

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: REACT JS COMPONENT LIFE CYCLES OVERVIEW

- Initial Render
- Props Change
- Stage Change
- Component willMount
- Component didMount
- Component Unmount

Real-time Practicals

- Applying Different Lifecycles in the Application.
- When to choose Appropriate lifecycles.

SECTION 7: 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 8: 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 9: 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 10: 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 11: FLUX , 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 13: INTEGRATION WITH OTHER LIBRARIES

- Gulp & Browserify
- React with jQuery
- React & AJAX

SECTION 14: REACT SERVER INTEGRATION & DEPLOYMENT

- https

- httpster
- npm

SECTION : 15 HOOKS

- Understanding Hooks
- The useState hook
- Side effects using the useEffect hook
- The useContext hook
- The useReducer hook
- Writing your own hook

SECTION 16: CODE SPLITTING

- Code splitting & Suspense
- Route Based Code Splitting
- Lazy Loading

SECTION 17: ISOMORPHIC REACT

- Server Side Rendering
- SSR with React - Setup & Server
- SSR with React - The Toolchain

SECTION 18: TESTING COMPONENT

- Using Jest with Test Utils from React-DOM
- Using Jest with the React Testing Library
- Using Jest with Enzyme

SECTION 19: EPILOGUE

- The React ecosystem

SECTION 20: NEW FEATURES OF REACT 16

- Handling exceptions in components
- Error boundaries

SECTION 21: WEBPACK PRIMER AND ISOMORPHIC REACT

- Webpack and its use
- Setting up and installing Webpack
- Working with the configuration file of Webpack
- Working with loaders
- Quick word on lazy loading, code splitting, and tree shaking
- Setting up a hot module replacement
- Server-side rendering (SSR)
- Working with renderToStaticMarkup and renderToString methods

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
- GraphQL 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