
FULL STACK DEVELOPMENT - LEARNING PATH

Module 1 - Introduction to Full Stack development

- What is full stack development and it's benefits?
- MEAN and MERN stack
- What is front-end development?
- What is back-end development?
- Edit tools and platforms

Module 2 - Basics of Programming with Javascript

- Why Javascript and history of JavaScript
- Introduction to JavaScript (Operators, Variables, Strings, Built-in Methods)
- Basics of JavaScript (Data Types, Conditionals, Control Flow)
- Arrays, Strings, Objects in JavaScript
- Types of loops in JavaScript
- Copy by Value and Copy by Reference
- Object Destructuring, Spread Operator and rest parameters
- Scope (Lexical and Dynamic)
- Assignment

Module 3 - Fundamentals of Web development

- How Web works & HTTP Methods
- Client Browser workflow
- History of Browsers & First browser
- Browser architecture & Popular Browsers
- Various Pass & SaaS like Heroku, Digital Ocean, AWS, Azure, Google Cloud
- Web protocols - TCP, UDP & 3 way handshake
- Assignment

Module 4 - Fundamentals of Front End development

- Basics of HTML5 & HTML5 Elements
- HTML 5 Semantic tags & attributes
- What is CSS3 & basics of CSS3
- CSS types, selectors and styling
- CSS box model
- CSS positioning & flexbox
- Assignment
- Basics of Bootstrap & grid system

Module 5 - Front End development with Javascript

- What is DOM & DOM methods
- Manipulating Style,Text,Content, Attributes,Events
- Use of Map, reduce, filter , Array Methods
- Switch Case, Arrow Functions
- this keyword, Spread operator, rest parameters
- ES6 v/s ES7 - Promises & callbacks
- JQuery - Why, Selector, Attr, Val, Manipulating Class,Events-Click
- Keypress, on, JQuery Effects
- Font awesome, Folder Structure for project,Using StackOverflow
- Assignment

Module 6 - Databases

- Uses of Databases
- SQL Basics, Syntax, CRUD operations
- SQL Basic Joins(Inner join, Outer Join..etc),
- SQL create and edit tables
- SQL v/s No SQL
- Introduction to MongoDB,Scalability & Operations
- MongoDB Basics, CRUD operations

- Schemas, Projection & Aggregation, Projection, Operators
- Database Normalization
- Mongoose & Basic Commands
- Assignment

Module 7 - Web Developer Tools

- Why version Control? Introduction to Git
- Github Basics, Branches Flow
- Basics of Terminal, Linux Commands
- Basics of Cloud 9 & setting up
- Basic Cloud 9 Project

Module 8 - Backend Development

- Basics of Node & Workflow of Backend and FrontEnd
- Setting up Project and NPM basics
- Introduction to ExpressJS
- Express Generator and Routers
- Why Middleware?, What is Middleware
- Creating your own Middlewares
- Passport JS (Authentication)
- Assignment
- Deploy your Backend (Heroku & AWS)

Module 9 - Front End Framework (React)

- Why React (Comparison & Benefits)
- React DOM, JSX, Props & State
- React Components, Class based and functional components
- Life cycle methods
- Use of hooks and Basics
- React Router
- Redux
- Assignment