**WEEK 6 1. ReactJS-HOL**

Step 1: Install Node.js and NPM

Visit: https://nodejs.org/en/download/

Download and install the latest version of Node.js, which includes NPM (Node Package Manager).

After installation, confirm the installation using:

node -v

npm -v

Step 2: Install Create React App

Open Command Prompt or Terminal and run:

npm install -g create-react-app

Step 3: Create the React Application

Use the following command to create your first React app:

npx create-react-app myfirstreact

This will generate a folder named myfirstreact with all necessary files and structure.

Step 4: Navigate to the Project Folder

Change your directory to the newly created project:

cd myfirstreact

Step 5: Open the Project in Visual Studio Code

In the command line, type:

code .

This opens the current folder in VS Code.

Step 6: Edit App.js File

Go to the src folder

Open the file: App.js

Delete all the existing code

Replace it with the following:

import React from 'react';

function App() {

return (

<div>

<h1>Welcome to the first session of React</h1>

</div>

);

}

export default App;

Step 7: Start the React Application

In the terminal, run:

npm start

This command starts the development server and opens your app in the browser.

Step 8: View the Output

Open your browser

Visit: http://localhost:3000

You will see the following output:

🖥️ Web Output (Expected Result)

Welcome to the first session of React

**2. ReactJS-HOL**

Project Name: StudentApp

Folder Structure

StudentApp/

├── src/

│ ├── Components/

│ │ ├── Home.js

│ │ ├── About.js

│ │ └── Contact.js

│ └── App.js

Step 1: Create a React Project

Open the terminal and run:

npx create-react-app StudentApp

Step 2: Create Components

src/Components/Home.js

import React from 'react';

function Home() {

return (

<div>

<h2>Welcome to the Home page of Student Management Portal</h2>

</div>

);

}

export default Home;

src/Components/About.js

import React from 'react';

function About() {

return (

<div>

<h2>Welcome to the About page of the Student Management Portal</h2>

</div>

);

}

export default About;

src/Components/Contact.js

import React from 'react';

function Contact() {

return (

<div>

<h2>Welcome to the Contact page of the Student Management Portal</h2>

</div>

);

}

export default Contact;

Step 3: Edit App.js to Render All Components

src/App.js

import React from 'react';

import Home from './Components/Home';

import About from './Components/About';

import Contact from './Components/Contact';

function App() {

return (

<div className="App">

<Home />

<About />

<Contact />

</div>

);

}

export default App;

Step 4: Run the Application

In your terminal:

cd StudentApp

npm start

Output in Browser (localhost:3000)

You will see the following output:

Welcome to the Home page of Student Management Portal

Welcome to the About page of the Student Management Portal

Welcome to the Contact page of the Student Management Portal

**3. ReactJS-HOL**

Project Name: scorecalculatorapp

Folder Structure

scorecalculatorapp/

├── src/

│ ├── Components/

│ │ └── CalculateScore.js

│ ├── Stylesheets/

│ │ └── mystyle.css

│ └── App.js

Step-by-Step Code Implementation

1. src/Components/CalculateScore.js

import React from 'react';

import '../Stylesheets/mystyle.css';

function CalculateScore(props) {

const average = props.total / props.goal;

return (

<div className="score-box">

<h2>Student Score Summary</h2>

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

<p><strong>School:</strong> {props.school}</p>

<p><strong>Total Marks:</strong> {props.total}</p>

<p><strong>Goal:</strong> {props.goal}</p>

<p><strong>Average Score:</strong> {average.toFixed(2)}</p>

</div>

);

}

export default CalculateScore;

2. src/Stylesheets/mystyle.css

.score-box {

background-color: #e6f2ff;

padding: 20px;

border: 2px solid #007acc;

border-radius: 10px;

width: 400px;

margin: 30px auto;

text-align: left;

font-family: Arial, sans-serif;

}

.score-box h2 {

color: #004080;

text-align: center;

}

3. src/App.js

import React from 'react';

import CalculateScore from './Components/CalculateScore';

function App() {

return (

<div className="App">

<CalculateScore name="John Doe" school="Springfield High School" total={450} goal={5} />

</div>

);

}

export default App;

Run the Application

In the terminal:

cd scorecalculatorapp

npm start

Output at http://localhost:3000

You will see a styled component with the following content:

Expected Output (Rendered in Browser)

