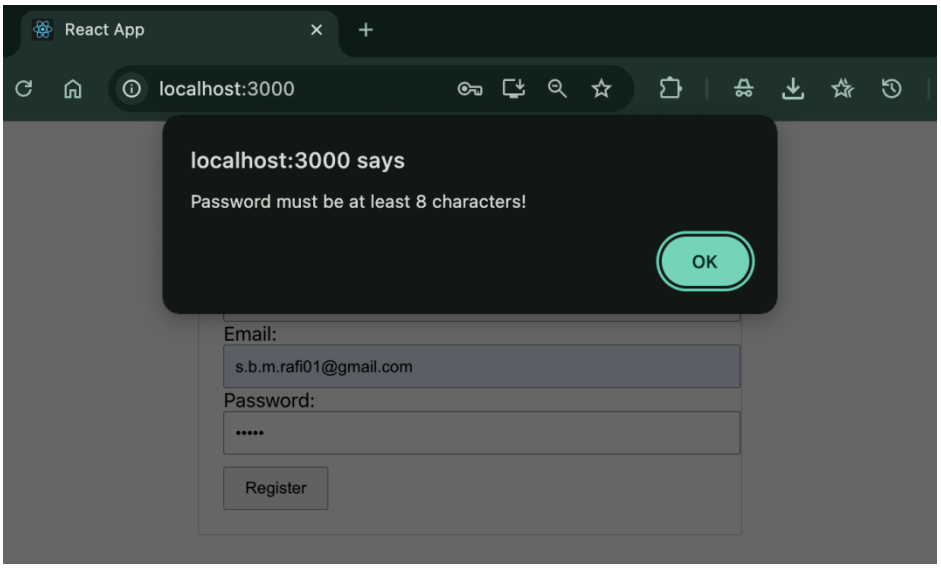
## App.js :

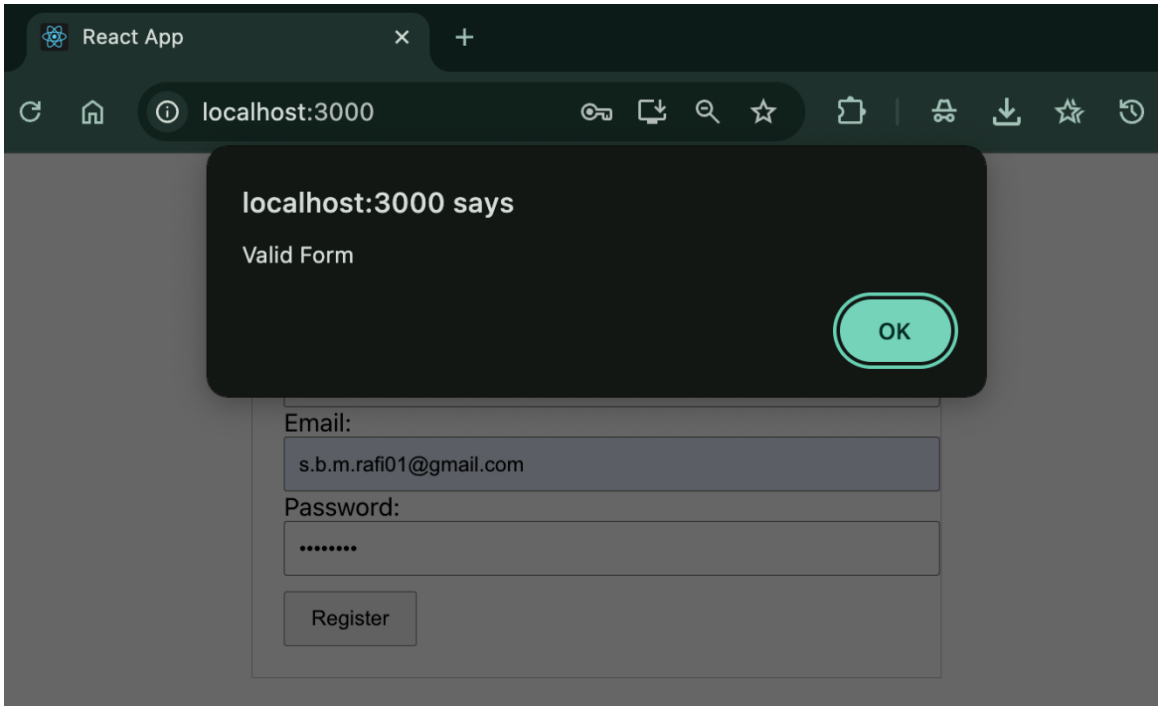
```
import React from 'react';
import Register from './register';

function App() {
  return (
    <div className="App">
      <Register />
    </div>
  );
}

export default App;
```

