

# **MERN Stack Development Syllabus**

**DURATION – 6 MONTHS**

**MODE OF TRAINING – OFFLINE/ONLINE**



# HTML



- 
- **Introduction to HTML**
  - **Basic HTML Tags**
  - **Text Formatting & Styles**
  - **Lists**
  - **Links & Navigation**
  - **Images & Multimedia**
  - **Tables**
  - **Forms & Input Elements**



# HTML5



- **Introduction to HTML5**
- **Semantic Elements**
- **HTML5 Forms & Input Types**
- **Audio & Video**
- **SVG (Scalable Vector Graphics)**
- **Project-1 static website**





# CSS



- **Introduction to CSS**
- **Selectors & Combinators**
- **Box Model**
- **Colors & Backgrounds**
- **Typography (Fonts & Text Styling)**
- **Lists & Tables**
- **CSS Positioning & Layout**



Activate Windows



# CSS 3



- **Introduction to CSS 3**
- **Flexbox**
- **Grid Layout**
- **Pseudo classes and Pseudo elements**
- **Transitions & Animations**
- **CSS3 Shadows & Effects**
- **Media Queries & Responsive Design**
- **Advanced CSS Techniques**
- **Project-2 Responsive Website**



Activate Windows



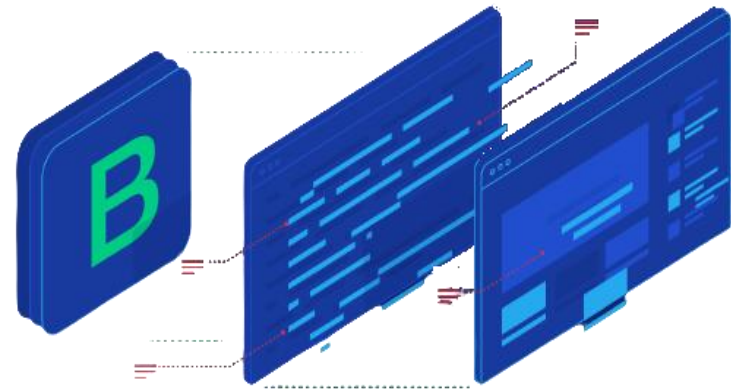
# BOOTSTRAP 4



## BOOTSTRAP 4

---

- **Installation Of Bootstrap 4**
- **Bootstrap Forms**
- **Bootstrap Containers**
- **Bootstrap Colors**
- **Bootstrap Buttons**
- **Bootstrap Cards**
- **Bootstrap Dropdowns**
- **Bootstrap Navbar**
- **Bootstrap Carousel**
- **Bootstrap Components**
- **Bootstrap Grid System**
- **Project-3 Responsive Website Development**

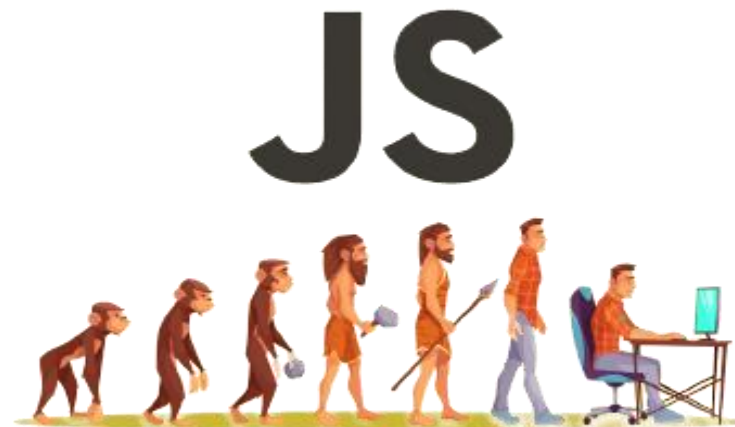




# JavaScript



- **Introduction to JavaScript**
- **JavaScript Basics**
- **Control Structures**
- **Functions**
- **Arrays & Objects**
- **DOM Manipulation**
- **Event Handling**
- **ES6+ Features**





# Advance Java Script



- **Asynchronous Programming**
- **Closures & Scope**
- **Error Handling**
- **Project-4**

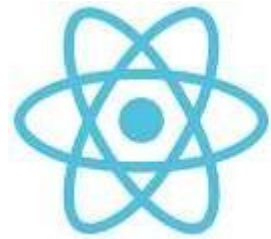




# JQuery Syllabus



- **jQuery Intro**
- **jQuery Syntax**
- **jQuery Selectors**
- **jQuery Effects**  
**Hide/Show, Fade, Slide ,Animate, stop() ,Callback, Chaining**
- **jQuery Get & Set**
- **jQuery Add jQuery & Remove**
- **jQuery CSS Classes & css(), Dimensions**
- **jQuery Traversing**
- **jQuery Traversing, Ancestors, Descendants, Siblings, Filtering**
- **jQuery AJAX**
- **1 Template website**

