React JS Course Syllabus

JavaScript Course Syllabus

- ➢ Introduction
- ➢ What is JavaScript?
- ➢ JavaScript Features
- ➢ JavaScript Libraries
- ➢ Understanding HTML, CSS, JavaScript
- ➢ JavaScript Version
- ➢ ES5
- ➢ ES6/ES2015
- ➢ ES7/ES2016
- ➢ ES8/ES2017
- ➢ Data Types
- ➢ Number
- ➢ String
- ➢ Boolean
- ➢ Undefined
- ➢ Null
- ➢ Variable Mutation
- ➢ Basic Operator
- ➢ Operator Precedence
- ➢ Shorthand operator
- ➢ Problem statement
- ➢ Decision making statement-if else
- ➢ if else - example
- ➢ Comparing the problem statement solution
- ➢ Switch statement - example
- ➢ Boolean logic

- Boolean logic example
- Ternary operator
- Ternary operator example
- Tips
- Functions
- Function statement
- Function Statement Example
- What is Array
- Real world Problem Ecommerce
- Real world problem transport
- Space and the Complexity
- Built in function Complexity
- examples of Array
- Objects, When to use it
- Objects and Methods
- Loops and Iteration
- For Loop
- Continue and Break Statement

ES6 JavaScript Course Syllabus

- History of JavaScript
- Features
- let & const and its example
- Arrow Functions
- Alternative
- Tips and Arrow Functions
- Exports and Imports
- Tips for exports and imports
- Classes

- ➢ Classes example
- ➢ Inheritance
- ➢ Spread and rest Parameter
- ➢ Destructing

React JS Course Syllabus

SECTION 1: WHAT IS REACT JS?

- ➢ React JS Introduction
- ➢ Advantages of React JS
- ➢ Work flow of React JS
- ➢ Scope of React JS

SECTION 2: OVERVIEW OF JSX

- ➢ Introduction of Virtual DOM.
- ➢ Difference between JS and JSX.
- ➢ React Components overview
- ➢ Containers and components
- ➢ What is Child Components?
- ➢ What is Namespaced components?
- ➢ What are the JavaScript expressions available in JSX?

SECTION 3: REACT JS ENVIRONMENT SETUPS

- ➢ Node setup
- ➢ How to use NPM?
- ➢ How to create package.json and purpose of it?
- ➢ ES6 Introduction and features.

- ➢ Webpack Overview
- ➢ Best IDE for React JS and How to write optimized code in React JS?
- ➢ React JS browser plugins overview.

Real-time Practicals

- • NPM Installation by locally and Globally
- • Create a Basic App with React JS and other Supported NPM

SECTION 4: A REAL-TIME APPLICATION BY USING REACT JS

- ➢ Create a React component with JSX template.
- ➢ How to create Nested Components?
- ➢ What is React JS render?
- ➢ React Props overview.
- ➢ Introduction of Props validation with data types.
- ➢ Flow of States, Initialize states and update states.

Real-time Practicals

- • Create a Small React Module
- • Use All the states in in the created Application.

SECTION 5: REACT JS FORMS AND UI

- ➢ Lists of Form components.
- ➢ Setup Controlled and Uncontrolled form components.
- ➢ Control Input elements.
- ➢ How to set default values on all formats of Input elements.
- ➢ React JS Form validations.
- ➢ How to write Styles?
- ➢ Animations overview

Real-time Practicals

- Create a React Form.
- Client-side form validation.
- Applying form components.

Submit and Rest the form.

SECTION 6: ROUTING IN REACT JS AND OTHER JS CONCEPTS

- ➢ Single Page Application Overview.
- ➢ How to configure React Router?
- ➢ History of Router
- ➢ How to Handle Conditional statement in JSX?
- ➢ IIFE in JSX for complex logic overview.

Real-time Practicals

- Create a Single Page Application.
- Applying Routing.
- Dynamically render the components based on the url.

SECTION 7: EVENT HANDLING IN JSX

➤ onBlur, onKeyUp, onChange and other useful primary events in React JS.
➤ How to Sharing events between the components?

Real-time Practicals

• Communicate Data between components.
• Applying all lists of events.

SECTION 8: HOW TO WRITE STYLES IN REACT JS?

➤ CSS and inline styles in React JS overview.
➤ Introduction to styled components
➤ Real-time Practicals
➤ Styling the application using styled component
➤ How to use Animations in the Application.

SECTION 9: REACT ROUTER WITH NAVIGATION

➤ How to Load the router library?
➤ Configure the React Router?
➤ How to Pass and receive parameters?
➤ Integration of React-cookie overview.

SECTION 10: REDUX OVERVIEW

➤ What is Flux Architecture?
➤ What are the Flux Components available?
➤ Stores.
➤ Dispatchers.
➤ View Controllers.
➤ Actions.
➤ Views.

- ➤ How Flux works?
- ➤ Flux and React works together.
- ➤ Introduction to One Store.
- ➤ Provider Component
- ➤ Actions.
- ➤ Reducers.
- ➤ sagas
- ➤ Dispatchers
- ➤ View Controllers
- ➤ Selector

Real-time Practicals

- • Redux application Development with Real-time Project

SECTION 12: UNIT TESTING OVERVIEW

- ➤ What are the necessary Tools required for Unit Testing?
- ➤ React Unit Testing overview
- ➤ Introduction to JEST.
- ➤ How to Test React Component?
- ➤ How to Test React Router?

SECTION : 15 HOOKS

- ➤ Understanding Hooks
- ➤ The useState hook
- ➤ Side effects using the useEffect hook
- ➤ The useContext hook
- ➤ The useReducer hook

SECTION 22: FETCH DATA USING GRAPHQL

- ➢ What is GraphQL?
- ➢ Cons of Rest API
- ➢ Pros of GraphQL
- ➢ Frontend backend communication using GraphQL
- ➢ Type system
- ➢ GraphQL datatypes
- ➢ Modifiers
- ➢ Schemas
- ➢ GraphiQL tool
- ➢ Express framework
- ➢ NPM libraries to build server side of GraphQL
- ➢ Build a GraphQL API
- ➢ Apollo client
- ➢ NPM libraries to build client side of GraphQL
- ➢ How to setup Apollo client