

AngularJS 4.0

Total Duration

3 days

Audience

This workshop is intended for developers who need to start development with single-page Applications using AngularJS4.

Course Objectives

At the end of the course, participants will have knowledge of

- Developing Single Page Applications
- Developing and Debugging scripts
- Writing simple test cases for JavaScript

Pre-requisites

- Basic knowledge of Eclipse / Visual Studio
- Understanding of HTML5 and JavaScript Basics
 - In case they have not worked on the same earlier, please go through following links before class
 - <http://www.w3schools.com/html/>
 - <http://www.w3schools.com/css/default.asp>
 - <http://www.w3schools.com/js/default.asp>

Course Contents

Day 1

- Introduction
 - Concerns for any web application
 - Understanding Round Trip
 - Client-Server Communications
 - Full Page Rendering
 - Ajax Style of working
 - Web Services
 - REST
 - JavaScript and Browser Dependencies
 - Formats like XML, JSON
 - Understanding
 - Factory
 - Dependency Injection
 - MVC
- Recap

- Object Oriented Java Script
- Starting with Angular 4
 - Minimal A4 Example
- Preparing for TypeScript
 - Brief Intro to TypeScript
 - The TypeScript Module System
 - Angular 4 with TypeScript and Modules
 - TypeScript decorators
- Building with A4 Components
 - A Trivial Component
 - Nested Components
 - Deeper Nesting
- Angular 4 Binding and Events
 - Templates
 - Bindings
 - Event Bindings
 - Two-way Binding
 - Class and Style Bindings
 - Built-in Directives
 - Component Data Binding
 - Component Events
 - Ng-model
- Forms
 - Controls
 - Control groups
 - FormBuilder

Day 2

- Pipes
 - Using Pipes
 - Creating Pipes
- CSS Styling
 - Component CSS
 - CSS Scoping
- Dependency Injection
 - Why Dependency Injection?
 - Injection API
 - Component Multi Providers
 - Injection Multi Providers
- HTTP, Promises, and Observables
 - Promises - still available, still useful

- Calling an API via HTTP
- Introduction to Observables
- Observable Bindings
- Observables Operators
- Calling an API via Observables

Day 3

- Routing
 - Introduction and Use
 - Nested Routing
 - Auxiliary Routes
 - The Component Lifecycle - "Resolve"?
- Directives
 - Introduction and Examples
 - ng-content ("transclusion")
 - Multiple ng-content
 - Tab Set Example
- Example Applications
 - Multi Screen Example Walkthrough
 - Firebase Examples
- Upgrading and JS Versions
 - Using Angular 4 with ES5
 - Upgrading from Angular 1.x
- The Multi Threaded Web
 - web-workers
- Building and Tools
 - JSPM
 - WebPack

Hardware & Software Requirements**Trainer Machine**

- NA

Participants Machine

- Eclipse (Kepler) Or Visual Studio
- Internet Explorer (10 or 11)
- Mozilla and Firefox (latest)
- Java Script Libraries
 - Will download these during training
- Internet Connectivity