MERN Stack Learning Roadmap (6 Weeks)

MERN Stack Overview

MERN = MongoDB + Express.js + React.js + Node.js

Week 1: HTML, CSS, JavaScript Basics

- HTML: Tags, forms, tables, semantic HTML

- CSS: Flexbox, Grid, Media Queries, Responsive Design

- JavaScript: Variables, Arrays, Loops, Functions, DOM Manipulation

Project: Build a responsive landing page and a simple To-Do app

Week 2: React.js (Frontend)

- React Basics: Components, Props, State

- Hooks: useState, useEffect

- Routing: React Router DOM

- Forms & Events

- API Calls: Fetch/Axios

- Component Libraries: Tailwind CSS or Material UI

Project: Weather app or Blog frontend

Week 3: Node.js & Express.js (Backend)

- Node.js Basics: Modules, FileSystem, HTTP server

- Express.js: Routing, Middleware, REST API

- Body Parsing, Error Handling, Postman Testing

Project: REST API for blog

Week 4: MongoDB + Mongoose

- MongoDB Basics: Documents, Collections

- Mongoose: Schemas, Models, CRUD, populate(), Validation

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Project: Extend blog API with MongoDB

Week 5: Connecting Frontend + Backend

- CORS setup

- Frontend calls to Backend APIs

- JWT Auth, Protected Routes, dotenv

Project: Full-stack Blog with Auth and CRUD

Week 6: Deployment & Best Practices

- Hosting: Vercel/Netlify (Frontend), Render/Railway (Backend), MongoDB Atlas

- Folder Structure, Git & GitHub, Code Cleanup

- Bonus: Docker (optional), CI/CD Basics

Final Project: E-commerce or Task Manager App

Resources

- React: react.dev

- Node & Express: nodejs.dev, expressjs.com

- MongoDB: mongodb.com

- Full Courses: freeCodeCamp (YouTube), The Odin Project

Interview Prep (Post 6 Weeks)

- DSA Basics (Array, String, Object)

- JavaScript Concepts: hoisting, closures, async/await

- Practice: LeetCode, Codewars