Module 1 : Introduction to React, Components

Topic	Description
Introduction to React	Overview of React, its purpose, and advantages in web development.
Origins of React	History and evolution of React, including its development by Facebook and adoption by the developer community.
Installation & Configuration	Steps to install React and set up a development environment using tools like Node.js and npm.
React component Properties	Concept of component properties in React and their role in passing data between components.
Setting Properties	How to set properties for React components and access them within the component.
Creating Components	Creation of React components, including functional and class components, and their significance in building the UI.
Rendering Components	Rendering React components within the application using JSX syntax and ReactDOM library.
Updating Components	Mechanism by which React components update and re-render in response to changes in state or props.
Overview of JSX and why you should use it	Introduction to JSX (JavaScript XML) syntax and its benefits in writing concise and expressive React code.
Creating & Rendering JSX elements	Examples of creating JSX elements and rendering them within React components.
Reusing Components	Reusing React components within the application to maintain a modular and scalable codebase.
Understanding the Component life-cycle	Explanation of the lifecycle phases of a React component, including mounting, updating, and unmounting.
Lifecycle functions	Overview of lifecycle methods available in React components, such as componentDidMount and componentWillUnmount, and their usage.

Module 2 : React State, Props, React Router

Topic	Description
Understanding State	Understanding the concept of state in React and its role in component rendering and behavior.
Creating Stateful components	How to create stateful components in React and manage state within them.
Changing the state	Exploring methods to change the state of a component in React.
Consuming the state	Consuming and accessing state data within React components.
Understanding and working with props	Understanding the usage of props (properties) to pass data between React components.
Creating Context	Introduction to React Context API and how to create and use context in React applications.
Working with global state	Working with global state management solutions like Redux in React applications.
Single Page Application Overview	Overview of single page applications (SPAs) and their benefits in web development.
How to configure React Router?	Configuration of React Router for handling navigation in single page applications.
History of Router	Understanding the history and evolution of routing concepts in web development.
Creating Router for navigation	Implementation of React Router for navigation purposes in React applications.
Passing parameters to the routes	Passing parameters and data between different routes in React Router.
Protecting the routes	Implementing route protection mechanisms to control access to certain routes in React Router.
Child routing	Implementing nested or child routing within React Router for complex navigation scenarios.

Module 3 : React Hooks

Topic	Description
Understanding React Hooks	Introduction to React Hooks and their purpose in functional components.
The useState hook	Understanding and utilizing the useState hook to add state in functional components.
Side effects using the useEffect hook	Understanding and managing side effects using the useEffect hook in functional components.
The useContext hook	Understanding the useContext hook for accessing context in functional components.
The useRef hook	The useEffect hook in React is applied to understand and manage side effects within functional components, while the useRef hook serves to establish a mutable reference to a DOM element or value, ensuring persistence across renders.
Writing your own hook	Overview of custom hook creation and writing your own custom hooks in React.

Module 4 : Redux And Context in React

Topic	Description
What is Redux	Introduction to Redux and its role as a predictable state container for JavaScript apps.
Redux principles	Understanding the core principles of Redux, including single source of truth and immutable state.
Install and setup Redux	Installation and setup of Redux in a React application.
Creating actions, reducer, and store	Creating Redux actions, reducers, and store to manage application state.
Presentational vs Container components	Differentiating between presentational and container components in React-Redux applications.
Understand high-order component	Understanding the concept and usage of higher-order components in React-Redux applications.
Context of React	Introduction to React context API for sharing data between components.

Module 5 : Event Handling

Topic	Description
Key Events	Understanding how key events work in React applications.
Event Pooling	Explanation of event pooling in React to improve event handling efficiency.
React.js Event Handlers	Overview of event handlers in React for handling user interactions.
Synthetic Event	Understanding synthetic events in React and their advantages.

Module 6 : Styling with Tailwind CSS and Bootstrap in React

Topic	Description
Tailwind CSS	Introduction to Tailwind CSS, a utility-first CSS framework that provides low-level utility classes for building custom designs quickly.
Bootstrap in React	Explanation of integrating Bootstrap with React, leveraging its pre-designed components and grid system for building responsive user interfaces efficiently.