

# React JS

## Prerequisites for React JS-

### 1. HTML and CSS

You should know how to write semantic HTML tags, how to write CSS selectors, how to use classes, how to implement a CSS reset, box model, how to reset to border-box, flexbox, how to write responsive web applications including media queries and how to build a frontend application using HTML and CSS.

### 2. JSX (Javascript XML) & Babel

JSX that looks like HTML and you can consider it like HTML-flavored JavaScript. It is the easiest way to add HTML code inside javascript or you can say it is the extension of the Javascript language syntax. Basically JSX extends the ECMAScript so that XML/ HTML like text can co-exist along with JavaScript react code.

Babel is a compiler that transforms HTML like text found in JavaScript files into standard JavaScript objects. It takes features from the latest version of javascript or ECMAScript 2015+ (ES6+) and brings them down to ES5 or regular javascript.

### 3. Fundamentals of Javascript and ES6

variables, number, boolean, string, operators, conditionals, functions, loops, javascript keywords, array, objects and other fundamentals. Event handling, DOM manipulation and how 'this' keyword works totally different in javascript. Higher order function, callback function, arrow function, state (how state and setState() function works) scope, class & constructors, extends and inheritance, map, reduce, filter, promises, modules, closures, const, let (difference between var, let and const) and other features of ES5 and ES6.

### 4. Package Manager (Node + Npm)

When you will be working with ReactJS you'll have to install many, smaller software packages. Package in javascript contains all the files needed for a module and modules are the javascript libraries that can be included in the Node project. To install these packages you need a good installer that can help you to download and install software packages. You can install NPM by installing Node.js. When you install Node.js, NPM will install automatically.

## 5. Git and CLI (Command Line Interface)

It helps developers to work and collaborate with each other and it allows them to track and host different versions of project files. You should have good knowledge that how Git and these code hosting platforms work.

# Syllabus-

## A] Prerequisites

### HTML/HTML5

- ✓ Basics of HTML
- ✓ HTML Elements
- ✓ HTML Attributes
- ✓ HTML5
- ✓ Styling HTML
- ✓ Lists, Paragraphs, and Text Styling Data With Tables
- ✓ Forms and Images

### CSS/CSS3

- ✓ Basics of CSS
- ✓ Implement CSS in HTML
- ✓ Element, ID & Class Selectors
- ✓ Backgrounds & Borders
- ✓ Text Styling & Formatting
- ✓ Padding & Margin
- ✓ CSS3 Implementation
- ✓ Building the Navbar
- ✓ Working with iframes
- ✓ SASS/SCSS

### BOOTSTRAP 4

- ✓ Bootstrap 4 setup
- ✓ Grid System
- ✓ Navbar
- ✓ Forms
- ✓ Buttons

## **JAVASCRIPT & GITHUB**

- ✓ Integers, strings, and variables
- ✓ Undefined variables and modifying values of variables
- ✓ Boolean operators
- ✓ Comparing values
- ✓ If statements
- ✓ For loops
- ✓ Defining functions
- ✓ Objects
- ✓ Grabbing Elements With Javascript
- ✓ Event handling
- ✓ Arrays
- ✓ Textareas and getting the value of inputs
- ✓ Multiple parameters in functions
- ✓ Flexible function parameters
- ✓ Classes explained
- ✓ Class constructor, instance variables, and static variables
- ✓ Extending classes
- ✓ Setting up Github
- ✓ Local & Remote Repositories
- ✓ Pushing to Github

## **B] React JS**

### **INTRODUCTION TO REACT**

- ✓ What is React?
- ✓ Real-World SPAs & React Web Apps
- ✓ React Alternatives
- ✓ Single Page Applications
- ✓ Multi-Page Applications
- ✓ Installing React and Tools

### **NEXT GENERATION JAVASCRIPT (ES6)**

- ✓ Module Introduction
- ✓ Understanding "let" and "const"
- ✓ Arrow Functions
- ✓ Exports and Imports
- ✓ Classes, Properties, and Methods
- ✓ The Spread & Rest Operator
- ✓ Refreshing Array Functions
- ✓ JS Array Functions

## **BASICS AND SYNTAX**

- ✓ Module Introduction
- ✓ Understanding the Folder Structure
- ✓ Component Basics
- ✓ Understanding JSX
- ✓ JSX Restrictions
- ✓ Creating a Functional Component
- ✓ Components & JSX Cheat Sheet
- ✓ Outputting Dynamic Content
- ✓ LISTS AND CONDITIONS
- ✓ REACT COMPONENTS AND ELEMENTS
- ✓ Understanding & Using State
- ✓ Handling Events with Methods
- ✓ DEBUGGING REACT APPS
- ✓ Functional (Stateless) vs class (Stateful) Components
- ✓ THE BURGER BUILDER
- ✓ HTTP/AJAX
- ✓ Http Requests in React
- ✓ Introducing Axios
- ✓ Http Request to GET Data
- ✓ Rendering Fetched Data to the Screen
- ✓ Transforming Data
- ✓ Making a Post Selectable
- ✓ POSTing Data to the Server
- ✓ Sending a DELETE Request
- ✓ Fixing a Bug
- ✓ Handling Errors Locally
- ✓ Global Configuration for Axios

## **REDUX**

- ✓ Understanding State
- ✓ The Complexity of Managing State
- ✓ Understanding the Redux Flow
- ✓ Setting Up Reducer and Store
- ✓ Dispatching Actions
- ✓ Adding Subscriptions
- ✓ Connecting React to Redux
- ✓ Connecting the Store to React
- ✓ Dispatching Actions from within the Component
- ✓ Time to Practice – Dispatching Actions
- ✓ Passing and Retrieving Data with Action
- ✓ Switch-Case in the Reducer
- ✓ Updating Arrays Immutably