**WEEK 7 – ASSIGNMENT**

**REACT**

**Exercise 9:**

**Component 1:** List of Players

import React from 'react';

const ListofPlayers = () => {

const players = [

{ name: 'Virat', score: 80 },

{ name: 'Rohit', score: 65 },

{ name: 'KL Rahul', score: 50 },

{ name: 'Hardik', score: 90 },

{ name: 'Pant', score: 55 },

{ name: 'Jadeja', score: 85 },

{ name: 'Ashwin', score: 60 },

{ name: 'Bumrah', score: 75 },

{ name: 'Shami', score: 45 },

{ name: 'Surya', score: 95 },

{ name: 'Ishan', score: 40 },

];

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

return (

<div>

<h2>All Players</h2>

<ul>

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

<li key={i}>{p.name} - {p.score}</li>

))}

</ul>

<h3>Players with Score Below 70</h3>

<ul>

{below70.map((p, i) => (

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

))}

</ul>

</div>

);

};

export default ListofPlayers;

**Component 2:** Indian Players

Import React from ‘react’;

Const IndianPlayers = () => {

Const allPlayers = [‘Virat’, ‘Rohit’, ‘Rahul’, ‘Pant’, ‘Hardik’, ‘Jadeja’, ‘Bumrah’, ‘Surya’];

Const oddPlayers = allPlayers.filter((\_, i) => i % 2 !== 0);

Const evenPlayers = allPlayers.filter((\_, i) => i % 2 === 0);

// Destructuring

Const [first, second, ...rest] = allPlayers;

// Merge example

Const T20 = [‘Dhoni’, ‘Raina’];

Const Ranji = [‘Pujara’, ‘Rahane’];

Const mergedPlayers = [...T20, ...Ranji];

Return (

<div>

<h2>Odd Team Players</h2>

<ul>{oddPlayers.map((p, i) => <li key={i}>{p}</li>)}</ul>

<h2>Even Team Players</h2>

<ul>{evenPlayers.map((p, i) => <li key={i}>{p}</li>)}</ul>

<h2>Merged Players (T20 + Ranji)</h2>

<ul>{mergedPlayers.map((p, i) => <li key={i}>{p}</li>)}</ul>

</div>

);

};

Export default IndianPlayers;

**App.js:**

Conditional Rendering Based on Flag

Import React from ‘react’;

Import ListofPlayers from ‘./components/ListofPlayers’;

Import IndianPlayers from ‘./components/IndianPlayers’;

Function App() {

Const flag = true; // change this to false to see other component

Return (

<div className=”App”>

<h1> Cricket App</h1>

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

</div>

);

}

Export default App;

**Output:**

**Flag = true**

Cricket App

All Players

- Virat – 80

- Rohit – 65

- KL Rahul – 50

- Hardik – 90

- Pant – 55

- Jadeja – 85

- Ashwin – 60

- Bumrah – 75

- Shami – 45

- Surya – 95

- Ishan – 40

Players with Score Below 70

- Rohit

- KL Rahul

- Pant

- Ashwin

- Shami

- Ishan

**Flag = false**

Cricket App

Odd Team Players

- Rohit

- Pant

- Jadeja

- Surya

Even Team Players

- Virat

- Rahul

- Hardik

- Bumrah

Merged Players (T20 + Ranji)

- Dhoni

- Raina

- Pujara

- Rahane

**Exercise 10:**

**Office Space Rental App**

**App.js**

Import React from ‘react’;

Function App() {

// Office object

Const office = {

Name: “Orchid Tech Park”,

Rent: 55000,

Address: “Chennai, Tamil Nadu”

};

// Array of multiple offices

Const officeList = [

{ name: “Global Space”, rent: 45000, address: “Coimbatore, Tamil Nadu” },

{ name: “Prime Tower”, rent: 70000, address: “Bangalore, Karnataka” },

{ name: “Skyline Hub”, rent: 65000, address: “Hyderabad, Telangana” },

{ name: “Metro Office”, rent: 30000, address: “Pune, Maharashtra” }

];

