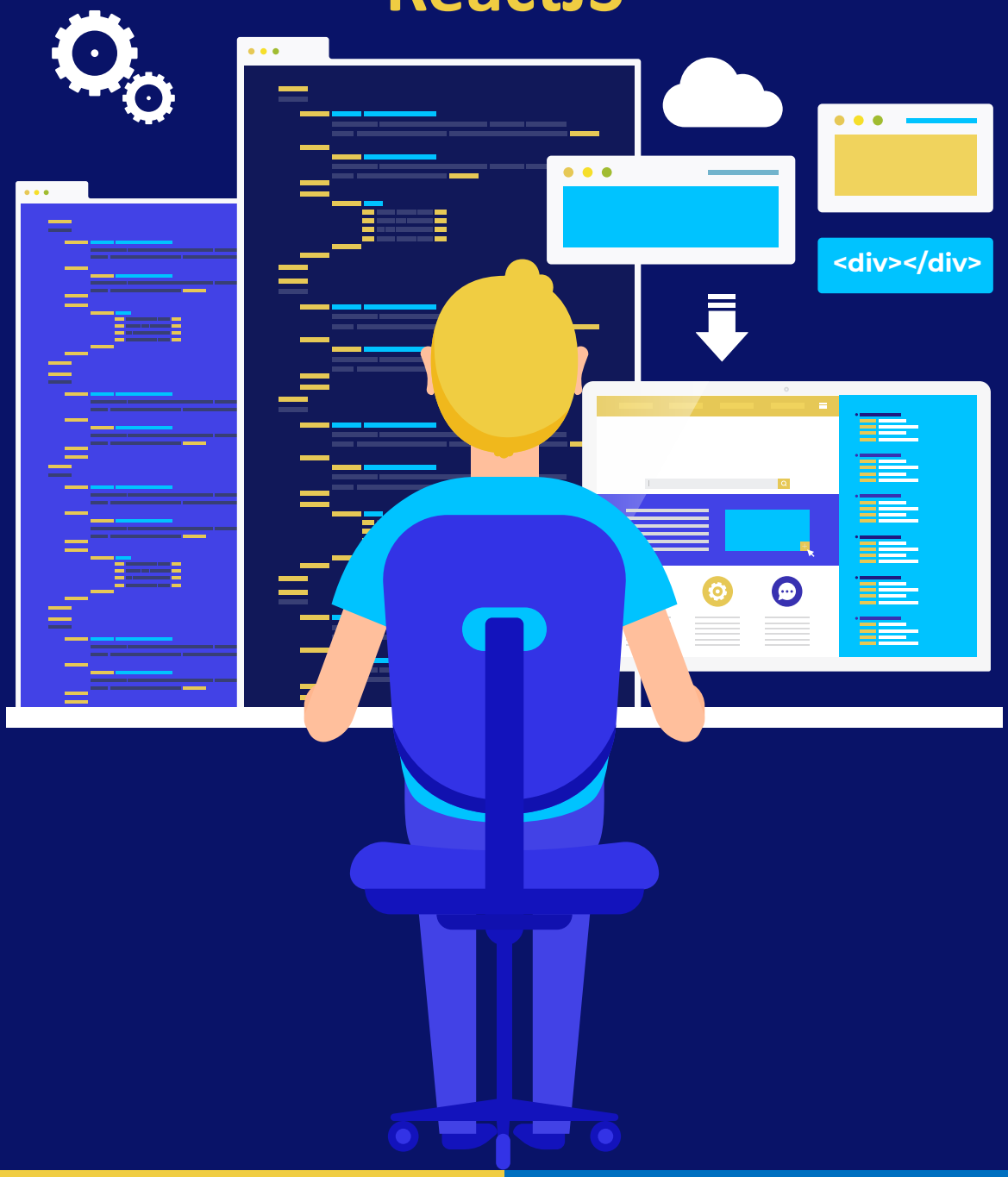
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Web Development Using ReactJS



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.

