



KIDS & TEENS FREELANCING TRAINING INSTITUTE

Mean Stack Web Development Course Outline

Module 1: What is the MEAN Stack?

- What does "MEAN" stand for? (MongoDB, Express, Angular, Node.js)
 - Simple explanation: building websites using one language—JavaScript
 - Real-life example: running a whole store from the shelves (frontend) to storage (backend)
 - Why MEAN is powerful for full-stack web apps
 - How MongoDB, Express, Angular, and Node.js work together
 - Fun comparison: MEAN stack vs. building a project with different tools for each layer
 - Activity: match each MEAN part to its job in a website
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Module 2: Angular – Building the Frontend

- What is Angular and how it helps build modern websites
 - Real-life example: Angular is like a toolbox for building dynamic pages
 - Components, templates, and data binding explained simply
 - How to create your first Angular app
 - Activity: build a small app that displays your favorite books or movies
 - Why Angular makes big websites easier to manage
 - Introduction to TypeScript (used with Angular)
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Module 3: Node.js & Express – Handling the Backend

- What is Node.js and why it runs JavaScript on the server
- What is Express and how it makes backend development easier
- Real-life example: Node and Express as a restaurant kitchen and server
- How to set up a simple web server using Express
- Activity: create a basic API that returns your name or hobby
- How frontend and backend communicate in a MEAN app

- Introduction to routes and middleware in Express
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Module 4: MongoDB – Storing Data

- What is MongoDB and how it stores your app's information
 - Real-life example: like storing digital files in labeled folders
 - Documents, collections, and databases explained simply
 - What CRUD means (Create, Read, Update, Delete)
 - Activity: create a simple MongoDB database with favorite foods or games
 - Introduction to Mongoose for easier database connections
 - How MongoDB fits into your full-stack web app
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Module 5: Putting the MEAN Stack Together

- How Angular (frontend) talks to Express & Node (backend)
 - How the backend connects to MongoDB (database)
 - Real-life example: customer orders a pizza online → server → kitchen → storage
 - What is an API and how data moves through the MEAN stack
 - Activity: build a mini full-stack app (e.g., a note taker or task manager)
 - Using Angular services to send and receive data from your backend
 - How data flows from user input to database and back
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Module 6: Deployment – Launching Your MEAN App

- What is deployment and why it matters
 - Real-life example: opening your digital shop for the world
 - How to deploy Angular frontend (e.g., on Firebase or Netlify)
 - How to host the backend on Render, Railway, or Heroku
 - Hosting your MongoDB database on MongoDB Atlas
 - Activity: deploy your full MEAN app and share the link
 - Keeping everything connected and live on the internet
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Module 7: Debugging & Performance – Making it Work Smoothly

- What is debugging and why it's part of every developer's job
- Real-life example: finding what's wrong in a recipe or instruction set
- Using Chrome DevTools and Angular error messages
- How to test your backend with Postman

- Activity: fix a sample bug in your Angular or Node app
 - Tips to make your MEAN app faster and cleaner
 - Why testing and fixing are key to keeping users happy
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Module 8: MEAN Stack Projects & Future Careers

- Real-world apps built using the MEAN stack
 - Mini project ideas: blog, recipe app, task tracker, contact book
 - Careers using MEAN: full-stack dev, Angular specialist, backend developer
 - Skills to keep learning: authentication, advanced forms, APIs
 - Fun drawing: design your dream app and connect each MEAN part to it
 - How MEAN is used in businesses and startups
 - Why MEAN developers are in high demand
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Bonus Materials:

- Interactive quizzes and mini-games
- Kid-friendly dev tools: StackBlitz, MongoDB Atlas, Firebase Hosting
- Printable MEAN Stack cheat sheet
- Group project ideas for collaboration
- Official Certificate of Completion