// Function to return color based on rent

Const getRentColor = (rent) => {

Return { color: rent > 60000 ? ‘green’ : ‘red’ };

};

Return (

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

{/\* Heading using JSX \*/}

<h1 style={{ textAlign: “center” }}> Office Space Rental App</h1>

{/\* Image using JSX attributes \*/}

<img

Src=<https://via.placeholder.com/600x200?text=Office+Space>

Alt=”Office Space”

Style={{ width: “100%”, borderRadius: “10px”, marginBottom: “20px” }}

/>

{/\* Displaying one office details \*/}

<div style={{ marginBottom: “30px” }}>

<h2>{office.name}</h2>

<p style={getRentColor(office.rent)}>Rent: ₹{office.rent}</p>

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

</div>

{/\* Displaying list of office spaces \*/}

<h2>Available Offices</h2>

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

<div

Key={index}

Style={{

Border: “1px solid #ccc”,

Padding: “10px”,

marginBottom: “10px”,

borderRadius: “8px”

}}

>

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

<p style={getRentColor(o.rent)}>Rent: ₹{o.rent}</p>

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

</div>

))}

</div>

);

}

Export default App;

**Output:**

**Office List with Loop and Color Styling:**

Global Space

Rent: ₹45000 (in red)

Address: Coimbatore, Tamil Nadu

Prime Tower

Rent: ₹70000 (in green)

Address: Bangalore, Karnataka

Skyline Hub

Rent: ₹65000 (in green)

Address: Hyderabad, Telangana

Metro Office

Rent: ₹30000 (in red)

Address: Pune, Maharashtra

**Exercise 11:**

**React Event Handling App**

**App.js**

Import React, { useState } from ‘react’;

Import CurrencyConverter from ‘./CurrencyConverter’;

Function App() {

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

// Increment Counter

Const handleIncrement = () => {

setCount(prev => prev + 1);

sayHello();

};

// Say Hello message

Const sayHello = () => {

Console.log(“Hello! This is a multi-method call.”);

};

// Decrement Counter

Const handleDecrement = () => {

setCount(prev => prev – 1);

};

// Function with argument

Const sayMessage = (msg) => {

Alert(msg);

};

// Synthetic event example

Const handlePress = (e) => {

Alert(“I was clicked”);

Console.log(“SyntheticEvent type:”, e.type);

};

Return (

<div style={{ padding: “30px”, fontFamily: “Arial” }}>

<h1> React Event Handling App</h1>

<h2>Counter: {count}</h2>

<button onClick={handleIncrement}>Increment</button>{‘ ‘}

<button onClick={handleDecrement}>Decrement</button>

<br /><br />

<button onClick={() => sayMessage(“Welcome”)}>Say Welcome</button>

<br /><br />

<button onClick={handlePress}>OnPress</button>

<br /><br />

<CurrencyConverter />

</div>

);

}

Export default App;

**CurrencyConverter.js**

Import React, { useState } from ‘react’;

Function CurrencyConverter() {

Const [rupees, setRupees] = useState(‘’);

Const [euros, setEuros] = useState(‘’);

Const handleSubmit = (e) => {

e.preventDefault();

const euroValue = parseFloat(rupees) / 88.5; // Assume 1 Euro = 88.5 INR

setEuros(euroValue.toFixed(2));

};

Return (

<div style={{ marginTop: “40px” }}>

<h2> Currency Converter</h2>

<form onSubmit={handleSubmit}>

<label>

Indian Rupees:

<input

Type=”number”

Value={rupees}

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

style={{ marginLeft: “10px” }}

/>

</label>

<br /><br />

<button type=”submit”>Convert</button>

</form>

{euros && (

<p>Converted Euro Value: €{euros}</p>

)}

</div>

);

}

Export default CurrencyConverter;

**Output:**

**Counter Section**

Counter: 0

[Increment] [Decrement]

[Say Welcome]