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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
- Understanding the File Structure
- Creating Your First Web Page with Bootstrap
- Including Bootstrap's Files via CDN
- Bootstrap Grid System
- Creating Fixed Layout with Bootstrap
- Creating Fluid Layout with Bootstrap
- What is Responsive Web Design or Layout
- Bootstrap Typography
- Bootstrap Tables
- Bootstrap Lists
- Bootstrap Forms
- Bootstrap Input Groups
- Bootstrap Buttons
- Bootstrap Images
- Bootstrap Icons
- Bootstrap Navbar
- Bootstrap Breadcrumbs
- Bootstrap Pagination
- Bootstrap Badges
- Bootstrap Progress Bars
- Bootstrap Jumbotron
- Bootstrap Helper Classes
- Bootstrap Modals
- Bootstrap Dropdowns
- Bootstrap Tooltips
- Bootstrap Popovers
- Bootstrap Alerts
- Bootstrap Accordion
- Bootstrap Carousel
- Bootstrap ScrollSpy
- Project

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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

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- **JS Validations**
- **Timing Based Events**
  - setTimeOut
  - clearTimeOut
  - setInterval
  - clearInterval

- **Regular Expressions**
- **ES6 Features**
- **Modules**
- **Sets**
- **Maps**
- **Error Handling**
  - try and catch

ReactJS



Introduction to React

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

Templating using JSX

- Expressions
- Using logical operators
- Specifying attributes
- Specifying children
- Fragments

About Components

- Significance of component architecture
- Types of components
- Functional
- Pure

Working with state and props

- What is state and it 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

Working with forms

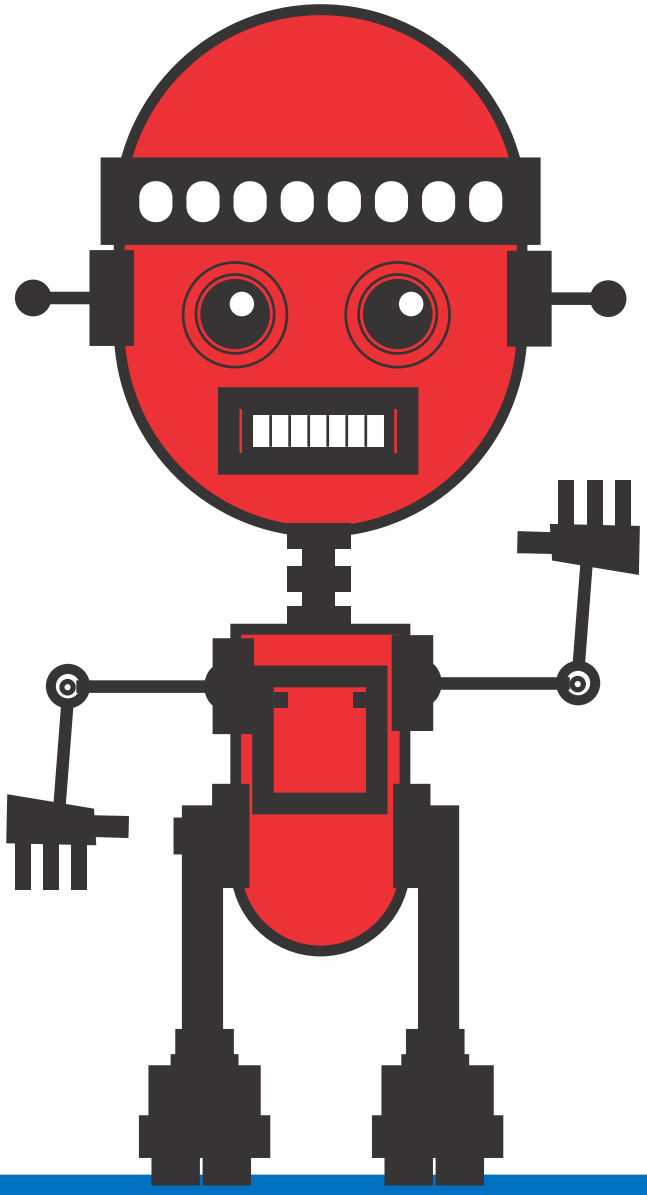
- Controlled components
- Uncontrolled components
- Understand the significance to default Value prop
- Using react ref prop to get access to DOM element

Hooks

- What are hooks
- Why do you need hooks
- Different types of hooks
- Using state and effect hooks
- Rules of hooks

Routing with react router

- Setting up react router
- Understand routing in single page applications
- Working with Browser Router components
- Configuring route with Route component
- Using Switch component to define routing rules
- Making routes dynamic using route params
- Working with nested routes
- Navigating to pages using Link and NavLink component
- Redirect routes using Redirect Component
- Using Prompt component to get consent of user for navigation
- Path less Route to handle failed matches



ROBOTRONIX ENGINEERING TECH PVT. LTD.

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