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## MEAN STACK

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### MODULE – 1 : Web & JavaScript Fundamentals

- HTML: Elements, Forms, Tables, Semantic Tags
- CSS: Selectors, Box Model, Flexbox, Grid
- Responsive Design (Media Queries)
- Mini Project: Personal Portfolio Page

### MODULE – 2 : JavaScript Fundamentals

- Variables, Data Types
- Operators, Conditions
- Loops, Arrays, Functions
- DOM Manipulation (Events, Selectors)

### MODULE – 3 : Intermediate JavaScript

- Objects, this keyword
- Callbacks, ES6 (let, const, arrow functions)
- Array methods: map, filter, reduce

### MODULE – 4 : Advanced JavaScript + Git

- Promises, Async/Await
- Fetch API, JSON
- Git/GitHub basics (clone, push, pull, branch)
- Mini Project: Todo App using JS and localStorage

### MODULE – 5 : Introduction to Node.js

- What is Node.js?



- npm (Node Package Manager)
- Core modules: fs, http, path
- Creating HTTP server

## **MODULE – 6 : Express.js Basics**

- Setting up Express server
- Routing (GET, POST)
- Middleware, Static files
- Nodemon setup

## **MODULE – 7 : REST API Development**

- REST API concepts (CRUD)
- Building APIs with Express
- Handling data with JSON
- Postman testing

## **MODULE – 8 : MongoDB Basics**

- NoSQL vs SQL
- MongoDB installation or use Atlas
- CRUD operations with Mongo Shell & Compass
- Mini Project: REST API for Blog posts

## **MODULE – 9 : MongoDB with Node**

- Connecting MongoDB to Node.js
- MongoDB Drivers

## **MODULE – 10 : Mongoose ODM**

- Schemas & Models
- CRUD operations using Mongoose
- Data validation, ObjectId, References

## **MODULE – 11 : Advanced API Features**

- Authentication: JWT
- Password hashing with bcrypt
- Protected Routes, Role-based access

## **MODULE – 12 : Mini Project**

- Project: Blog API or Student Management System
- GitHub Deployment

## **MODULE – 13 : Intro to Angular**

- Angular CLI & Project Setup
- Components, Modules, Templates
- Data binding, Directives, Event handling

## **MODULE – 14 : Angular Forms**

- Template-driven forms
- Reactive Forms
- Form Validation

## **MODULE – 15 : Services and HTTP**

- Creating Services
- Making HTTP Requests
- Observables & RxJS Basics

## **MODULE – 16 : Routing in Angular**

- Angular Router
- Route Params, Navigation
- Lazy Loading, Guards

## **MODULE – 17 : MEAN Stack Architecture**

- Connecting Angular with Node
- CORS handling
- Environment configuration

## **MODULE – 18 : Token-based Auth in Angular**

- Login, Register Pages
- JWT storage in localStorage
- Route Guards (AuthGuard)

## **MODULE – 19 : CRUD Operations (Frontend + Backend)**

- Full integration of CRUD
- Angular Forms with REST API
- UI with Bootstrap or Angular Material

## **MODULE – 20 : Mini Full-Stack Project**

- Project: Task Manager / Notes App

## **MODULE – 21 : Advanced Angular Features**

- Pipes, Custom Pipes
- Directives, Animations
- File Upload (Frontend)

## **MODULE – 22 : Admin Dashboard Concepts**

- Role-based access UI
- Charts (ng2-charts or Chart.js)
- Pagination, Search, Sort

## **MODULE – 23 : Testing & Debugging**

- Debugging tools
- Unit testing with Jasmine & Karma (basic)
- Postman & Browser DevTools

## MODULE – 24 : Deployment & Final Project

- Deployment: Node (Render, Railway), Angular (Vercel/Netlify)
- MongoDB Atlas setup
- Final Project: Full-Stack App (E-commerce/Admin Panel)

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| Trainer        | Er Abinash Nayak |
| Discounted Fee | ₹ 14,999         |
| Duration       | 6 Months         |