[OnPress]

**Currency Converter**

Indian Rupees: [ 10000 ]

[Convert]

Converted Euro Value: €113.00

**Exercise 12:**

**Ticket booking app**

**App.js**

Import React, { useState } from ‘react’;

Import GuestPage from ‘./GuestPage’;

Import UserPage from ‘./UserPage’;

Function App() {

Const [isLoggedIn, setIsLoggedIn] = useState(false);

// Toggle login state

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

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

// Element variable for button

Let button;

If (isLoggedIn) {

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

} else {

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

}

Return (

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

<h1> Flight Ticket Booking App</h1>

{/\* Display login/logout button \*/}

{button}

<hr />

{/\* Conditional rendering based on login status \*/}

{isLoggedIn ? <UserPage /> : <GuestPage />}

</div>

);

}

Export default App;

**GuestPage.js**

Import React from ‘react’;

Function GuestPage() {

Return (

<div>

<h2>Welcome, Guest </h2>

<p>Explore available flight details below:</p>

<ul>

<li>Chennai to Delhi – 9:00 AM</li>

<li>Bangalore to Mumbai – 11:30 AM</li>

<li>Hyderabad to Kolkata – 2:00 PM</li>

</ul>

<p><strong>Note:</strong> Please login to book tickets.</p>

</div>

);

}

Export default GuestPage;

**UserPage.js**

Import React from ‘react’;

Function UserPage() {

Return (

<div>

<h2>Welcome, User </h2>

<p>You can now book your flight tickets:</p>

<ul>

<li>

Chennai to Delhi – 9:00 AM

<button style={{ marginLeft: “10px” }}>Book Now</button>

</li>

<li>

Bangalore to Mumbai – 11:30 AM

<button style={{ marginLeft: “10px” }}>Book Now</button>

</li>

<li>

Hyderabad to Kolkata – 2:00 PM

<button style={{ marginLeft: “10px” }}>Book Now</button>

</li>

</ul>

</div>

);

}

Export default UserPage;

**Output:**

**Not logged in:**

Flight Ticket Booking App

[Login]

Welcome, Guest

Explore available flight details below:

- Chennai to Delhi – 9:00 AM

- Bangalore to Mumbai – 11:30 AM

- Hyderabad to Kolkata – 2:00 PM

Note: Please login to book tickets.

**After logged in:**

Flight Ticket Booking App

[Logout]

Welcome, User

You can now book your flight tickets:

- Chennai to Delhi – 9:00 AM [Book Now]

- Bangalore to Mumbai – 11:30 AM [Book Now]

- Hyderabad to Kolkata – 2:00 PM [Book Now]

**Exercise 13:**

**Blogger app**

**App.js**

Import React, { useState } from ‘react’;

Import BookDetails from ‘./BookDetails’;

Import BlogDetails from ‘./BlogDetails’;

Import CourseDetails from ‘./CourseDetails’;

Function App() {

Const [showComponent, setShowComponent] = useState(‘book’);

// Element variable for rendering

Let content;

If (showComponent === ‘book’) {

Content = <BookDetails />;

} else if (showComponent === ‘blog’) {

Content = <BlogDetails />;

} else {

Content = <CourseDetails />;

}

Return (

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

<h1> Blogger App</h1>

{/\* Toggle Buttons \*/}

<button onClick={() => setShowComponent(‘book’)}>Show Books</button>{‘ ‘}

<button onClick={() => setShowComponent(‘blog’)}>Show Blogs</button>{‘ ‘}

<button onClick={() => setShowComponent(‘course’)}>Show Courses</button>

<hr />

{/\* Conditional Rendering using variable \*/}

{content}

{/\* Also show all below using conditional && rendering \*/}

<hr />

<h2>Preview of All</h2>

{showComponent === ‘book’ && <BookDetails />}

{showComponent === ‘blog’ && <BlogDetails />}

{showComponent === ‘course’ && <CourseDetails />}

</div>

);

}

Export default App;

