

# **MEAN Stack Development**

## **Syllabus**

**Duration: 120 Hours**

### **1. Session 1: Introduction to HTML**

- HTML Basics, Elements, Attributes, Styles
- Forms, Form Elements, Input Element Types
- Input Attributes, File Paths, Script tag
- HTML & XHTML

### **2. Session 2: Introduction to CSS**

- CSS Introduction, Syntax, Selectors, Styling
- Pseudo class, Pseudo Elements
- CSS Tables, CSS Box Models
- CSS Opacity, CSS Navigation Bar, Dropdowns

### **3. Session 3: Introduction to JavaScript**

- JavaScript Statements, Keywords, Functions
- JavaScript Programs, Operators, Functions
- Function Parameters, Function Return Types
- Data Types, Primitive Types

### **4. Session 4: Working with Objects**

- Object Oriented Programming, Object Creation
- Adding Methods of Objects
- JavaScript Loops & Iteration
- Adding Properties of Objects
- JavaScript Conditional Statements
- Enumerating Properties, Callbacks, JSON

### **5. Session 5: Angular JS Basics**

- What is Angular JS?
- Why Angular JS?
- Why MVC matters
- MVC-The Angular JS way
- Features of Angular JS ,Model-View-Controller
- My First Angular JS app

### **6. Session 6: Angular Expressions**

- All about Angular Expressions
- How to use expressions, Angular vs JavaScript

## **7. Session 7: Filters**

- Built-In Filters, Using Angular JS Filters
- Creating Custom Filters

## **8. Session 8: Directives**

- Introduction to Directives, Directive Lifecycle
- Binding controls to data, Matching directives
- Using Angular JS built-in directives
- Creating a custom directive

## **9. Session 9: Controllers**

- Role of a Controller, Controllers & Modules
- Attaching Properties and functions to scope
- Nested Controllers, Using Filters in Controllers
- Controllers in External Files

## **10.Session 10: Angular JS Modules**

- Introduction to Angular JS Modules
- Bootstrapping Angular JS

## **11.Session 11: Angular JS Forms**

- Working with Angular Forms, Model Binding
- Forms Events, Updating Models with a Twist
- Form Controller, Validating Angular Forms
- Error object

## **12.Session 12: Scope**

- What is scope, Scope Lifecycle
- Scope Inheritance, Scope & Controllers
- Root scope, Scope Broadcasting
- Two-way data binding, Scope Inheritance
- Scope & Directives, \$apply and \$watch
- Scope Events

## **13.Session 13: Dependency Injection & Services**

- What is Dependency Injection
- Creating Services, Factory, Service & Provider
- Using Dependency Injection, What are services
- Using Angular JS built in services

## **14.Session 14: Single Page Application (SPA)**

- What is SPA, Pros and Cons of SPA
- Passing Parameters, Changing location



- Installing the ng Route module, Configure routes
- Resolving promises, Creating a Single Page Apps

## **15.Session 15: Angular JS Animation**

- Animate Module, CSS Transforms
- CSS Transitions, Applying Animations

## **16.Session 16: Introduction to Node JS**

- Introduction to Node JS
- Advantages of Node JS
- What is Node JS, Node.js Process Model
- Traditional Web Server Model

## **17.Session 17: Setup Development Environment**

- Install Node.js on Windows
- Working in REPL, Node JS Console

## **18.Session 18: Node JS Modules**

- Functions, Buffer, Module
- Modules Types
- Core Modules, Local Modules
- Modules Exports

## **19.Session 19: Node Package Manager**

- What is NPM, Installing Packages Locally
- Installing package globally
- Adding dependency in package json
- Updating packages

## **20.Session 20: Creating Web Server**

- Creating Web Server
- Sending Requests
- Handling http requests

## **21.Session 21: File System**

- read File, Writing a File
- Opening a file, Deleting a file
- Writing a file asynchronously
- Other IO Operations

## **22.Session 22: Debugging Node JS Application**

- Core Node JS Debugger

## **23.Session 23: Events**

- Event Emitter class
- Inheriting Events
- Returning event emitter

## **24.Session 24: Express JS**

- Configuring Routes
- Working with Express

## **25.Session 25: Serving Static Resources**

- Serving Static Files
- Working with Middle Ware

## **26.Session 26: Database Connectivity**

- Connecting String, Configuring
- Updating Records
- Working with Select Command
- Deleting Records

## **27. Major Project Work**

## **28.Placement Assistance Sessions**

- Mock Interviews
- GDs
- Preplacement Talks
- Industry Exposer Sessions

## **29.Internship**