

React Topic Coverage (8 Half Days)

Day 1

1. Introduction To React

- a. Introduction To React
- b. What is React?
- c. Setting Up React Development Environment
- d. Advantages and Disadvantages
- e. React vs Angular
- f. Working with Virtual DOMs

2. Working with Functional Components

- a. Understanding React Functional Component
- b. Defining a Component
- c. Component Rendering
- d. Understanding JSX
- e. JSX vs Native JavaScript Implementation
- f. Multiline JSX
- g. Understanding the parameters in "ReactDOM"

Day 2

3. Working with Data in Functional Component

- a. Understanding Props Data
- b. Passing Props data to the Component
- c. Understanding and Updating Props
- d. Interpolating Data in Component
- e. Invoking Functions in React Component
- f. Raising Event with React Components
- g. Working With Spread and Rest Operators

4. Working with ES6 Classes

- a. Understanding ES6 Class-Based Architecture
- b. Inheritance in ES6 Classes
- c. Understanding the "super" keyword
- d. ES6 to ES5 Conversions

Day 3

5. Creating State Components

- a. Understanding State Components
- b. Adding State to the Component
- c. Passing State to Child Components

- d. Updating Component State
- e. Understanding State Update impact on props
- f. Working with “setState”
- g. Understanding “setState” asynchronous behavior

6. Working with Child Components

- a. Adding Child Component to Parent Components
- b. Passing Data to Child Components
- c. Lifting the State
- d. Updating the Parent Data from Child Component

Day 4

7. Iterations and Conditions

- a. Working with Conditional Operators
- b. Working with Iterations
- c. Working with Keys in Iteration
- d. Incorrect Usage of Keys
- e. Performance Impact of Keys in Iteration

8. Understanding React Lifecycle

- a.
- b. Working with Lifecycle Events
- c. Working with “shouldComponentUpdate”
- d. Understanding “shouldComponentUpdate” complexity
- e. Optimizing code with “shouldComponentUpdate”
- f. Working with Force Update

9. Working with Routing in React

- a.
- b. Understanding the dynamics of Single Page Architecture
- c. Creating Single Page architecture with React Routers
- d. Working with BrowserRouter and HashRouter
- e. Defining React Router and Switch and Links
- f. Nested Routing in React
- g. Working with Render Props
- h. Prompt User on Page Redirect
- i. Creating Custom Routes and Links

Day 5

10. Working with Forms

- a. Capturing Events from Forms
- b. Updating Forms Data
- c. Working with Uncontrolled Elements
- d. Working with TextArea, Inputs, etc

11. Understanding Higher-Order Components

- a.
- b. Understanding Higher-Order Components
- c. Creating Higher-Order Components
- d. Analysis of Benefits of Higher-Order Components

Day 6

12. Understanding Uncontrolled Elements

- a.
- b. Uncontrolled vs Controlled Elements
- c. Understanding “ref” in React
- d. Advantage and usage of Uncontrolled Elements
- e. Disadvantages of Uncontrolled Elements

13. Working with React State Hooks

- a. Understanding Hooks Concepts
- b. Advantages and Use cases for React Hooks
- c. Creating React Components with Hooks
- d. Using “useEffect” Hooks in React

Day 7

14. Handling Errors and Validations

- a. Working with React Validation
- b. Understanding Error Boundaries
- c. Working with “componentShouldCatchError”
- d. Capturing React Errors and Fallback Mechanism

15. Performance Optimization with React 16.8

- a. Working with Pure Components
- b. Working with React Fragments
- c. Function binding with Arrows vs “bind” keyword.
- d. Working with “memos”
- e. Working with Lazy and Suspense
- f. Providing Default parameters

Day 8

16. Working With Context APIs

- a. Understanding React Context APIs
- b. Creating React Context
- c. Working with Context Provider and Consumer

17. Working with Redux

- a.
- b. Understanding Redux Concepts
- c. Creating Actions, Reducers, and Stores
- d. Updating Store Data in Redux
- e. Triggering User Actions with Redux