**BookDetails.js**

Import React from ‘react’;

Const books = [

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

{ id: 2, title: “Learning JS”, author: “John S.” },

{ id: 3, title: “Design Patterns”, author: “Gamma” },

];

// Extracted list item component

Function Book({ book }) {

Return (

<li>

<strong>{book.title}</strong> by {book.author}

</li>

);

}

Function BookDetails() {

Return (

<div>

<h2> Book Details</h2>

<ul>

{books.map((book) => (

<Book key={book.id} book={book} />

))}

</ul>

</div>

);

}

Export default BookDetails;

**BlogDetails.js**

Import React from ‘react’;

Function BlogDetails() {

Const blogs = [

{ id: 101, title: “Why React is Great”, date: “2025-08-01” },

{ id: 102, title: “Hooks Explained”, date: “2025-07-25” },

{ id: 103, title: “JSX vs HTML”, date: “2025-07-15” }

];

Return (

<div>

<h2> Blog Details</h2>

<ul>

{blogs.map((blog) => (

<li key={blog.id}>

<strong>{blog.title}</strong> - <em>{blog.date}</em>

</li>

))}

</ul>

</div>

);

}

Export default BlogDetails;

**CourseDetails.js**

Import React from ‘react’;

Function CourseDetails() {

Const courses = [

{ id: ‘C01’, name: “React Basics”, duration: “4 weeks” },

{ id: ‘C02’, name: “Advanced JavaScript”, duration: “6 weeks” },

{ id: ‘C03’, name: “Frontend Mastery”, duration: “8 weeks” },

];

Return (

<div>

<h2> Course Details</h2>

<ul>

{courses.map((course) => (

<li key={course.id}>

{course.name} – {course.duration}

</li>

))}

</ul>

</div>

);

}

Export default CourseDetails;

**Output:**

**Show Books**

Book Details

- React in Action by Mark T.

- Learning JS by John S.

- Design Patterns by Gamma

**Show Blogs**

Blog Details

- Why React is Great – 2025-08-01

- Hooks Explained – 2025-07-25

- JSX vs HTML – 2025-07-15

**Show Courses**

Course Details

- React Basics – 4 weeks

- Advanced JavaScript – 6 weeks

- Frontend Mastery – 8 weeks

**Exercise 14:**

**React Context API for Theme Management**

**ThemeContext.js**

Import { createContext } from ‘react’;

// Create a context with default value ‘light’

Const ThemeContext = createContext(‘light’);

Export default ThemeContext;

**App.js**

Import React, { useState } from ‘react’;

Import EmployeesList from ‘./EmployeesList’;

Import ThemeContext from ‘./ThemeContext’;

Function App() {

Const [theme, setTheme] = useState(‘light’);

Const toggleTheme = () => {

setTheme(prev => (prev === ‘light’ ? ‘dark’ : ‘light’));

};

Return (

<ThemeContext.Provider value={theme}>

<div className={`app ${theme}`}>

<h1>Employee Management</h1>

<button onClick={toggleTheme}>

Toggle to {theme === ‘light’ ? ‘Dark’ : ‘Light’} Mode

</button>

{/\* Remove theme prop \*/}

<EmployeesList />

</div>

</ThemeContext.Provider>

);

}

Export default App;

**EmployeesList.js**

Import React from ‘react’;

Import EmployeeCard from ‘./EmployeeCard’;

Const employees = [

{ id: 1, name: ‘John Doe’, designation: ‘Software Engineer’ },

{ id: 2, name: ‘Jane Smith’, designation: ‘Project Manager’ },

];

Function EmployeesList() {

Return (

<div>

<h2>Employees List</h2>

{employees.map(emp => (

// No need to pass theme

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

))}

</div>

);

}

Export default EmployeesList;

**EmployeeCard.js**

Import React, { useContext } from ‘react’;

Import ThemeContext from ‘./ThemeContext’;

