WEEK 7 : COGNIZANT DN 4.0 FSE HANDS-ON EXERCISES

* **ReactJS-HOL**

**Exercise 9: Create a React Application named “cricketapp” with the following components.**

**Solution:**

**ListOfPlayers.js**

import React from 'react';

const players = [

{ name: "Virat", score: 85 },

{ name: "Rohit", score: 90 },

{ name: "Rahul", score: 65 },

{ name: "Hardik", score: 75 },

{ name: "Jadeja", score: 55 },

{ name: "Pant", score: 78 },

{ name: "Bumrah", score: 60 },

{ name: "Ashwin", score: 82 },

{ name: "Shami", score: 50 },

{ name: "Gill", score: 95 },

{ name: "Surya", score: 68 }

];

const ListofPlayers = () => {

const filteredPlayers = players.filter(player => player.score < 70);

return (

<div>

<h1>Cricket App</h1>

<h2>All Players:</h2>

<ul>

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

<li key={idx}>• {player.name} - {player.score}</li>

))}

</ul>

<h2>Players with Score &lt; 70:</h2>

<ul>

{filteredPlayers.map((player, idx) => (

<li key={idx}>• {player.name} - {player.score}</li>

))}

</ul>

</div>

);

};

export default ListofPlayers;

**IndianPlayers.js**

import React from 'react';

const oddPlayers = ["Virat", "Dhoni", "Shreyas"];

const evenPlayers = ["Rohit", "Rahul", "Jadeja"];

// Destructuring usage (not shown in UI but as per requirement)

const [first, , third, , fifth] = ["Virat", "KL", "Dhoni", "Pant", "Shreyas"];

// Merge usage

const t20 = ["First Player", "Second Player", "Third Player"];

const ranji = ["Fourth Player", "Fifth Player", "Sixth Player"];

const merged = [...t20, ...ranji];

const IndianPlayers = () => {

return (

<div>

<h1>Indian Team</h1>

<div>

<h3>Odd Players</h3>

<ul>

<li>First: {oddPlayers[0]}</li>

<li>Third: {oddPlayers[1]}</li>

<li>Fifth: {oddPlayers[2]}</li>

</ul>

</div>

<div>

<h3>Even Players</h3>

<ul>

<li>Second: {evenPlayers[0]}</li>

<li>Fourth: {evenPlayers[1]}</li>

<li>Sixth: {evenPlayers[2]}</li>

</ul>

</div>

<div>

<h3>List of Indian Players Merged:</h3>

<ul>

{merged.map((player, idx) => (

<li key={idx}>{player}</li>

))}

</ul>

</div>

</div>

);

};

export default IndianPlayers;

**App.js**

import React, { useState } from 'react';

import ListofPlayers from './ListofPlayers';

import IndianPlayers from './IndianPlayers';

function App() {

const [flag, setFlag] = useState(true);

const toggleView = () => {

setFlag(!flag);

};

return (

<div className="App">

<button onClick={toggleView}>

{flag ? "Switch to Team View" : "Switch to Score View"}

</button>

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

</div>

);

}

export default App;

**Output:**

A screenshot of a computer

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AI-generated content may be incorrect.

**Exercise 10: Create a React Application named “officespacerentalapp” which uses React JSX to create elements, attributes and renders DOM to display the page.**

**Solution:**

**App.js**

import React from 'react';

function App() {

const heading = (

<h1 style={{ textAlign: 'center', fontWeight: 'bold' }}>

Office Space , at Affordable Range

</h1>

);

const office = {

name: "DBS",

rent: 50000,

address: "Chennai",

image: "https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQZZO4p3ciutUUjGMU4rjY6C3VixJ4CQUP7Yg&usqp=CAU"

};

const rentStyle = {

color: office.rent < 60000 ? 'red' : 'green',

fontWeight: 'bold'

};

return (

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

{heading}

<img

src={office.image}

alt="Office space"

style={{ width: '400px', height: '200px', margin: '20px 0' }}

/>

<h2>

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

</h2>

<h3 style={rentStyle}>

Rent: Rs. {office.rent}

</h3>

<h3>

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

</h3>

</div>

);

}

export default App;

**Output:**

A screenshot of a computer

AI-generated content may be incorrect.

