

Full Stack Developer Training Course

COURSE DETAILS

Visit Our Website
www.gemsinstitute.com





Overview

Full Stack Developer Training is a 360° training program offered by Gems Institute of Technology, comprehensive and designed to train participants in creating enterprise-style applications with server-side code using Node, Express framework, front-end coding using ReactJS and databases with MongoDB.

This training program has become one of the most popular and in-demand because of all the benefits it offers with a combination of technologies. Web developers who want to take their careers to a new level can do so with Full Stack (MERN) Developer Training (Master Program).

After completion of the training, participants will become experts in front-end and back-end JavaScript technologies of the popular MongoDB, Express, React and Node. This training program is designed to give participants a thorough understanding of Full Stack technologies: MongoDB, Express, ReactJS and Node.

Yagnesh Darji
CEO Of Gems Institute Of Technology



Course Content

- HTML
- CSS
- Java Script
- Bootstrap
- React JS
- Node
- Mongo DB
- AWS Cloud Integration

HTML (Hypertext Mark-up Language)

- Introduction of Tags
- Empty and Container Tags
- HTML All Basic Tags
- HTML Address Tag
- HTML Formatting Tags
- HTML Elements
- HTML Attributes
- HTML Tables
- HTML div with CSS Float
- HTML Forms
- Other HTML Important Tags

The slide features several decorative geometric shapes: a green circle in the top-left corner, a blue circle in the top-right corner, a large green diamond in the middle-right, a red diamond overlapping the green one, a blue diamond in the bottom-right, and a red diamond in the bottom-right corner. The title is in a bold, blue, sans-serif font.

CSS (Cascading Style Sheet) with Bootstrap

- Introduction of CSS
- Inline CSS
- Internal CSS
- External CSS
- Box Model: Margin, Border and Padding
- Float Property
- Text Decoration
- CSS Tables
- Layouts using CSS
- CSS Shadows

The slide features several decorative geometric shapes. In the top-left corner, there is a green circle. In the top-right corner, there is a blue circle. On the right side, there is a large green diamond shape. In the bottom-right corner, there are two smaller diamond shapes, one blue and one red. The title 'Bootstrap Framework' is written in a bold, blue, sans-serif font.

Bootstrap Framework

- Meaning of Responsive
- Bootstrap CDN
- Bootstrap Layout using grids
- Use different components in Bootstrap

JavaScript

- JS Introduction
- JS Let
- JS Const
- JS DOM
- JS Variables
- JS Operators
- JS Arithmetic
- JS Assignment
- JS Data Types
- JS Functions
- JS Objects
- JS Strings
- JS Numbers
- JS Arrays
- JS Random
- JS Booleans
- JS Control statements
- JS Type Conversion
- JS Errors
- JS Scope
- JS Strict Mode
- JS this Keyword
- JS Validation

React JS

Introduction to ReactJS

- Introduction to Basic building blocks of Web Application Development. HTML-CSS- JS
- SPAs and React Web Apps.
- ReactJS Overview.
- Single Page Apps VS Multi-Page Applications.
- What is a DOM, Virtual DOM?
- Installing ReactJS and writing our first Hello World code.
- The Folder Structure of React Application.
- Basic Building Blocks of React JS – (components, state, props, jsx)
- What are the components? Understanding the component basics and different types of components.
- What are the functional components and container components?
- Creating your first class-based component and functional component.
- Understanding JSX and JSX restrictions.
- Component Nesting.
- What are props and a simple understanding of props?
- Passing Props into components.
- Accessing props inside the components.
- Creating reusable dynamic components

React Architecture

- Components configuration with state, props and children.
- Understanding and using state and props, and Differences between props & state
- Handling Events
- Manipulating the state with `setState()` method
- Difference between stateless and stateful components.
- Adding two-way binding.
- Rendering content conditionally.
- Making API REQUESTS with React.
- Fetching data – Axios vs Fetch.
- Building Lists from data
- The purpose of keys in lists and Implementing keys in lists.
- Handling User Input with forms and events.

React Architecture

- Controlled Elements versus uncontrolled elements.
- Handling forms submitted.
- Understanding this in JavaScript and solving context issues.
- Communicating child to parent.
- Handling user Input of dynamic forms
- Handling form submission (MAKING API CALL)
- Adding Custom Form Validation.
- Showing validation errors and other error messages.
- Handling overall form validity.

UI and Component Styling in React

- Styling React components. The different ways of styling the react components.
- Inline styles and external styles to the components.
- Using styled-components.
- Creating a navigation-bar in ReactJS.
- Introduction to React Router.
- Creating Routes to our Navigation Bar.

Hooks

- Introducing Lifecycle methods.
- Why use Lifecycle methods
- React Hooks – An Introduction, Why React Hooks
- Moving from classes to functional components
- Introducing the first Hook: useState Hook and Second Hook: useEffect Hook
- Data Fetching with hooks/replacing the class lifecycle methods
- Fetching data on component mount with useEffect
- Using the useRef Hook
- Displaying loading state with useState
- Error Handling and displaying errors with useState
- The useReducer Hook
- Using the useContext Hook



Basics of Networking

- What is Ip addresses?
- Ports
- TCP and UDP protocol
- Private and Public Network
- Client – Server Architecture

Getting started with Node

- What is Node
- Node Architecture
- How Node Works
- Installing Node
- Your First Node Program

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Node Module System

- Introduction
- Global Object
- Modules
- Creating a Module
- Loading a Module
- Path Module
- OS Module
- File System Module
- Events Module
- Event Arguments
- Extending Event Emitter
- HTTP Module

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Node Package Manager (NPM)

- Introduction
- Package.json
- Installing a Node Package
- Using a Package
- Package Dependencies
- Installing a Specific Version of a Package
- Updating Local Packages
- DevDependencies
- Uninstalling a Package
- Working with Global Package

Express JS

- Introduction
- RESTful Services
- Introducing Express
- Building Your First Web Server
- Nodemon
- Environment Variables
- Route Parameters
- Handling HTTP GET Requests
- Handling HTTP POST Requests
- Calling Endpoints Using Postman
- Input Validation
- Handling HTTP PUT Requests
- Handling HTTP Delete Requests
- Project- Build the Genres API
- Building RESTful APIs with Express Recap

The slide features a white background with several large, semi-transparent geometric shapes in green, blue, and red. These shapes are primarily located on the right side and corners of the slide, creating a modern, abstract design. The shapes include circles, triangles, and polygons of various sizes and orientations.

