

REACT COURSEMAP

Module 1 – Intro to REACT – (1 hr)

1. React JS Introduction – Why When ..
2. What is SPA
3. React types – Class Based and Functional
4. React Basics – What is Component, JSX, props and state
5. Different types of Component – Stateful, Stateless, Presentational etc.,
6. Concept of Virtual DOM
7. Basics of NODE – for packaging purpose

Module 2 – Useful Javascript concepts – (2 hrs)

1. ES6 – let, const, import export, spread and rest operation, Arrow functions, Destructuring, Classes and its properties
2. Promises, fetch, Async/Await, Array and it's methods, Object and Its methods
3. Third party library – Lodash and its functions – A useful library for sorting, filtering, deep copy and many more – (Underscore – being an alternative)

Module 3 – REACT Basics 1 – (1.5 hrs)

1. Creating our first REACT project
2. Project structure overview
3. Developing our First Class Based Component
4. Understanding props and state
5. Understanding jsx and its limitations
6. Using React Fragment as a wrapper Component
7. Sending props from one component to another component
8. Sending functions as props
9. Updating state by event handling



Module 4 – REACT Basics 2 – (3 hrs)

1. Understanding component lifecycle – Render, Mounting, Unmounting, Re-Rendering etc.,
2. Component Re-Render – (Prop Change and State Change)
3. Different Lifecycle Methods when state changes
4. Different Lifecycle Methods when prop changes
5. Understanding purpose of different lifecycle methods like ComponentWillMount, ComponentWillReceiveProps, ComponentDidUpdate, ComponentDidUnmount etc and using it in our project
6. Introducing PropTypes

Module 5 – REACT Basics 3 – (2 hrs)

1. Writing First Functional Component
2. Managing state in Functional Component – (useState Hook)
3. Introduction to hooks in React 16.8 version and above
4. Lifecycle management in Functional component using useEffect hook
5. Different ways of using useEffect – For cleanup, state change etc

Module 6 – REACT Basics 4 – (2 hrs)

1. Pure Component
2. Rendering components by list (Dynamic Rendering) and adding keys
3. Introduction to Refs in React
4. Context API in React
5. useContext for Functional Component
6. useReducer for Functional Component
7. Adding inline styling if needs
8. Double curly brace for expressions {} – Using JS inside JSX
9. String literals
10. Children, Two Way Data Binding, Lifting up state concepts



Module 7 – Form Management with React – (2 hrs)

1. Controlled vs Uncontrolled components
2. Managing Form elements via state – Controlled
3. Managing Form elements via DOM using Ref – Uncontrolled

Module 8 – REDUX – (1.5 hrs)

1. Understanding REDUX – An alternate to Context API
2. Concept of REDUX like Store, Action, Action Creator, Reducer etc.
3. React-Redux – Implementing Redux in React

Module 9 – React Router – For achieving SPA – (3 hrs)

Both Class Based and Functional Based way of achieving Routing and all of its concepts being covered

Module 10 – Redux Thunk (Middleware) – (1 hr)

Module 11 – REST http with axios or fetch or promise – (1 hr)

Module 10 – Gulp / Webpack – For packaging, minification etc – (1 hr)

Module 11 – Using React libraries(Material UI) – An Overview – (1 hr)

Module 12 – Unit Testing using JEST and Enzyme – (2 hrs)



Project Activities – Team will be splitted with 2/3 Teammate per team

1. Common Reusable Component creation –(4 hrs)

Each team should create below “commonly reusable components”

- a. Table component with Checkbox, Radio button and input field
- b. Pagination for Table
- c. Form elements like Input, Select, Checkbox, button etc.,
- d. Carousel
- e. Title
- f. Paragraph with Rich Text Editor
- g. Header with Navigation bar, Breadcrumb and login/logout Button
- h. Overlay Component

Additional Component can be created based on requirement while learning.

2. E-Comm Website –(5 hr)

Creating simple Homepage, Content page, Product Listing page, Product information page

3. Ticket management like Service Now – (2 hrs)

Create ticket, edit ticket, view ticket

We can use Nodejs Authentication for login and MongoDB as DB – These training will be included while implementing mini projects

