**Week 7 Additional Hands-on**

**13. ReactJS-HOL**

**1. BookDetails.js**

import React from 'react';

const BookDetails = () => {

const books = [

{ id: 1, title: "React in Action", author: "Mark T." },

{ id: 2, title: "Learning React", author: "Alex B." }

];

return (

<div>

<h3> Book Details</h3>

<ul>

{books.map(book => (

<li key={book.id}>{book.title} by {book.author}</li>

))}

</ul>

</div>

);

};

export default BookDetails;

**2. BlogDetails.js**

import React from 'react';

const BlogDetails = () => {

const blogs = [

{ id: 1, title: "React Hooks Deep Dive" },

{ id: 2, title: "State Management Tips" }

];

return (

<div>

<h3>Blog Details</h3>

<ul>

{blogs.map(blog => (

<li key={blog.id}>{blog.title}</li>

))}

</ul>

</div>

);

};

export default BlogDetails;

**3. CourseDetails.js**

import React from 'react';

const CourseDetails = () => {

const courses = [

{ id: 1, name: "React Basics", duration: "4 weeks" },

{ id: 2, name: "Advanced React", duration: "6 weeks" }

];

return (

<div>

<h3>Course Details</h3>

<ul>

{courses.map(course => (

<li key={course.id}>{course.name} - {course.duration}</li>

))}

</ul>

</div>

);

};

export default CourseDetails;

**4. App.js – With Conditional Rendering Variants**

import React, { useState } from 'react';

import BookDetails from './components/BookDetails';

import BlogDetails from './components/BlogDetails';

import CourseDetails from './components/CourseDetails';

function App() {

const [selected, setSelected] = useState("book"); // 'book', 'blog', or 'course'

const [showCourse, setShowCourse] = useState(true); // for && operator

let displayComponent; // for element variable method

if (selected === "book") {

displayComponent = <BookDetails />;

} else if (selected === "blog") {

displayComponent = <BlogDetails />;

} else {

displayComponent = <CourseDetails />;

}

return (

<div style={{ padding: "20px", fontFamily: "Arial" }}>

<h1>Blogger App</h1>

<div>

<button onClick={() => setSelected("book")}>Book</button>

<button onClick={() => setSelected("blog")}>Blog</button>

<button onClick={() => setSelected("course")}>Course</button>

<button onClick={() => setShowCourse(prev => !prev)}>

Toggle Course Details (&& method)

</button>

</div>

<hr />

{/\* Element Variable Method \*/}

{displayComponent}

{/\* Ternary Operator \*/}

<div style={{ marginTop: "20px" }}>

<h2>Ternary Rendering:</h2>

{selected === "book" ? <BookDetails /> : <p>Not showing Book details</p>}

</div>

{/\* && Logical AND Rendering \*/}

<div style={{ marginTop: "20px" }}>

<h2>Conditional Rendering using &&</h2>

{showCourse && <CourseDetails />}

</div>

</div>

);

}

export default App;

**5. index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(<App />);

**14. ReactJS-HOL**

**1. ThemeContext.js**

import React from 'react';

const ThemeContext = React.createContext('light'); // default value

export default ThemeContext;

**2. App.js**

import React, { useState } from 'react';

import EmployeeList from './components/EmployeeList';

import ThemeContext from './ThemeContext';

function App() {

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

return (

<ThemeContext.Provider value={theme}>

<div className="App" style={{ padding: '20px' }}>

<h1>Employee Management</h1>

<button onClick={() => setTheme(theme === 'light' ? 'dark' : 'light')}>

Toggle Theme

</button>

{/\* Removed theme prop \*/}

<EmployeeList />

</div>

</ThemeContext.Provider>

);

}

export default App;

**3. EmployeeList.js**

import React from 'react';

import EmployeeCard from './EmployeeCard';

const EmployeeList = () => {

const employees = [

{ id: 1, name: 'Ravi', designation: 'Manager' },

{ id: 2, name: 'Anita', designation: 'Developer' },

{ id: 3, name: 'Suresh', designation: 'Tester' }

];

return (

<div>

<h2>Employees List</h2>

{employees.map(emp => (

// Removed theme prop

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

))}

</div>

);

};

export default EmployeeList;

**4. EmployeeCard.js**

import React, { useContext } from 'react';

import ThemeContext from '../ThemeContext';

const EmployeeCard = ({ employee }) => {

const theme = useContext(ThemeContext); // Retrieve theme from context

const buttonClass = theme === 'dark' ? 'btn-dark' : 'btn-light';

return (

<div style={{ border: '1px solid #ccc', padding: '10px', margin: '10px' }}>

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

<p>{employee.designation}</p>

<button className={buttonClass}>Contact</button>

</div>

);

};

export default EmployeeCard;

**Sample CSS :**

.btn-light {

background-color: #f0f0f0;

color: #000;

border: 1px solid #ccc;

}

.btn-dark {

background-color: #333;

color: #fff;

border: 1px solid #666;

}

**15. ReactJS-HOL**

**1. ComplaintRegister.js**

import React, { useState } from 'react';

const ComplaintRegister = () => {

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

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

const handleSubmit = (e) => {

e.preventDefault();

if (!employeeName || !complaint) {

alert("Please fill in both fields.");

return;