Function EmployeeCard({ employee }) {

Const theme = useContext(ThemeContext); // Get theme from context

Return (

<div className={`card card-${theme}`}>

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

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

<button className={`btn btn-${theme}`}>Message</button>

</div>

);

}

Export default EmployeeCard;

**CSS**

.card-light {

Background-color: #f9f9f9;

Color: #000;

}

.card-dark {

Background-color: #333;

Color: #fff;

}

.btn-light {

Background-color: #e0e0e0;

Color: #000;

}

.btn-dark {

Background-color: #000;

Color: #fff;

}

**Output:**

**Default Light Theme**

| Employee Management |

| [Toggle to Dark Mode] |

|  |
| --- |
|  |

| Employees List |

|  |
| --- |
|  |

| | John Doe | Software Engineer | |

| | [Message] (light button) | |

|  |
| --- |
|  |
|  |

| | Jane Smith | Project Manager | |

| | [Message] (light button) | |

|  |
| --- |
|  |

**Toggle to Dark Mode**

| Employee Management |

| [Toggle to Light Mode] |

|  |
| --- |
|  |

| Employees List |

|  |
| --- |
|  |

| | John Doe | Software Engineer | |

| | [Message] (dark button) | |

|  |
| --- |
|  |
|  |

| | Jane Smith | Project Manager | |

| | [Message] (dark button) | |

|  |
| --- |
|  |

**Exercise 15:**

**Ticket raising app**

**ComplaintRegister.js**

Import React, { useState } from ‘react’;

Function ComplaintRegister() {

Const [employeeName, setEmployeeName] = useState(‘’);

Const [complaint, setComplaint] = useState(‘’);

Const handleSubmit = (e) => {

e.preventDefault();

if (!employeeName.trim() || !complaint.trim()) {

alert(“Please fill in both fields.”);

return;

}

Const referenceNumber = ‘REF’ + Math.floor(Math.random() \* 1000000);

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

// Clear form

setEmployeeName(‘’);

setComplaint(‘’);

};

Return (

<div style={styles.container}>

<h2>Complaint Registration Form</h2>

<form onSubmit={handleSubmit} style={styles.form}>

<label>

Employee Name:

<input

Type=”text”

Value={employeeName}

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

style={styles.input}

placeholder=”Enter your name”

/>

</label>

<br />

<label>

Complaint:

<textarea

Value={complaint}

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

style={styles.textarea}

placeholder=”Describe your issue”

/>

</label>

<br />

<button type=”submit” style={styles.button}>Submit Complaint</button>

</form>

</div>

);

}

Const styles = {

Container: {

Width: “400px”,

Margin: “auto”,

Padding: “20px”,

Background: “#f4f4f4”,

borderRadius: “10px”,

marginTop: “50px”

},

Form: {

Display: “flex”,

flexDirection: “column”

},

Input: {

marginTop: “5px”,

marginBottom: “15px”,

padding: “10px”

},

Textarea: {

marginTop: “5px”,

marginBottom: “15px”,

padding: “10px”,

height: “100px”

},

Button: {

Background: “#007bff”,

Color: “#fff”,

Padding: “10px”,

Border: “none”,

Cursor: “pointer”,

borderRadius: “5px”

}

};

Export default ComplaintRegister;

**App.js**

Import React from ‘react’;

Import ComplaintRegister from ‘./ComplaintRegister’;

Function App() {

Return (

<div>

<ComplaintRegister />

</div>

);

}

Export default App;

**Output:**

Alert Box:

Complaint submitted successfully!

Reference No: REF154833

Alert Box:

Please fill in both fields.

