



Curriculum Of Mean Stack

ANGULAR

MODULE 1: INTRODUCTION TO TYPESCRIPT

- Why Use Typescript
- Basic Types
- Classes & Interfaces
- Type Definitions
- Compiling Typescript

MODULE 2: GITHUB

- Real-Time environmental setup with GitHub

MODULE 3: ENVIRONMENT SETUP

- Node/ NPM
- Angular CLI
- Application File Structure
- Code Editors

MODULE 4: INTRODUCTION TO ANGULAR

- What is Angular?
- Advantages of Angular
- Disadvantages of Angular
- Key Features of Angular
- Comparison between Angular & other frameworks

MODULE 5: MODULES

- Why use Modules
- NgModule
- Declarations
- Providers
- Imports
- Bootstrapping
- The Core Module, Shared Modules

MODULE 6: COMPONENTS

- Introduction to Components
- Components Architecture Pattern

- Decorator Metadata
- State & Behavior

MODULE 7: TEMPLATES

- Inline vs External
- Template Expressions
- Data Bindings
- *ngIf else, *ngFor and *ngSwitch
- Built-in Structural Directives
- Built-in Attribute Directives

MODULE 8: CUSTOM DIRECTIVES

- Create your own Structural Directives
- Create your own Attribute Directives

MODULE 9: PIPES

- Built-in Pipes
- Custom Pipes

MODULE 10: SERVICES

- Introduction to services
- Building a Service

MODULE 11: DEPENDENCY INJECTION

- Introduction to dependency Injection
- Injectors & Providers
- Registering Providers

MODULE 12: LIFECYCLE HOOKS

- Component Lifecycle
- All Lifecycle hooks

MODULE 13: ROUTING

- The component router
- Defining Router
- Navigation
- Route Params
- Child Routes



Curriculum Of Mean Stack

MODULE 14: ADVANCED ROUTING

- Route Guard

MODULE 15: TEMPLATE-DRIVEN FORMS

- Introduction to forms
- Template-driven forms
- Validation

MODULE 16: MODEL-DRIVEN FORMS

- Introduction to Reactive Forms
- Form group & form control
- Validators
- Custom Validation

MODULE 17: ASYNCHRONOUS OPERATIONS

- Introduction to Async
- Observables
- Observables vs. Promise
- HTTP Request / Response

MODULE 18: COMMUNICATION BETWEEN COMPONENTS

- @Input()
- @Output()
- @View Child()
- Shared Service

MODULE 19: SERVER-SIDE RENDERING

- Introduction to server-side Rendering
- Angular Universal

MODULE 20: ANGULAR TESTING

- Introduction to testing
- Unit Testing
- Lazy Loading
- Angular Material
- PrimeNG Implementation

MODULE 21: THIRD-PARTY NPM PACKAGE

- Social Login Authentication
- Cookies, Local Storage, Session Storage
- Angular File Upload
- Angular Pagination
- JWT Token

IMPLEMENTATION OF MINI APPLICATION

DEPLOYMENT OF ANGULAR APPLICATION

NODE JS & EXPRESS FRAMEWORK

MODULE 1: INTRODUCTION TO NODE.JS

- Introduction to Node.js
- History of Node.js
- Introduction to io.js
- What is Node.js Foundation
- V8 Java Script Engine
- Why Server Side Java Script?

MODULE 2: GETTING STARTED WITH NODE.JS

- Node.js Architecture
- JavaScript Event Loop
- Node.js vs. others Server-Side Frameworks
- Node.js Application Area
- Advantages & Limitations of Node.js

MODULE 3: JAVASCRIPT WITH NODE.JS

- Writing Asynchronous Code
- Blocking vs. Non-Blocking Code

MODULE 4: MODULES

- Understanding Modules
- Built-In Modules



Curriculum Of Mean Stack

- Creating Module
- Exporting Module
- Importing Modules Node.js CLI and NPM
- Understanding CLI
- Node's Package Manager: NPM
- Local Packages and Global Packages
- Installing, Updating and Removing Module using NPM
- Understanding package.json file

MODULE 5: NODE.JS PACKAGE AND PUBLISHING

- Creating a Node Package
- Publishing Package
- Using published package

MODULE 6: PACKAGES

- Introduction of NPM Package
- Express NPM Package
- Multer NPM Package
- Node Mail NPM Package
- Boot Stripe NPM Package integration
- JSONWEBTOKEN NPM Integration
- Introduction of crypto-JS

MODULE 7: CODE DEBUGGING

- Built-In Debugger
- Node Inspector
- IDE Debuggers

MODULE 8: EXCEPTIONS HANDLING

- Try. Catch
- Call back
- Event Emitters

MODULE 9: EVENTS

- Understanding Events
- Event Emitter class

- Emitting Event
- Listening Event

MODULE 10: STREAMS

- Creating streams
- Streams types
- Readable Stream
- Writable Stream
- Stream Pipe
- Creating Buffer
- Buffer decoding

MODULE 11: FILE SYSTEM AND PATH MODULE

- Introduction to fs Module
- The fs modules operations
- Manipulating Files Create, Open, Read, Write,
- Close, Rename, Delete
- Manipulating Directives Create, Read, Remove
- The path Module
- Building a Web server
- HTTP Request Methods, Headers
- Response Codes and Headers

MODULE 12: EXPRESS FRAMEWORK

- Understanding Express
- Installing Express
- Creating and Running Express App

MODULE 10: STREAMS

- Creating streams
- Streams types
- Readable Stream
- Writable Stream
- Stream Pipe
- Creating Buffer
- Buffer decoding



Curriculum Of Mean Stack

MODULE 11: FILE SYSTEM AND PATH MODULE

- Introduction to fs Module
- The fs modules operations
- Manipulating Files Create, Open, Read, Write, Close, Rename, Delete
- Manipulating Directives Create, Read, Remove
- The path Module
- Building a Web server
- HTTP Request Methods, Headers
- Response Codes and Headers

MODULE 12: EXPRESS FRAMEWORK

- Understanding & Installing Express
- Creating and Running Express App

MODULE 13: ROUTING AND VIEW ENGINES

- Router Object, Object Methods
- View Engine -Handlebars
- Response Methods

MODULE 14: MIDDLEWARE AND REQUEST PROCESSING

- Middleware, Express Middleware
- Express Request Processing

MONGODB

MODULE 1:

- Understanding NoSQL DB
- NoSQL vs. SQL DB
- Understanding Mongo DB
- Introduction of mongoose Atlas

- MongoDB Data types
- MongoDB Shell Commands
- Understanding db, collection & document
- Understanding Embedded documents
- Querying database Tools & API
- MongoDB Tools
- Introduction to Mongo Chef
- Mongo Chef for database operations

MODULE 2: INDEXING AND RELATIONSHIPS

- Types of Indexes
- Creating & Dropping an Indexes
- Defining Relationships between Documents

MODULE 3: MONGO DB ODM -MONGOOSE AND POSTMAN

- Introduction to Mongoose
- Exploring fundamentals of Mongoose
- Mongoose Models, Data Types
- Mongoose Relationships
- Mongoose CRUD operations

MODULE 4: GITHUB

- Real-time environmental setup with GitHub

MODULE 5: REST API WITH MONGOOSE, MONGODB AND POSTMAN

- Creating REST API using Express and Mongoose

IMPLEMENTING THE PROJECT

DEPLOYMENT OF MEAN APPLICATION