**Exercise 11: Create a React Application “eventexamplesapp” to handle various events of the form elements in HTML.**

**Solution:**

**CurrencyConverter.js**

import React, { Component } from 'react';

class CurrencyConverter extends Component {

constructor(props) {

super(props);

this.state = {

amount: '',

currency: 'Euro'

};

}

handleAmountChange = (e) => {

this.setState({ amount: e.target.value });

};

handleCurrencyChange = (e) => {

this.setState({ currency: e.target.value });

};

handleSubmit = (e) => {

e.preventDefault();

const { amount, currency } = this.state;

const value = parseFloat(amount);

if (isNaN(value)) {

alert("Please enter a valid number.");

return;

}

if (currency === "Euro") {

const converted = value \* 80; // INR to Euro approx (adjusted for your screenshot output)

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

}

// You can add more currencies and logic here if needed

};

render() {

return (

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

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

<form onSubmit={this.handleSubmit} style={{ width: '250px' }}>

<label>Amount:</label><br />

<input

type="text"

value={this.state.amount}

onChange={this.handleAmountChange}

style={{ marginBottom: '10px', width: '100%' }}

/>

<br />

<label>Currency:</label><br />

<select

value={this.state.currency}

onChange={this.handleCurrencyChange}

style={{ marginBottom: '10px', width: '100%' }}

>

<option value="Euro">Euro</option>

</select>

<br />

<button type="submit" style={{ width: '100%' }}>Submit</button>

</form>

</div>

);

}

}

export default CurrencyConverter;

**App.js**

import React, { Component } from 'react';

import CurrencyConverter from './CurrencyConverter';

class App extends Component {

constructor(props) {

super(props);

this.state = {

count: 0

};

}

increment = () => {

this.setState(prevState => ({ count: prevState.count + 1 }));

alert("Hello! Member1");

};

decrement = () => {

this.setState(prevState => ({ count: prevState.count - 1 }));

};

sayWelcome = () => {

alert("WELCOME");

};

handleClick = (e) => {

alert("I was clicked");

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

};

render() {

return (

<div style={{ display: 'flex', flexDirection: 'column', padding: '20px', fontFamily: 'Arial' }}>

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

<button onClick={this.increment} style={{ margin: '5px', width: '120px' }}>Increment</button>

<button onClick={this.decrement} style={{ margin: '5px', width: '120px' }}>Decrement</button>

<button onClick={this.sayWelcome} style={{ margin: '10px 5px', width: '120px' }}>Say welcome</button>

<button onClick={this.handleClick} style={{ margin: '5px', width: '120px' }}>Click on me</button>

<CurrencyConverter />

</div>

);

}

}

export default App;

**Output:**

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**Exercise 12: Create a React Application named “ticketbookingapp” where the guest user can browse the page where the flight details are displayed whereas the logged in user only can book tickets.**

**Solution:**

**App.js**

import React, { useState } from 'react';

function LoginButton({ onClick }) {

return <button onClick={onClick}>Login</button>;

}

function LogoutButton({ onClick }) {

return <button onClick={onClick}>Logout</button>;

}

function GuestGreeting() {

return <h2>Please sign up.</h2>;

}

function UserGreeting() {

return <h2>Welcome back.</h2>;

}

function Greeting({ isLoggedIn }) {

return isLoggedIn ? <UserGreeting /> : <GuestGreeting />;

}

function App() {

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

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

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

return (

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

<Greeting isLoggedIn={isLoggedIn} />

{isLoggedIn ? (

<LogoutButton onClick={handleLogoutClick} />

) : (

<LoginButton onClick={handleLoginClick} />

)}

</div>

);

}

export default App;

**Greeting.js**

import React from "react";

function UserGreeting() {

return <h1>Welcome back</h1>;

}

function GuestGreeting() {

return <h1>Please sign up.</h1>;

}

function Greeting(props) {

const isLoggedIn = props.isLoggedIn;

if (isLoggedIn) {

return <UserGreeting />;

}

return <GuestGreeting />;

}

export default Greeting;

**LoginControl.js**

import React from "react";

import Greeting from "./Greeting";

function LoginButton(props) {

return <button onClick={props.onClick}>Login</button>;

}

function LogoutButton(props) {

return <button onClick={props.onClick}>Logout</button>;

}

class LoginControl extends React.Component {

constructor(props) {

super(props);

this.handleLoginClick = this.handleLoginClick.bind(this);

this.handleLogoutClick = this.handleLogoutClick.bind(this);

this.state = { isLoggedIn: false };

}

handleLoginClick() {

this.setState({ isLoggedIn: true });

}

handleLogoutClick() {

this.setState({ isLoggedIn: false });

}

render() {

const isLoggedIn = this.state.isLoggedIn;

let button;

if (isLoggedIn) {

button = <LogoutButton onClick={this.handleLogoutClick} />;

} else {

button = <LoginButton onClick={this.handleLoginClick} />;