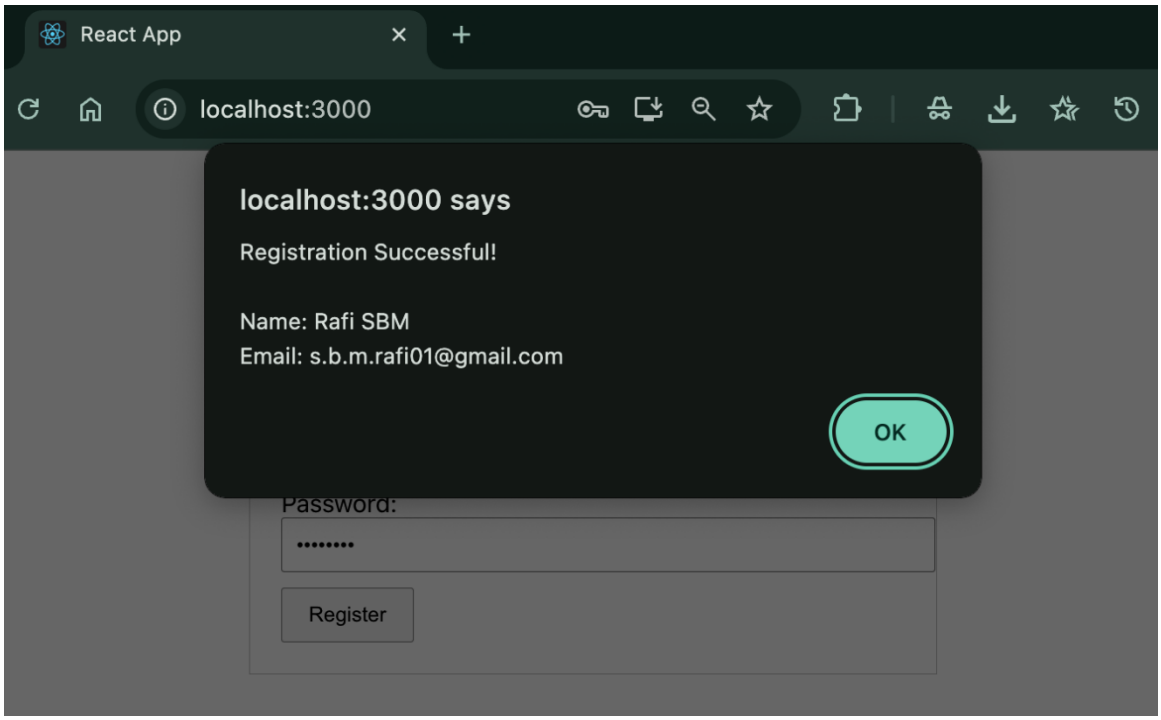
**OUTPUT :**


React App
localhost:3000
Register
Full Name:
Rafi
Email:
s.b.m.rafi01@gmail.com
Password:
Register


React App
localhost:3000
localhost:3000 says
Full Name must be 5 characters long!
OK
Email:
s.b.m.rafi01@gmail.com
Password:
Register


React App
localhost:3000
localhost:3000 says
Password must be at least 8 characters!
OK
Email:
s.b.m.rafi01@gmail.com
Password:
Register


React App
localhost:3000
localhost:3000 says
Valid Form
OK
Email:
s.b.m.rafi01@gmail.com
Password:
Register


React App
localhost:3000
localhost:3000 says
Registration Successful!
Name: Rafi SBM
Email: s.b.m.rafi01@gmail.com
OK
Password:
Register

**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 :**