Advanced Angular 8

Routing, Libraries, Rendering, Platforms, DI, NgModule, Universal, DevKit, Schematics

It is in the more advanced capabilities of Angular that we see it distancing itself from simpler frameworks and results in it being more and more selected for large-scale important projects that needs a stable, powerful framework as the basis for long-term innovation.

Angular offers a well thought out architecture, its configurable platforms means alternative rendering approaches may be supported (e.g. from a web worker), dependency injection means components can be swapped in and out over time and a wonderful routing engine provides browser-side navigation for views.

Developers already familiar with using Angular to build UI apps will find this advanced course of particular interest as it comprehensively explores how to leverage the rich feature set of the Angular Framework to build more innovative applications that distinguish themselves from the competition in rendering performance and the flexibility of what they offer users.

Attendees will also benefit from this course's coverage of more specialist Angular topics, such as NgModules, Angular Universal and Angular Dev Kit (including Schematics).

Target Audience

Angular and TypeScript developers wishing to explore more deeply how to leverage the more advanced capabilities of the Angular Framework.

Prerequisites

Attendees should have attended our *"Angular 8 Fundamentals"* course or have equivalent experience.

All demos & labs are in TypeScript.

Contents of One-Day Training Course

Angular System Programming

Closer look at low level details of how Angular apps actually run
Use of zones in Angular

Dependency Injection

Excellent for testing
Hierarchical DI built into Angular
Provides greater flexibility in how a well structured app can evolve into future

Angular Router Fundamentals

Browser-based editing of address bar URI
Setting up routes using the Router Service
Router outlet
Catch-all entry

Advanced Angular Router

State management
Handling routing events
Use of guards

Lazy Loading

For large applications, loading everything at startup is costly
How can we postpone loading some functionality until/unless it is needed

Advanced Angular CLI

What is a CLI workspace?
In-depth look at workspace layout
`ng add`
Build tooling
Multiple projects

Building Angular 8 Libraries

ng-packagr
`ng g library`
Sub-dividing large projects into libraries

NgModule

Detailed look at what `NgModules` are and how they are used
`entryComponents` vs. `bootstrap`
`imports` & `exports`

Platforms & Rendering

Renderer/View engine – v2 and v3 (Ivy)
How Ivy works and its benefits to apps
Customizing rendering
Logging rendering information
Role of platforms
Web workers:`[ClientService]MsgBroker`

Schematics

Idea behind schematics
Creating for your own projects
Examing sample schematics projects

Angular Language Service

"The Angular Language Service is a way to get completions, errors, hints, and navigation inside your Angular templates"

Angular Universal

Running Angular on the server
Good for search engines (SEO)
Good for fast first load of page in browser

Angular 8 DevKit

Set of dev tools and libraries for ecosystem
Schematics - "generators that transform an existing filesystem" -used by Angular CLI
Core, Build & Architect packages

App Architecture

Structure needed for large Angular apps – domain model, REST, routing, security, error handling, i18n, modularity, ...