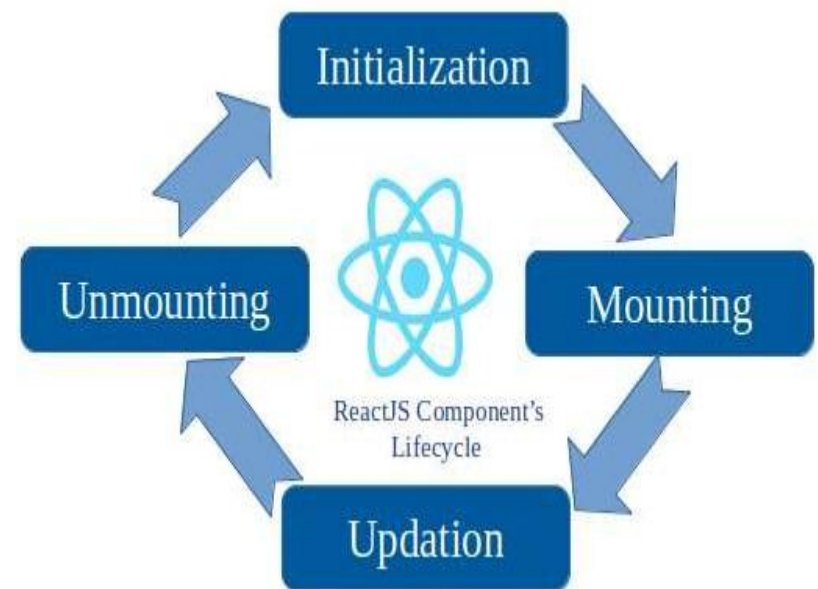


**React JS**



- 
- **Introduction to React.js**
  - **Core Concepts of React**
  - **How does React work?**
  - **Introduction to JSX**
  - **React Hooks**
  - **React Forms and Validations**
  - **React Router (Navigation in React)**
  - **State Management in React**
  - **Working with APIs in React**
  - **Performance Optimization in React**
  - **React UI Libraries and Styling**

- **Component Life-Cycle**
- **Render() method – Behind the Scenes**
- **Component Lifecycle – Creation**
- **Component Lifecycle – Updation**
- **shouldComponentUpdate() Lifecycle Method**



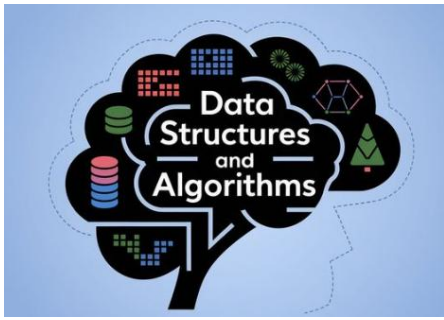


# Version Control System



- **Introduction to Version Control**
- **Getting Started with Git**
- **Git Workflow**
- **Branching in Git**
- **Merging and Resolving Conflicts**
- **Working with GitHub**
- **Collaboration Workflows**
- **Advanced Git Commands and Techniques**
- **Best Practices for Git and GitHub**





# Data Structures and Algorithms



- Time & Space Complexity
- Recursion
- Math Problem & Algorithm
- Linked List
- Stacks and Queues
- Sorting Algorithms (Bubble, Selection, Insertion, Merge, Quick)
- Searching Algorithms (Binary Search, Linear)



- 
- **Introduction to Node.js and Setup**
  - **Modules and NPM**
  - **Core Modules in Node.js**
  - **File System Operations**
  - **Creating a server with HTTP**
  - **Middleware**
  - **Asynchronous Programming in Node.js**
  - **Working with Databases**

- 
- **Introduction & Setup of Express.js**
  - **Express.js Fundamentals**
  - **Working with Templates & Views**
  - **Handling Forms and Requests**
  - **Database Integration**
  - **Authentication & Authorization**
  - **REST API Development**
  - **File Uploads and Handling**
  - **Web Sockets and Real-time Communication**



# MongoDB



- 
- **Introduction to MongoDB**
  - **MongoDB Basics**
  - **CRUD Operations in MongoDB**
  - **Database Integration**
  - **Querying and Filtering Data**
  - **Indexing in MongoDB**
  - **Aggregation Framework**
  - **Relationships in MongoDB**
  - **MongoDB with Node.js**
  - **MongoDB Cloud**





# SQL Syllabus



- **Microsoft SQL Server installation**
- **Introduction to Basic Database Concepts**
- **Introduction to SQL Server**
- **DDL and DML Statements**
- **Working with Constraints**
- **Working with Queries (DQL)**
- **Joins and Set Operations**
- **Implementing Views**
- **Working with Stored Procedures and Functions**
- **Cover 400+ queries**



# Aptitude

---

## Quantitative Aptitude

- Average
- Percentage
- Profit and Loss
- Simple Interest
- Compound Interest
- Ratio Proportion
- Time and Work
- Time
- Speed
- Distance Number
- System
- Permutation and Combination
- Probability
- Data Interpretation

## Logical Reasoning

- Blood Relation
- Direction sense
- Coding and decoding
- Clocks and Calendar
- Cubes and Dices
- Seating arrangement
- Syllogism
- Data sufficiency
- Puzzles
- Miscellaneous



# Softskill



- **Setting the tone**
- **Introduction of Be Employable**
- **Competency Matrix**
- **Effective Communication**
- **Presentation skills**
- **Business Communication**
- **Attitude + Motivation**
- **Emotional Intelligence**
- **Leadership**
- **Create CV/Resume**
- **Group Discussion**
- **Mock Group Discussion**
- **PI practice**
- **Virtual Interview**
- **Industry Knowhow and future, Certifications and action plan**

## **Key Feature**

---

- **Trainer with 12+ Years of Experience**
- **200 hours of high-quality course**
- **Best Quality Training**
- **Live Project Experience**
- **Demo Lectures are available**
- **In-depth Course Contents**
- **100 % Placement Assistance**
- **Internship support**

# Orange Itech Offer You



# THANK YOU

---

**317,B wing 3rd Floor, Rajdhani Complex,  
Near Shankar Maharaj Math, Pune - Satara  
Road, Balajinagar, Pune  
9975708774/9623922545  
website - <http://orangeitech.in>**