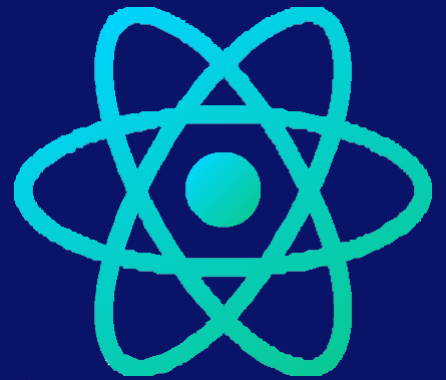


BITBYTE



ROBOTRONIX ENGINEERING TECH PVT. LTD.



# Web Development Front-End with ReactJS Introduction



# Web Development Using ReactJS

## React.js (Front End Tier)

### Why You Should Learn React Js :

React JS saves your time and money on development because it's component-based. You can break down an interface into reusable components that allow you to build dynamic user interfaces.

### What is React JS :

1. The top tier of the MERN stack is React.js, the declarative JavaScript framework for creating dynamic client-side applications in HTML.
2. React is a JavaScript library for building user interfaces.
3. React Applications Are Usually Built around a single HTML element called Root Node.(Root Element).
4. React Application Describe the Structure of the web page.
5. Javascript Functions are React Components.
6. Using React you can build complex interfaces through simple Components, connect them to data on your backend server, and render them as HTML.

## Syllabus

### HTML :

- Introduction
- Basic structure of an HTML document
- Creating an HTML document
- Head Section and Elements of Head
- HTML Tags with Attributes
  - ❖ Meta Tags
  - ❖ CSS Tags
  - ❖ Script Tags
  - ❖ Heading Tag
  - ❖ Paragraph, Span & Pre Tags
  - ❖ Formatting Tag
  - ❖ Image Tag
  - ❖ Anchor Tag (Hyperlink Tag)
  - ❖ Table Tag
  - ❖ List Tag



- Form Tag - Attributes of Form
  - ❖ POST & GET Methods
  - ❖ Text input, Text area
  - ❖ Checkbox and Radio Button
  - ❖ Dropdown, List and Optgroup
  - ❖ File Upload and Hidden Fields
  - ❖ Submit, Reset Button
- Fieldset and Legend
- Frame Tag
- Media Tag
- HTML5 Semantic Tag
- Layout based on HTML5
- Assignment
- Project

## CSS :

- Introduction
- Types of CSS
  - ❖ Inline CSS
  - ❖ Internal CSS
  - ❖ External CSS
- CSS Selectors
  - ❖ Name Or Tag Selector
  - ❖ ID selector
  - ❖ Class Selector
  - ❖ Attribute Selectors
- CSS Properties
- Custom Fonts
- New CSS3 Properties
  - ❖ Text-Shadow Property
  - ❖ Text-Stroke Property
  - ❖ Rounded Corners
  - ❖ Box Shadows
  - ❖ CSS Gradients
  - ❖ CSS Multiple Backgrounds
  - ❖ Opacity Property
  - ❖ Transition Effect
  - ❖ Transform Effect
  - ❖ Animation Effects
  - ❖ CSS Media Queries
- Layout Of Web Page
- Simple Registration Login Layout
- Responsive CSS
- Templates
- Project



## BOOTSTRAP

- Introduction
- Downloading the Bootstrap Files



## JAVASCRIPT :

- Introduction
- What is JavaScript
- JavaScript Engine
- Developer Console
- Code Editors



- **Data types**

- ❖ Primitive

1. String
2. Number
3. Boolean
4. Null
5. Undefined
6. BigInt
7. symbol

- ❖ Non-primitive (Object)

1. Array
2. Object

- **Variable**

- ❖ var
- ❖ let
- ❖ const

- **Type Conversions**

- ❖ String Conversion
- ❖ Numeric Conversion
- ❖ Boolean Conversion

- **Variable Hoisting**

- **Operators and Statements**

- ❖ Arithmetic Operators
- ❖ Assignment Operators
- ❖ Comparison Operators
- ❖ Logical Operator
- ❖ Conditional (Ternary) operator
- ❖ String operator