}

// Generate a random reference number

const referenceNumber = "REF" + Math.floor(100000 + Math.random() \* 900000);

alert(`Complaint submitted successfully!\nReference No: ${referenceNumber}`);

// Reset the form

setEmployeeName('');

setComplaint('');

};

return (

<div style={{ padding: '20px', fontFamily: 'Arial' }}>

<h2> Complaint Register</h2>

<form onSubmit={handleSubmit}>

<div style={{ marginBottom: '10px' }}>

<label>

Employee Name:<br />

<input

type="text"

value={employeeName}

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

required

style={{ width: '300px', padding: '8px' }}

/>

</label>

</div>

<div style={{ marginBottom: '10px' }}>

<label>

Complaint:<br />

<textarea

value={complaint}

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

required

rows="5"

style={{ width: '300px', padding: '8px' }}

></textarea>

</label>

</div>

<button type="submit" style={{ padding: '10px 20px' }}>

Submit Complaint

</button>

</form>

</div>

);

};

export default ComplaintRegister;

**2. App.js**

import React from 'react';

import ComplaintRegister from './components/ComplaintRegister';

function App() {

return (

<div className="App">

<ComplaintRegister />

</div>

);

}

export default App;

**3. index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(

<React.StrictMode>

<App />

</React.StrictMode>

);

**16. ReactJS-HOL**

**1. Register.js**

import React, { useState } from 'react';

const Register = () => {

const [formData, setFormData] = useState({

name: '',

email: '',

password: ''

});

const [errors, setErrors] = useState({});

const validate = (name, value) => {

let error = '';

if (name === 'name') {

if (value.trim().length < 5) {

error = 'Name must be at least 5 characters long';

}

} else if (name === 'email') {

if (!value.includes('@') || !value.includes('.')) {

error = 'Email must be valid (include "@" and ".")';

}

} else if (name === 'password') {

if (value.length < 8) {

error = 'Password must be at least 8 characters';

}

}

setErrors(prevErrors => ({ ...prevErrors, [name]: error }));

};

const handleChange = (e) => {

const { name, value } = e.target;

setFormData(prevData => ({ ...prevData, [name]: value }));

validate(name, value);

};

const handleSubmit = (e) => {

e.preventDefault();

const formErrors = {};

Object.entries(formData).forEach(([key, value]) => {

validate(key, value);

if (!value || errors[key]) {

formErrors[key] = errors[key] || 'This field is required';

}

});

if (Object.keys(formErrors).length === 0) {

alert("Registration successful!");

// Optionally reset form

setFormData({ name: '', email: '', password: '' });

setErrors({});

} else {

alert("Please correct the errors before submitting.");

}

};

return (

<div style={{ padding: '20px', maxWidth: '400px' }}>

<h2>Mail Registration Form</h2>

<form onSubmit={handleSubmit}>

<div>

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

<input

type="text"

name="name"

value={formData.name}

onChange={handleChange}

/>

{errors.name && <p style={{ color: 'red' }}>{errors.name}</p>}

</div>

<div>

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

<input

type="email"

name="email"

value={formData.email}

onChange={handleChange}

/>

{errors.email && <p style={{ color: 'red' }}>{errors.email}</p>}

</div>

<div>

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

<input

type="password"

name="password"

value={formData.password}

onChange={handleChange}

/>

{errors.password && <p style={{ color: 'red' }}>{errors.password}</p>}

</div>

<button type="submit" style={{ marginTop: '10px' }}>

Register

</button>

</form>

</div>

);

};

export default Register;

**2. App.js**

import React from 'react';

import Register from './components/Register';

function App() {

return (

<div className="App">

<Register />

</div>

);

}

export default App;

**3. index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(

<React.StrictMode>

<App />

</React.StrictMode>

);

**17. ReactJS-HOL**

**1. Set up React App**

npx create-react-app fetchuserapp

cd fetchuserapp

npm start

**2. Create Getuser.js Component**

import React, { Component } from 'react';

class Getuser extends Component {

constructor(props) {

super(props);

this.state = {

user: null,

isLoading: true,

error: null

};

}

async componentDidMount() {

try {

const response = await fetch('https://api.randomuser.me/');

if (!response.ok) {

throw new Error(`HTTP error! status: ${response.status}`);

}

const data = await response.json();

const user = data.results[0];

this.setState({ user, isLoading: false });

} catch (error) {

this.setState({ error: error.message, isLoading: false });

}

}

render() {

const { user, isLoading, error } = this.state;

if (isLoading) return <p>Loading user...</p>;

if (error) return <p>Error: {error}</p>;

return (

<div style={{ textAlign: 'center' }}>

<h2>User Info</h2>

<p>

<strong>Title:</strong> {user.name.title}

</p>

<p>

<strong>First Name:</strong> {user.name.first}

</p>

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

</div>

);

}

}

export default Getuser;

**3. Update App.js**

import React from 'react';

import './App.css';

import Getuser from './Getuser';

function App() {

return (

<div className="App">

<Getuser />

</div>

);

}

export default App;