

## Mean Stack Course Syllabus

### Module 1

- Introduction to Angular
- Introduction to TypeScript and ES6
- Components in Angular

### Module 2

- Data and Event Binding
- Structural Directives
- Attribute Directives and Property Bindings
- Template/ Model Driven Forms

### Module 3

- Pipes and Data Formatting
- Service and Dependency Injection

### Module 4

- Introduction to Single Page Application
- Angular Component Router
- Modules
- Deploying an Angular App

## Module 5

- More Topics
- Performance Tuning and best practices

## Module 6

- Introduction to Node JS
- Creating first Node JS app
- Understanding NPM
- Creating and locating Modules
- Specifying dependencies with package. Json
- Understanding CPS (Continuation Passing Style)
- Understanding the Event Loop
- NPM AND CPS
- Understanding NPM
- Creating and locating Modules

- Specifying dependencies with package. Json
- Understanding CPS (Continuation Passing Style)
- Understanding the Event Loop
- Build app with Node and express with MVC architecture
- MONGODB

## Module 7

- Express JS with Middleware
- Working with third party API's
- Events and Streams
- Socket IO
- Node JS Best Practices

## →NOSQL DB

- Introduction to NOSQL DB
- Overview of DB
- Adv of NOSQL DB
- Type of NOSQL DB

## MongoDB

- Introduction to MongoDB
- Installation and Configuration of MongoDB
- Start and Stop MongoDB
- Connection with Javascript and Node.js
- Static and Dynamic Schemas
- Data Modeling
- Create database
- Drop database

## →MongoDB Collection

- Introduction to Collection
- Collection Vs Tables
- Create Collection
- Drop Collection
- Operation on MongoDB

## →MongoDB Document

- Introduction to document
- Create document

- Insert Document
- Update Document
- Delete Document

## →MongoDB- Operation

- MongoDB - Limit Records
- MongoDB - Sort Records
- MongoDB - Indexing
- MongoDB - Create Backup

## →JSON

- Introduction to JSON
- Uses of JSON
- JSON Datatype
- JSON Object
- JSON Schemas

## →MongoDB with Javascript

- Creating and Dropping collection by javascript application
- Creating and Deleting document by javascript application

- Insert,Update,delete Operation with javascript

## →REST API

- Introduction to REST API
- REST Architecture
- HTTP methods
- HTTP response
- Creating REST
- Testing REST
- POSTMAN
- Creating Application based on REST API with Javascript and MongoDB

## NODE.JS & EXPRESS.JS

## → Node.js

- Introduction Node.js
- Why Node.js ?
- Feature of Node.js
- Node.js Installation & configuration

- Where to use Node ?
- Server-side JavaScript
- Asynchronous events vs. threads
- Performance
- Server utilisation

## → REPL Terminal

- REPL Introduction
- REPL Commands
- Operation In REPL
- Stopping REPL

## → NPM

- Introduction to NPM
- Installing module with npm
- Global Vs Local installation
- Package.json
- Updating a module
- Deleting a Module

## → EVENT LOOP

- What is Event Loop?
- Event Driven Programming
- Event Emitter
- Call back function

## → UTILITY MODULE

- OS module
- Path module
- Net Module
- DNS Module
- Domain Module

## → WEB MODULE

- What is web-server ?
- Web application architecture
- Creating web-server using Node
- Creating Web client Using Node

## → Express.js Introduction

- What is framework ?
- Express.js Overview



- Installing Express.js
- Request & Response
- Request Object
- Response Object
- HTTP method with Node
- Serving statics file
- Cookies management
- REST with Node.js

## → Express.js

- Routing
- Configuration
- Views
- Middleware

## → Building an Express app

- Creating an Express app/project
- Organising/structuring the app
- Generating HTML views with Jade
- Navigating datasets
- Filtering data

- Request variables and routes
- Posting data
- Modifying data through PUT requests
- Handling GET requests returning JSON
- Modifying HTTP response headers

## →Node with REST API

- Introduction to REST API
- REST Architecture
- HTTP methods
- HTTP response
- Creating REST
- Testing REST
- POSTMAN

## ANGULAR JS

## →Angular JS

- Introduction to MVC
- What is AngularJS

- What is SPA
- Angular Directives
- Angular Expression
- Angular Controller
- Angular Model
- Angular Services
- Angular Module
- Angular Filter
- Angular Data Binding
- Angular Filters
- Angular DOM
- Angular Validations
- Angular Forms
- Dependencies Injection

## →Conclusion

- Hosting Node projects
- Node.js sites and resources
- Hosting MEAN-STACK application