

MEAN STACK COURSE CONTENT

SECTION 1 : INTRODUCTION TO ANGULAR

- What is Angular?
- Difference between framework & Library?
- History of Angular and its versions.
- Why Angular?
- Features of Angular.
- What is Single Page Application?
- Difference between SPA & Traditional Application.
- What is MVC?
- How MVC works in Client & Server sides?

SECTION 2 : ANGULAR 7 ENVIRONMENT SETUPS

- What is Angular CLI?
- Purpose of the CLI.
- Angular CLI installation.
- Create a Basic Angular App by using CLI.
- Executing the Angular Application in the browser.
- How an Angular app Bootstrapping?
- Brief explanation about the structure of the Angular App.

SECTION 3: MAIN BUILDING BLOCKS OF ANGULAR

- An Overview of the below Building blocks of Angular
 - Modules
 - Components
 - Templates
 - Metadata
 - Data binding
 - Directives
 - Services
 - Dependency Injection.
- What is Module & its importance?
- What is Root Module and Child Module?

SECTION 4: COMPONENTS IN ANGULAR 7

- What is Component?
- How to create a Component manually and through CLI?

- What is Component decorator and its Meta data?
- Component's Structure overview.
- Component Lifecycle Hooks.
- Components Interactions overview.
- How to pass Data from Parent to Child & Child to Parent?

SECTION 5: DATA BINDINGS AND EVENT BINDINGS IN ANGULAR 7

- What is Data Binding?
- What is Two-way Data Binding?
- String Interpolation.
- Style Binding, Class Binding.
- Overview of Event Binding.
- Element reference and \$event service in Angular.
- Event Filtering

SECTION 6: DIRECTIVES & CUSTOM DIRECTIVES IN ANGULAR 7

- What is Directives?
- What are the Different kind of Directives available in Angular?
- Difference between Structural & Attribute Directives.
- Overview of All Structural & Attribute Directives.
- Difference between *ngIf* & *hidden* directives.
- How to create Custom Attribute Directive?
- How to create Custom Structural Directive?

SECTION 7: PIPES IN ANGULAR 7

- What is Pipe in Angular?
- Purpose of the Pipes.
- Difference between Pipes & Directives.
- Detailed explanation of the below Pipes,
 - Lowercase
 - Uppercase
 - Titlecase
 - Slice
 - Json
 - Number
 - Percent
 - Currency
 - Date
- What is Pure Pipe & Impure Pipe?
- How to create Custom Pipes?

SECTION 8: EVENT EMITTER AND OTHER SPECIAL DIRECTIVES

- What is Event Emitter?
- When to use Event Emitter?
- How to transfer data with Event Emitter?

- How to create Custom Events and Trigger?
- View Encapsulation Overview.
- What is **ng-content** and its purpose?
- **ng-container** Directive overview.

SECTION 9: TEMPLATE DRIVEN FORM IN ANGULAR

- What is Template Driven Form?
- Purpose of Form.
- How to setup a form in Angular?
- What is form control and how to set it?
- What is **ngForm**?
- How to Access form values?
- What are the form states available in Angular?
- Form Validations.
- HTML5 Validation vs Angular form Validation.
- How to set default values in form fields?
- Setup One-way data binding in Angular.

SECTION 10: SERVICE AND DEPENDENCY INJECTION IN ANGULAR.

- What is Service in Angular?
- Create & configure Service in Angular.
- How to do Dependency Injection in Angular?
- What is Singleton Object?
- Multiple DI in single Class.

SECTION 11: ROUTING IN ANGULAR 7

- What is Routing?
- How Routing makes our App into SPA?
- How to configure Routing in an Application?
- Load our components dynamically based on url path.
- How to create Child Route?
- Navigating to other links programmatically.
- Passing Parameter to the Routes.
- Static Route vs Dynamic Route.
- Fetching Route Params.

SECTION 12. HTTP & OBSERVABLE IN ANGULAR

- How to establish HTTP request to Server side.
- How HTTP Mechanism works?
- What are the methods available in HTTP?
- What is Observable & Observer?
- What are the call back methods available in Observable?
- How to create a Custom Observable?

- What is *next()*, *error()* and *complete()* ?

SECTION 13: AUTHORIZATION IN ANGULAR

- Client side Authorization vs Server side Authorization.
- How to create Guard in Angular?
- Setup Route Guard.
- Server side Authorization by using **JWT Token**.
- HTTP interceptors.

SECTION 14: FILE UPLOAD IN ANGULAR

- Angular form setups for File Upload.
- Server side setups for Angular.
- Multer NPM in node.
- How to use Multer NPM as middleware in Node?
- Attach the Multer middleware in server-side routing.

SECTION 15: REAL-TIME PROJECT IN ANGULAR

- Applying all the above in a real-time Shopping Cart Application.

SECTION 16: NODE JS AND EXPRESS JS

- What is Node JS?
- What is Single Thread?
- How Asynchronous works?
- What is call back functions?
- Node JS event loop overview
- What is NPM and its types?
- How to install NPMs
- Introduction about package.json
- What are the core Modules Available?
- HTTP Module Overview
- File System NPM overview
- Read & Write files
- Streaming concepts with data packets
- How to create a Node Server?
- How to run a Node Server?
- How to create Local Module?
- HTTP streaming overview
- All major NPMs overview
- What is socket.io?
- Node Routing in detail

SECTION 17: Working with top NPMs

- Nodemon
- JWT
- Nodemailer
- Multer
- Socket.io
- Body Parser
- Crypto JS
- How to handle Headers?
- How to receive form data?
- Authorization & Authentication

SECTION 18: EXPRESSJS

- Express JS Overview
- What is Express JS?
- Purpose of Express JS?
- Routing in Express JS
- How to Run Express on top of Node JS?
- How to generate Views?
- What is Middleware?
- How Middleware works?
- Working With Socket.io
- Process Module overview
- What is clusters and its purpose?
- How to create RESTful API?
- How to Receive Request and Parse the data?
- How to send Response?
- Debugging
- Hosting Node
- How to Host Node & Express JS?



SECTION 19: Node JS Advanced

- Error Handling in Node JS
- How to set Headers?
- How to perform Unit Testing?
- Event Loops in detail
- Mail concepts in Node JS
- How Node JS differs with other languages?
- Promises Overview

SECTION 20: MONGODB

- MongoDB Overview
- What is NoSQL?
- How to install MongoDB in Local?
- How to use MongoDB in Cloud?
- Cluster in MongoDB

- Create database
- Create Users
- Create table
- What is Collection & Document?
- Insert & Insert many Document
- Select & Select One Document
- MongoDB methods
- Delete & Delete One Document.
- How to write conditions?
- Update & Update one Document
- What is Upsert?
- How to use Join Queries?
- Map Reduce in MongoDB
- Real-time Application with Node & MongoDB



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