

PROGRAMMER'S DEN

"Practical Knowledge > Theoretical Knowledge"

MEAN (MongoDB, Express, Angular, Node JS) Batch

Contents: -

Module 1:

- History of TypeScript/JavaScript Programming Language
- Features of TS/JS Programming Languages
- Toolchain of TS/JS Programming Languages
- Installation of Node JS for TypeScript and JavaScript, VS CODE

Module 2: Programming in TypeScript/JavaScript

- Datatypes in TS/JS
- Variable Declaration in TS/JS
- Flow Control Statements (loops) in TS/JS
- Selection Statements (if else if ladder, Switch case) in TS/JS
- Functions in TS/JS
- Various Types of Parameters in TS/JS
- Constants in TS/JS
- Packages in TS/JS
- Import/Export in TS/JS
- I/O Operations in TS/JS
- Arrays in TS/JS
- Object Orientation Programming/Concepts in TS/JS

- String Class in TS/JS
- Inferred Typing in TS/JS

Module 3: Frontend Web Development using Angular Framework

- History of Angular Web Framework
- Installation of Angular Web Framework with the help of Node JS
- Angular Project Structure
- Creation and Execution Flow of Angular Project
- Components in Angular
- Modules in Angular
- Services in Angular
- Pipes in Angular
- Directives in Angular
- Various Types of Data Binding in Angular
- Intercomponent Communication in Angular
- Inline Template (HTML) and Inline Styles (CSS) in Angular
- HTTP & Observables, RxJS(Reactive Extensions for JavaScript) in Angular
- Routings in Angular
- Route Parameters in Angular
- Authentication Using Angular Auth Guards.
- Angular Forms (Reactive Form, Template-Drive Form)
- Lazy Loading Concept in Angular
- Use of Bootstrap in Angular Application for Styling Purpose of Frontend
- Use of Material Design in Angular Application for Styling Purpose of Frontend.

- Angular Life Cycle Hooks
- Testing of Angular Applications

Module 4: Backend Web Development using Node JS, Express and MongoDB (For Database).

- History of Node JS (JavaScript Runtime Environment)
- Installation of Node JS, Express and MongoDB
- Installation of MongoDB Compass (GUI To perform operation on Data present in MongoDB Database)
- Use of Node JS For Backend web development
- Use of Express (JavaScript Library) to create Servers to connect Angular with Node JS.
- Use of mongoose (JavaScript Library) to Connect Node JS with MongoDB
- CRUD Operations in MongoDB using Node JS and Then Sending Data to Angular (Frontend of Our MEAN Project)
- Use of JWT (Json Web Token in our MEAN Stack Project)

Module 5: Deployment of MEAN Project on Live Servers Using various web Services.

- Use of Various Web Services Provided by AWS (Amazon Web Services)
- Deployment of Our Frontend (Angular) of Our MEAN Project using Amazon's "S3 Bucket" Web Service.
- Deployment of Node JS and Express Server using Render Web Service
- Use of MongoDB Atlas for Live Database Connections

- Use MongoDB Compass to connect with MongoDB Atlas Cloud to monitor database and to perform database operations easily.

Note:

- You Have To Do Parallel Programming During Class With Teacher For Better Understanding of above Concepts.