



# MERN Stack Mastery: Full-Stack Development Roadmap

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## Week 1: HTML & CSS Fundamentals

### Day 1-4: HTML

- ✓ HTML Elements & Tags
- ✓ Paragraphs & Headings
- ✓ Boilerplate Code
- ✓ Lists (Ordered, Unordered, Nested)
- ✓ Links, Images, and Formatting Tags (Bold, Italic, Underline)
- ✓ Inline & Block Elements (div, span, hr, sub, sup)
- ✓ Semantic HTML & Entities
- ✓ Tables (Cells, Rows, Colspan, Rowspan)
- ✓ Forms (Input, Buttons, Labels, Select, Range, Textarea)

### Day 5-8: CSS Basics

- ✓ What is CSS?
  - ✓ Adding CSS (Inline, Internal, External)
  - ✓ Colors, Fonts & Text Properties
  - ✓ Box Model, Padding, Display Property
  - ✓ CSS Units, Selectors, Pseudo-classes & Elements
  - ✓ Positioning & Flexbox (Justify, Align, Wrap)
  - ✓ Alpha Channel, Opacity, Shadows
  - ✓ CSS Transitions & Animations
  - ✓ Media Queries for Responsive Design
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## Week 2: JavaScript Essentials

### Day 9-13: JavaScript Basics

- ✓ Using Console & Debugging
- ✓ Variables & Data Types

- ✓ Numbers, Operators, Precedence
- ✓ Strings (Concatenation, Template Literals)
- ✓ Conditional Statements (If-Else, Switch)
- ✓ Arrays & Array Methods (Map, Filter, Reduce)
- ✓ Objects & Nested Objects
- ✓ Functions (Return, Scope, Arrow Functions)
- ✓ Callbacks, Promises, Async/Await

#### **Day 14-15: DOM Manipulation & Events**

- ✓ Selecting & Modifying Elements
  - ✓ Event Listeners (Click, Keyboard, Form Events)
  - ✓ Adding & Removing Elements
  - ✓ SetTimeout & setInterval
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### **Week 3: Backend Development with Node.js**

#### **Day 16-20: Node.js & Express.js**

- ✓ What is Backend & Why It's Important
  - ✓ Installing Node.js & Understanding Node REPL
  - ✓ Working with Node Files & Module Exports
  - ✓ NPM & Managing Packages
  - ✓ Express.js: Routing & Middleware
  - ✓ Handling Requests & Responses
  - ✓ Using Nodemon for Development
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### **Week 4: Database with MongoDB & Advanced Backend**

#### **Day 21-23: MongoDB**

- ✓ Why Use MongoDB?
- ✓ Installing & Using MongoDB
- ✓ CRUD Operations with MongoDB
- ✓ Integrating MongoDB with Express

### Day 24-25: Advanced Backend Features

- ✓ Express Generator & How It Works
  - ✓ Flash Messages & Their Integration
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## Week 5: React.js - Frontend Development

### Day 26-28: React Basics

- ✓ Introduction to React & JSX
- ✓ Components, Props & Rendering Lists
- ✓ JSX Styling & Conditional Rendering
- ✓ Handling Events & State Management (useState)

### Day 29-30: React Forms & Full-Stack Project

- ✓ Handling Forms & Input Fields
  - ✓ Submitting Forms & Managing State
  - ✓ Full-Stack **Login Page Project** (React + Node.js + MongoDB)
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## Outcome of This Course

- ✓ Build & deploy full-stack web applications
- ✓ Master frontend with **HTML, CSS & React.js**
- ✓ Develop robust backends with **Node.js & Express**
- ✓ Work with **MongoDB** for database management
- ✓ Gain hands-on experience through **real-world projects**

 By the end, you'll be a MERN Stack Developer! 