1. Introduce JavaScript MVC and Angular

Goal: Introduce JavaScript MVC and Angular

Objectives: Upon completing this lesson, you should be able Compare

JavaScript Design Patterns - MVC,

Explain Client side SPA,

Libraries, and Frameworks,

Demonstrate Typescript,

Setup Angular Project

Topics: JavaScript MVC, SPA Intro, NodeJS Intro (NPM), Typescript Introduction (Introduction, When to use types / When not), Angular Hello World Demo

Hands On: Angular Project Setup and Hello World

2. Components and DOM Interactions

Goal: Explain its components, and related interactions

Objectives: Upon completing this lesson, you should be able to:

Express how Angular works,

Describe Components and Creation,

Work with Multiple components,

Work with DOM manipulation API

Hands On: Creating components and using Metadata, Multiple Components and Passing data, Introduction to DOM Manipulation using Angular APIs

3. Components and Dependency Injection

Goal: Discuss the dependency injection, and application strategies

Objectives: Upon completing this lesson, you should be able to:

Describe Dependency Injection,
Describe creation and working with Injectable dependencies,
Express Change detection and Emulation strategies,
Work with Application lifecycle hooks

Topics: Component creation strategies, Angular lifecycle hooks, Introduction to Dependency Injection, Sharing data between components

Hands On: Using component creation strategies and related metadata, Using Angular lifecycle hooks, Working with Services and Dependency Injection

4. Routes, Inbuilt Directives and Pipes

Goal: Describe the working of SPA routes and using inbuilt Directives/Pipes

Objectives: Upon completing this lesson, you should be able to:
Analyze Application cleanliness and Angular Modules,
Work with SPA Routes,
Work with inbuilt, Directives and Forms,
Work with inbuilt Pipes

Topics: Angular Modules, Routes (Simple and Nested), Inbuilt Directive, Inbuilt Pipes

Hands On: Working with Routes, Working with Multiple Modules, Inbuilt Directives and Forms, Inbuilt Pipes

5. Custom Directives and Pipes

Goal: Creation of custom reusable functionalities

Objectives: Upon completing this lesson, you should be able to:

Work with custom directives,
Work with custom pipes,
Work with HTTP features,
Describe how Promises and Observables work

Topics: Custom Directives, Custom Pipes, Inbuilt Features - HTTP Request

Hands On: Creating custom Directives, Creating custom Pipes, Inbuilt Features - HTTP Requests

6. Working with External Libraries and using Angular APIs

Goal: Working with External Libraries and using Angular APIs

Objectives: Upon completing this lesson, you should be able to: Work with External / Third party Libraries like JQuery / Socket.IO, Discuss and Work with other APIs, Analyze options available for upgrading from 1.x, discuss the concept of Internationalization and Localization
Hands On: Introduction to Third party library integration, Third party Library integration

7. Unit testing in Angular and Working with Angular-CLI

Goal: Explain Unit testing in Angular and Working with Angular-CLI
Objectives: Upon completing this lesson, you should be able to: Describe Unit testing and TDD concepts, Work with Jasmine Framework, Work with Angular-CLI, Work with Angular-CLI for Test environment setup, Work with other Angular application development Tools

Topics: Unit Testing, related Tools, and TDD, Introduction to Jasmine Framework, Introduction to Angular CLI, Unit Test Environment and set up using Angular CLI, Other Tool

Hands On : Unit testing Jasmine, Creating a Project with Angular-CLI, Creating Test environment and tests for Angular application

8. How to create an Angular Project

Goal: Learn how to create an Angular Application

Objectives: Upon completing this lesson, you should be able to: Develop Angular Applications and work with Data.

Project / Use-Cases: (Any One of the Following)

Use-Case 1 – Simple Employee Management

Use-Case 2 – Top Movies

Use-Case 3 – Grocery list Management

Project – Shopping Cart Application