**Exercise 16:**

**Mail register app**

**Register.js**

Import React, { useState } from ‘react’;

Function Register() {

Const [form, setForm] = useState({

Name: ‘’,

Email: ‘’,

Password: ‘’

});

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

Const validate = () => {

Const err = {};

If (form.name.trim().length < 5) {

Err.name = ‘Name must be at least 5 characters long.’;

}

If (!form.email.includes(‘@’) || !form.email.includes(‘.’)) {

Err.email = ‘Email must include “@” and “.”’;

}

If (form.password.length < 8) {

Err.password = ‘Password must be at least 8 characters long.’;

}

setErrors(err);

return Object.keys(err).length === 0;

};

Const handleChange = (e) => {

Const { name, value } = e.target;

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

};

Const handleSubmit = (e) => {

e.preventDefault();

if (validate()) {

alert(‘Registration Successful!’);

setForm({ name: ‘’, email: ‘’, password: ‘’ });

setErrors({});

}

};

Return (

<div style={styles.container}>

<h2>Mail Registration Form</h2>

<form onSubmit={handleSubmit} style={styles.form}>

<label>Name:</label>

<input

Type=”text”

Name=”name”

Value={form.name}

onChange={handleChange}

style={styles.input}

placeholder=”Enter your name”

/>

{errors.name && <p style={styles.error}>{errors.name}</p>}

<label>Email:</label>

<input

Type=”email”

Name=”email”

Value={form.email}

onChange={handleChange}

style={styles.input}

placeholder=”Enter your email”

/>

{errors.email && <p style={styles.error}>{errors.email}</p>}

<label>Password:</label>

<input

Type=”password”

Name=”password”

Value={form.password}

onChange={handleChange}

style={styles.input}

placeholder=”Enter your password”

/>

{errors.password && <p style={styles.error}>{errors.password}</p>}

<button type=”submit” style={styles.button}>Register</button>

</form>

</div>

);

}

Const styles = {

Container: {

Width: ‘400px’,

Margin: ‘50px auto’,

Padding: ‘20px’,

Background: ‘#f9f9f9’,

borderRadius: ‘10px’,

boxShadow: ‘0 0 10px rgba(0,0,0,0.2)’

},

Form: {

Display: ‘flex’,

flexDirection: ‘column’

},

Input: {

marginBottom: ‘10px’,

padding: ‘10px’,

fontSize: ‘16px’

},

Error: {

Color: ‘red’,

fontSize: ‘14px’,

marginBottom: ‘10px’

},

Button: {

backgroundColor: ‘#28a745’,

color: ‘#fff’,

padding: ‘10px’,

fontSize: ‘16px’,

border: ‘none’,

cursor: ‘pointer’

}

};

Export default Register;

**App.js**

Import React from ‘react’;

Import Register from ‘./register’;

Function App() {

Return (

<div>

<Register />

</div>

);

}

Export default App;

**Output:**

Registration Successful!

**Exercise 17:**

**Fetch user app**

**Getuser.js**

Import React, { Component } from ‘react’;

Class Getuser extends Component {

Constructor(props) {

Super(props);

This.state = {

User: null,

Loading: true

};

}

Async componentDidMount() {

Try {

Const response = await fetch(‘https://api.randomuser.me/’);

Const data = await response.json();

Const user = data.results[0];

This.setState({ user: user, loading: false });

} catch (error) {

Console.error(‘Error fetching user:’, error);

}

}

Render() {

Const { user, loading } = this.state;

If (loading) {

Return <h3>Loading user data...</h3>;

}

Return (

<div style={styles.container}>

<h2>User Information</h2>

<img src={user.picture.large} alt=”User” style={styles.image} />

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

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

</div>

);

}

}

Const styles = {

Container: {

Width: ‘350px’,

Margin: ‘40px auto’,

Padding: ‘20px’,

Border: ‘1px solid #ccc’,

borderRadius: ‘10px’,

backgroundColor: ‘#f5f5f5’,

textAlign: ‘center’

},

Image: {

borderRadius: ‘50%’,

marginBottom: ‘15px’

}

};

Export default Getuser;

**App.js**

Import React from ‘react’;

Import Getuser from ‘./Getuser’;

Function App() {

Return (

<div>

<Getuser />

</div>

);

}

Export default App;

**Output:**

User Information

[User image shown]

Title: Mr/Ms/etc.

First Name: John/Emily/etc.