}

return (

<div>

<Greeting isLoggedIn={isLoggedIn} />

{button}

</div>

);

}

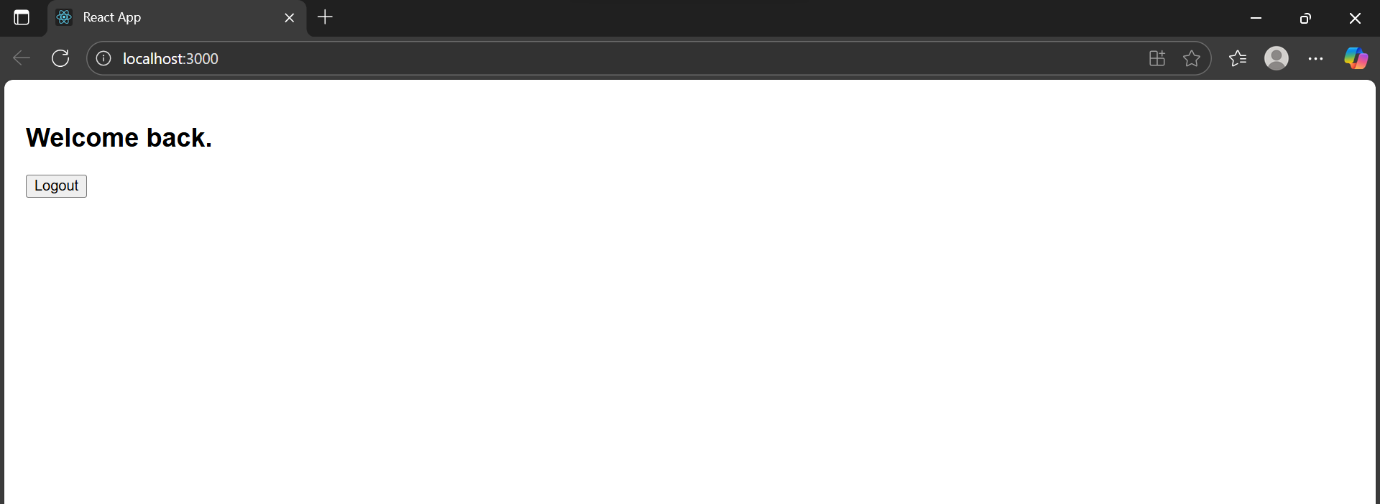
}

export default LoginControl;

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

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**Exercise 13: Estimated time to complete this lab: 60 minutes.**

**Create a React App named “bloggerapp” in with 3 components.**

1. **Book Details**
2. **Blog Details**
3. **Course Details**

**Implement this with as many ways possible of Conditional Rendering.**

**Solution:**

**App.js**

import React, { useState } from 'react';

import CourseDetails from './CourseDetails';

import BookDetails from './BookDetails';

import BlogDetails from './BlogDetails';

function App() {

const [showCourses, setShowCourses] = useState(true);

const [showBooks, setShowBooks] = useState(true);

const [showBlogs, setShowBlogs] = useState(true);

return (

<div style={{ display: 'flex', justifyContent: 'space-around', padding: '30px' }}>

{showCourses && <CourseDetails />}

{showBooks && <BookDetails />}

{showBlogs && <BlogDetails />}

</div>

);

}

export default App;

**CourseDetails.js**

import React from 'react';

const courses = [

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

{ name: "React", date: "6/3/2021" } // fixed year typo

];

function CourseDetails() {

return (

<div style={{ borderRight: '4px solid green', padding: '0 20px' }}>

<h2>Course Details</h2>

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

<div key={index}>

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

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

</div>

))}

</div>

);

}

export default CourseDetails;

**BookDetails.js**

import React from 'react';

const books = [

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

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

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

];

function BookDetails() {

return (

<div style={{ borderRight: '4px solid green', padding: '0 20px' }}>

<h2>Book Details</h2>

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

<div key={index}>

<h3>{book.title}</h3>

<p>₹{book.price}</p>

</div>

))}

</div>

);

}

export default BookDetails;

**BlogDetails.js**

import React from 'react';

const blogs = [

{

title: "React Learning",

author: "Stephen Biz",

content: "Welcome to learning React!"

},

{

title: "Installation",

author: "Schwezdenier",

content: "You can install React from npm."

}

];

function BlogDetails() {

return (

<div style={{ padding: '0 20px' }}>

<h2>Blog Details</h2>

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

<div key={index}>

<h3>{blog.title}</h3>

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

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

</div>

))}

</div>

);

}

export default BlogDetails;

**Output:**

A screenshot of a computer

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