

CUSTOMIZED TRAINING ON ANGULAR

- FORMAT** : Instructor Led Training with hands-on
- DURATION** : 05 days
- PREREQUISITES** : Working knowledge of HTML, CSS & JavaScript

LAB REQUIREMENTS :

- ✓ Windows 7 or later
- ✓ Node Installer
- ✓ 4GB RAM
- ✓ Latest Browser : Chrome, IE, Firefox
- ✓ Any preferred IDE (VS, Sublime, Notepad++ etc.)
- ✓ Internet Connection
- ✓ Permission to download and install libraries on participants' machine

COURSE OUTLINE:

Day 01:

1 - Introduction to Angular

- What is Angular?
- Central Features of the Angular Framework
- Why Angular?
- Scope and Goal of Angular
- Angular vs. AngularJS
- Installing and Using Angular
- Adding Angular and Dependencies to Your App
- Building Blocks of and Angular Application
- Understanding Angular Environment Setup

2 - Introduction to TypeScript and ES6

- Programming Languages for Use with Angular
- TypeScript Syntax
- The Type System
- Destructuring – Objects & Arrays
- Class Constructors
- Interfaces
- Generics
- Parameter and Return Value Types
- Working with Modules
- TypeScript Transpilation
- Arrow Functions
- Template Strings
- TypeScript Config

3 - Components in Angular

- What is a Component?
- An Example Component

- Component Starter
 - Selector
 - Template
 - Style (Compiling SASS & LESS)
- Developing a Simple Login Component
- Component Decorator Properties
- Component Lifecycle Hooks
- Nested Component Communication
 - @Input() / @Output
 - Data Projection

Day 02:

4 - Data and Event Binding

- Binding Syntax
- One-Way Output Binding
- Binding Displayed Output Values
- Two-Way Binding of Input Fields
- Input Binding Examples
- Binding Events
- Setting Element Properties

5 - Structural Directives

- Structural Directives
- Adding and Removing Elements Dynamically
- Creating Tables/Lists with ngFor
- ngSwitch & ngIf/else
- Custom Structural Directive

6 - Attribute Directives and Property Bindings

- What are Directives
- Directive Types
- Apply Styles by Changing Classes
- Changing Classes - Example
- Applying Styles Directly
- Directives and Property Binding
- Controlling Element Visibility
- Setting Image Source Dynamically
- Setting Hyperlink Source Dynamically
- Custom Attribute Directive

7 – Template/ Model Driven Forms

- Template Driven Forms
- A Basic Angular Form
- Binding Input Fields
- Accessing the Form Object
- Binding the Form Submit Event
- HTML5 vs. Angular Validation
- Angular Validations
 - Built-in Validation
 - Custom Validation
- Displaying Form Validation State
- Displaying Field Validation State

- Displaying Validation State Using Classes
- Disabling Submit when Form is Invalid
- Submitting the Form
- Binding to Object Variables
- FormBuilder, FormGroup, FormControl

Day 03:

8 - Pipes and Data Formatting

- What are Pipes?
- Formatting Changes in Angular
- Using a Built-in Pipe
- Using Pipes in HTML
- Chaining Pipes
 - Decimal Pipe
 - Currency Pipe
 - Async Pipe
- Custom Pipes
 - Pure
 - Impure

9 - Service and Dependency Injection

- What is a Service?
- Creating a Basic Service
- What is Dependency Injection?
- Injecting Services
- Using a Service in a Component: Dedicated Instance
- Using onInit to Initialize Component Data
- Dependency Injection Tree

10 - HTTP / HTTPClient

- The Angular HTTP
- Using HTTP - Overview
- Setting up the Root Component
- Service Using Http
- Importing Individual HTTP Providers into Components
- Service Imports
- Promise vs Observables
- The Observable object type
- Creating Observables
- Making HTTP GET Call
- Using the Service in a Component
- Importing Observable Methods
- Enhancing the Service with .map() and .catch() (Error handling)
- Interceptors
- Token based Authentication
- HTTP GET / POST using Firebase

Day 04:

11 - Introduction to Single Page Application

- What is a Single Page Application (SPA)
- SPA Workflow
- Traditional Web Application Capabilities
- Single Page Application Advantages
- Implementing SPA's Using Angular
- Simple SPA Using Visibility Control
- SPA Using Angular

12 - The Angular Component Router

- Routing and Navigation
- The Component Router
- Traditional Browser Navigation
- Component Router Terminology
- Setting up the Component Router
- Browser Routes
- Bootstrapping Routing
- App Routes
- Programmatic Navigation
- Creating Routes with Route Parameters
- Navigating with Route Parameters
- Using Route Parameter Values
- Retrieving the Route Parameter
- Query Parameters
- Guards at Gate / Authentication

13 – Modules

- Lazy Loaded Module
- Creating Module
- Exporting Modules
- Exporting Components

14 - Deploying an Angular App

- Deployment Preparations and Important Steps
- Project Deployment -
 - Building/Bundling
 - Development Builds
 - Production Builds
 - AOT Compilation
- Continuous Integration build & deployment

Day 05 :

15 – More Topics

- Pagination using ngx-paginate
- Global Exception Handling
- Application Debugging
- State Management using Redux
- Setting up Angular with Visual Studio

- Angular Application Security
 - Preventing Cross Site Scripting (XSS)
 - Trusting values with DOMSanitizer
 - HTTP attacks

16 – Performance Tuning and best practices

Day -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

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- Creating a simple HTTP server
- Understanding and installing Express JS
- Creating a basic Express JS app
- Understanding Routing in Express JS.

MONGODB

- Connecting to Mongoose
- Working with Mongodb
- CRUD Operations
- Search Operations
- Working with Mongodb in Nodejs
- Understanding Mongoose
- Securing passwords and SSN by encryption

Day -7:

EXPRESS JS WITH MIDDLEWARE

- Error Handling by using logger
- Handling sessions
- Ejs templating engine.
- Working with public and private content.
- Rendering view using Express JS
- Using parameterized routes
- Working with Multer
- Working with Morgan

WORKING WITH THIRD PARTY API'S

- request-promise module
- Working Open Api's Like Walmart.

EVENTS AND STREAMS

- Understanding streams
- Readable and Writable streams

- Piping streams
- Understanding Events
- Demonstration of using Events

SOCKET IO

- Understanding Socket.IO
- Creating a basic Socket.IO app
- Creating a simple chat application using Socket.IO

NODE JS BEST PRACTICES

- Challenges with Node Js.
- Deployment scenarios.

Conclusion Q & A