- **Control Statement**

- ❖ if
- ❖ else
- ❖ if else
- ❖ Nested if else
- ❖ switch

- **Loop**

- ❖ while
- ❖ do while
- ❖ for
- ❖ for in
- ❖ for of

- **Function**

- **Call By Value / Call By Reference**

- **Array**

- ❖ Array Methods

- **Object**

- **String**

- ❖ String Methods
- ❖ Template String

- **Number**

- ❖ Number Methods

- **Math Object**

- **Date Object**

- **DOM**

- ❖ Introduction
- ❖ Methods
- ❖ Document
- ❖ Elements
- ❖ HTML
- ❖ Forms
- ❖ CSS
- ❖ Animations
- ❖ Event

1. Mouse Events

2. Keyboard Events

3. Form Events

4. Input Events

- **JS Validations**
- **Timing Based Events**
- ❖ setTimeout
- ❖ clearTimeout
- ❖ setInterval
- ❖ clearInterval
- **Regular Expressions**
- **ES6 Features**
- **Modules**
- **Sets**
- **Maps**
- **Error Handling**
- ❖ try and catch

## Working with state and props

- What is state and its significance
- Read state and set state
- Passing data to component using props
- Validating props using propTypes
- Supplying default values to props using default Props

## Rendering lists

- Using react key prop
- Using map function to iterate on arrays to generate elements

## Event handling in React

- Understanding React event system
- Understanding Synthetic event
- Passing arguments to event handlers

## Understanding component lifecycle and handling errors

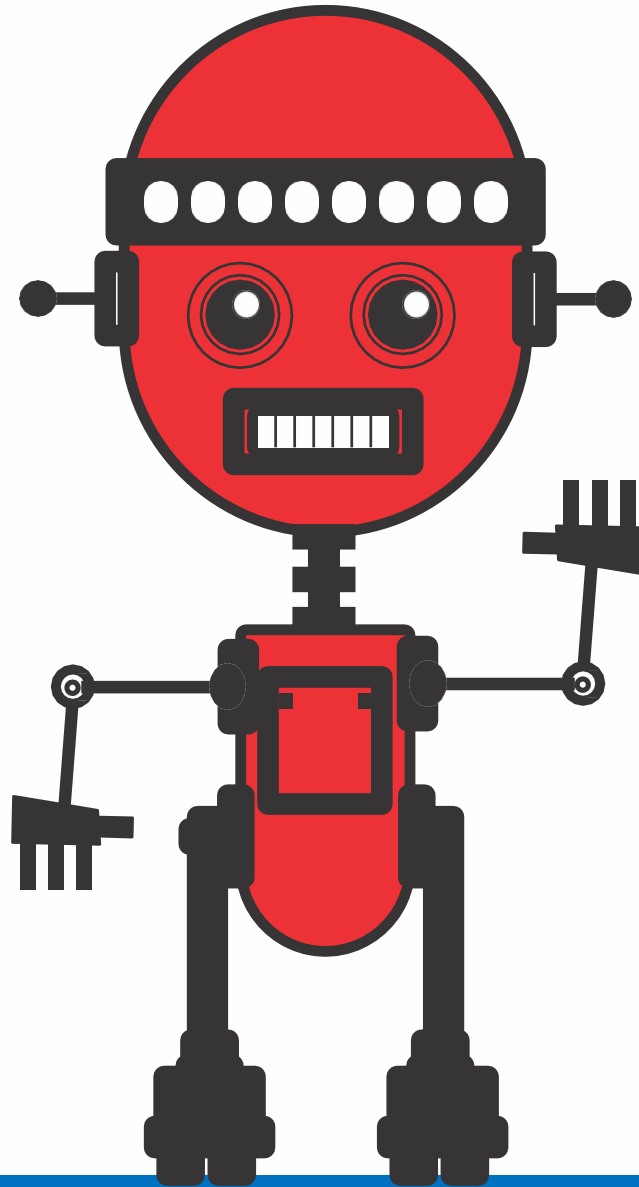
- Understand the lifecycle methods
- Handle errors using error boundaries



# ReactJS

## Introduction to React

- What is React?
- Why React?
- React version history
- Just React – Hello World
- Using create-react-app
- Anatomy of react project



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