MongoDB

- Introducing MongoDB
- Installing MongoDB on Windows
- Connecting to MongoDB
- Schemas
- Models
- Saving a Document
- Querying Documents
- Comparison Query Operators
- Logical Query Operators
- Regular Expressions
- Counting
- Updating and Removing a Document

Mongo – Data Validation

- Validation
- Built-in Validators
- Custom Validators
- Async Validators
- Validation Errors
- SchemaType Options

Mongoose – Modelling Relationships between Connected Data

- Modelling Relationships
- Referencing Documents
- Population
- Embedding Documents
- Using an Array of Sub-documents
- Transactions
- ObjectID
- Validating ObjectIDs
- A Better Implementation

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Handling and Logging Errors

- Introduction
- Handling Rejected Promises
- Express Error Middleware
- Try Catch Blocks
- Express Async Errors
- Logging Errors
- Logging to MongoDB
- Uncaught Exceptions
- Unhandled Promise Rejections
- JWT Token

Cloud Computing

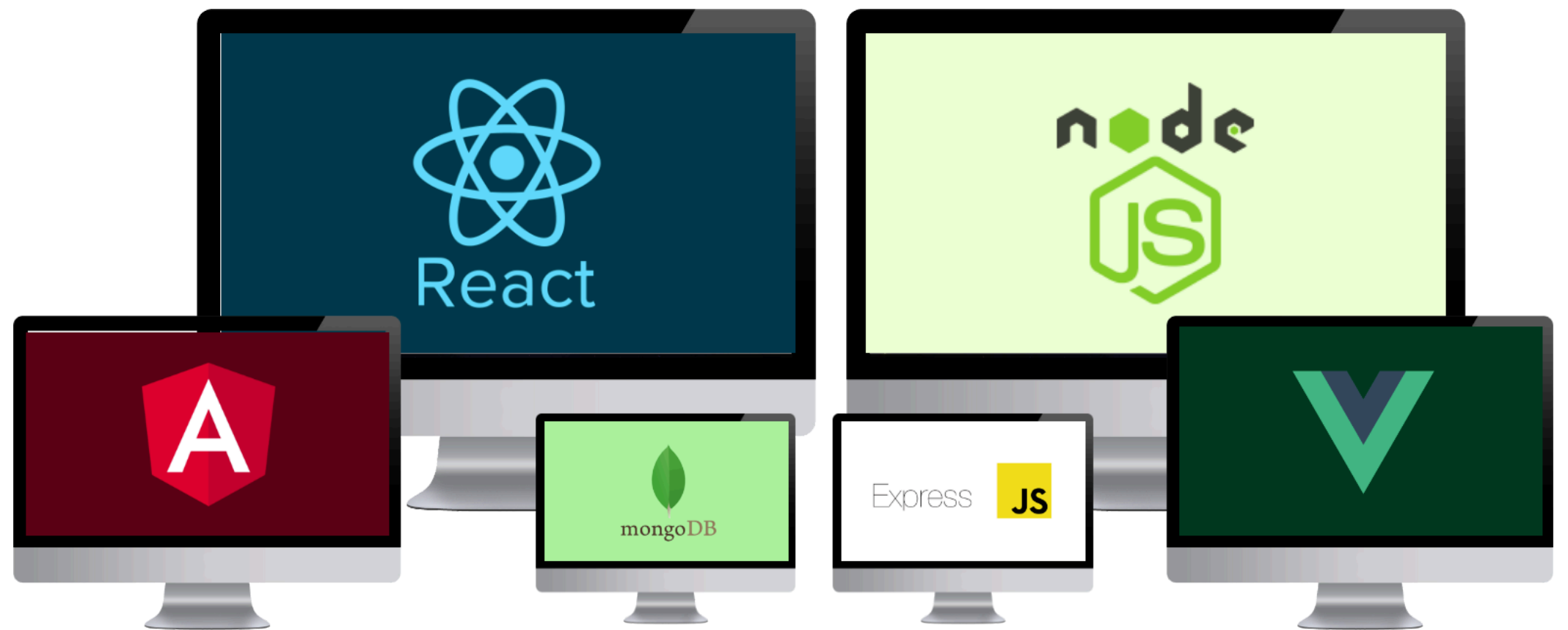
- Introduction of AWS
- EC2 Server
- AWS Elastic Beanstalk (Run and Manage Web Apps)
- Amazon RDS (Managed Relational Database Service for MySQL and MariaDB)
- Amazon Simple Storage Service (S3) (Scalable Storage in the Cloud)

Type of projects on MERN using all technologies: (ANY ONE)

- **Introduction of AWS**
- **EC2 Server**
- **AWS Elastic Beanstalk (Run and Manage Web Apps)**
- **Amazon RDS (Managed Relational Database Service for MySQL and MariaDB)**
- **Amazon Simple Storage Service (S3) (Scalable Storage in the Cloud)**

Full Stack Developer Training Course Fees: ~~₹ 90,000~~ **₹ 45,000**

Course Duration: 6 to 8 Months





Thank You

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