Student Score Summary

Name: John Doe

School: Springfield High School

Total Marks: 450

Goal: 5

Average Score: 90.00

**4. ReactJS-HOL**

Project Name: blogapp

Folder Structure

blogapp/

├── src/

│ ├── Post.js

│ ├── Posts.js

│ └── App.js

Step-by-Step Code

1. src/Post.js

import React from 'react';

class Post extends React.Component {

render() {

return (

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

<h3>{this.props.title}</h3>

<p>{this.props.body}</p>

</div>

);

}

}

export default Post;

2. src/Posts.js

import React from 'react';

import Post from './Post';

class Posts extends React.Component {

constructor(props) {

super(props);

this.state = {

posts: [],

hasError: false,

};

}

componentDidMount() {

this.loadPosts();

}

loadPosts() {

fetch('https://jsonplaceholder.typicode.com/posts')

.then((response) => response.json())

.then((data) => {

this.setState({ posts: data.slice(0, 5) }); // Only display first 5 posts for demo

})

.catch((error) => {

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

this.setState({ hasError: true });

});

}

componentDidCatch(error, info) {

alert('An error occurred in the Posts component!');

console.error('Error caught:', error, info);

}

render() {

if (this.state.hasError) {

return <h2>Something went wrong while loading posts.</h2>;

}

return (

<div>

<h2>Latest Blog Posts</h2>

{this.state.posts.map((post) => (

<Post key={post.id} title={post.title} body={post.body} />

))}

</div>

);

}

}

export default Posts;

3. src/App.js

import React from 'react';

import Posts from './Posts';

function App() {

return (

<div className="App">

<h1>Welcome to BlogApp</h1>

<Posts />

</div>

);

}

export default App;

Run the Application

Open your terminal and run:

cd blogapp

npm start

Output at http://localhost:3000

Expected Web Output:

Welcome to BlogApp

Latest Blog Posts

Post Title 1

Post Body 1...

Post Title 2

Post Body 2...

... (up to 5 posts)

Each blog post will appear inside a styled box, with the title in bold as a heading (<h3>) and the body in a paragraph (<p>).

If an error occurs (e.g., fetch fails), a message like:

Something went wrong while loading posts.

will be displayed, and an alert will pop up saying:

"An error occurred in the Posts component!"

**5. ReactJS-HOL**

Folder & File Structure

your-react-app/

├── src/

│ ├── Components/

│ │ └── CohortDetails.js

│ ├── CohortDetails.module.css

│ └── App.js

Step-by-Step Code

1. src/CohortDetails.module.css

.box {

width: 300px;

display: inline-block;

margin: 10px;

padding: 10px 20px;

border: 1px solid black;

border-radius: 10px;

}

dt {

font-weight: 500;

}

2. src/Components/CohortDetails.js

import React from 'react';

import styles from '../CohortDetails.module.css';

function CohortDetails(props) {

const { name, status, startDate, endDate } = props;

const headingStyle = {

color: status === 'ongoing' ? 'green' : 'blue',

};

return (

<div className={styles.box}>

<h3 style={headingStyle}>{name}</h3>

<dl>

<dt>Status:</dt>

<dd>{status}</dd>

<dt>Start Date:</dt>

<dd>{startDate}</dd>

<dt>End Date:</dt>

<dd>{endDate}</dd>

</dl>

</div>

);

}

export default CohortDetails;

3. src/App.js

import React from 'react';

import CohortDetails from './Components/CohortDetails';

function App() {

return (

<div className="App">

<h2>Cohort Dashboard</h2>

<CohortDetails

name="React Training - Batch 1"

status="ongoing"

startDate="2025-07-01"

endDate="2025-07-30"

/>

<CohortDetails

name="Java Fullstack - Batch 2"

status="completed"

startDate="2025-05-01"

endDate="2025-06-15"

/>

</div>

);

}

export default App;

Run the Application

After downloading and unzipping the app:

Open terminal and run:

npm install

npm start

Output at http://localhost:3000

You will see two cohort cards:

Expected Output (Visually)

Cohort Dashboard

React Training - Batch 1

Status: ongoing (in green heading)

Start Date: 2025-07-01

End Date: 2025-07-30

Java Fullstack - Batch 2

Status: completed (in blue heading)

Start Date: 2025-05-01

End Date: 2025-06-15