

FULL STACK DEVELOPER

Full Stack Developer Course Module designed for 3 months, 6 months, and 9 months. The content is structured to progressively build skills from beginner to advanced levels.

3-MONTH FULL STACK DEVELOPER COURSE (BEGINNER LEVEL)

Objective: Learn the fundamentals of web development and basic tools for front-end and back-end.

Modules:

1. Month 1: Front-End Basics

HTML5: Tags, forms, semantic elements.

CSS3: Selectors, box model, flexbox, grid.

JavaScript Basics: Variables, data types, loops, functions, DOM manipulation.

Mini Project: Build a static responsive portfolio website.

2. Month 2: Front-End Framework

Bootstrap: Components, grid system, responsive design.

Introduction to React.js: JSX, components, state, props.

API Integration: Fetching data using fetch or axios.

Mini Project: Build a weather app using React.js and OpenWeather API.

3. Month 3: Back-End Basics

Node.js Basics: Setting up a server, handling requests and responses.

Express.js: Creating APIs, middleware, routing.

Database Basics: Introduction to MongoDB, CRUD operations.

Final Project: Develop a basic CRUD web application (e.g., To-Do List).

6-MONTH FULL STACK DEVELOPER COURSE (INTERMEDIATE LEVEL)

Objective: Enhance skills with advanced tools, frameworks, and full-stack projects.

Modules:

1. Month 1-3: Beginner Modules (Same as 3-Month Course).

2. Month 4: Advanced Front-End Development.

React.js Advanced: Hooks, context API, routing, state management with Redux.

CSS Preprocessors: SASS/SCSS.

Version Control: Using Git and GitHub for collaboration.

Mini Project: Develop a real-time chat application UI with React.js.

3. Month 5: Advanced Back-End Development.

Node.js Advanced: Authentication (JWT), file uploads.

Database Design: MongoDB advanced features, indexing.

RESTful APIs: Best practices and error handling.

Mini Project: Develop an e-commerce backend with user authentication and product management.

4. Month 6: Full-Stack Integration

Deployment: Hosting on platforms like Heroku, Vercel, or AWS.

Real-Time Applications: Introduction to WebSockets with Socket.io.

Testing: Unit and integration testing using Jest.

Final Project: Develop and deploy a full-stack e-commerce web app.

9-MONTH FULL STACK DEVELOPER COURSE (ADVANCED LEVEL)

Objective: Master full-stack development with advanced tools, frameworks, and scalable project design.

Modules:

1. Month 1-6: Beginner & Intermediate Modules (Same as 6-Month Course).

2. Month 7: Advanced Topics

TypeScript: Setting up TypeScript with React and Node.js.

GraphQL: Building APIs with Apollo Server.

Database Optimization: Working with relational databases like PostgreSQL.

3. Month 8: Full-Stack Specialization

Next.js: Server-side rendering, static site generation.

Microservices Architecture: Building modular applications.

Docker: Containerization for application deployment.

4. Month 9: Capstone Project

Build a large-scale, production-ready application. Examples:

Social media platform.

Learning management system.

Online booking system.

Integrate advanced features: real-time notifications, payment gateway, and admin dashboard.

Features:

- Additional Features for All Durations:
- Weekly Assignments: Hands-on tasks to reinforce learning.
- Live Q&A Sessions: For doubt resolution.
- Placement Assistance: For 6 and 9-month courses.
- Certificate: Provided upon course completion.

This modular approach ensures steady progress for beginners, intermediates, and advanced learners.

