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Sign up

Angular Training: Advanced with AI

2 days (14 hours)

Overview

This 2-day training is designed for developers who have completed the Angular — Fundamentals training or have practical experience with Angular. It takes skills to a professional level by covering advanced reactivity with Signals and RxJS, application security with JWT, performance optimization, and best practices for AI-assisted testing.

True to the approach of the fundamentals course, it maintains the core themes of LLM-Driven Development, Clean Code according to Robert C. Martin, WCAG 2.2 accessibility, and eco-development—with a higher level of rigor and patterns directly applicable in a professional context.

Over two days, the carefully balanced density of concepts covered ensures a significantly higher retention rate than longer training programs. Each concept is immediately applied, enabling participants to be fully operational as soon as they return to their companies.

This course is part of our AI-enhanced Angular curriculum, which will enable you to get your teams fully up and running in the shortest possible time.

Like all our courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Master advanced Signals and interoperability with RxJS
- Implement secure JWT authentication with interceptors
- Build reusable and maintainable service architectures
- Optimize the performance of an Angular application with OnPush and @defer
- Create generic and reusable components with content projection

- Design dynamic forms and custom form components
- Automate and understand AI-assisted unit and E2E tests

Target Audience

- Angular developers looking to deepen their skills and adopt professional patterns in modern development.

Prerequisites

- Completion of the Angular — Fundamentals course or practical experience with Angular, including knowledge of standalone components, basic routing, `signal()` and `computed()` signals, and HTTP requests using `HttpClient`.
- [Test My Knowledge](#)

Technical prerequisites

- At least 8 GB of RAM (16 GB recommended) on Windows 10, macOS, or Linux (such as Ubuntu)
- An internet connection without a proxy
- Node.js installed
- An IDE installed, such as Visual Studio Code

Curriculum for our Angular: Advanced with AI training course

[Day 1 - Morning]

Architecture & Reactive Mastery

- Review and in-depth exploration of LLM-Driven Development, Clean Code, accessibility, and eco-development
- Advanced signals: `toSignal()`, `linkedSignal()`, `toObservable()`
- Hot Observables: `Subject`, `BehaviorSubject`, `ReplaySubject` — real-world use cases and legacy patterns
- Advanced RxJS operators: `switchMap`, `mergeMap`, `concatMap`, `exhaustMap`, `combineLatest`, `forkJoin`

[Day 1 - Afternoon]

Pro Routing & Authentication

- takeUntilDestroyed — when toSignal() and async pipe aren't enough
- JWT Authentication — AuthService with signals, token storage, and decoding
- Functional interceptors: JWT token, refresh token, 401 retry
- Advanced Router: canDeactivate, canMatch, named routes, multiple RouterOutlets
- Functional resolvers with withComponentInputBinding() — direct injection into signal-based input()

[Day 2 - Morning]

Components & Patterns

- Abstract Class AbstractCrudService<T>
- Content projection: ng-content, ngTemplateOutlet, @ContentChild
- ControlValueAccessor — custom form components
- Dynamic forms: FormArray, advanced Signal forms

[Day 2 - Afternoon] Performance

& Enhanced Testing

- Optimizing change detection: OnPush strategy
- Component lazy loading: @defer, @placeholder, @loading, @error
- Angular CDK: FocusTrap, DragDrop
- Advanced AI-assisted unit testing with Vitest: guards, resolvers, interceptors, abstract services
- AI-assisted E2E testing with Playwright — Page Object Model

Target Companies

This training is intended for both individuals and companies, large or small, wishing to train their teams in a new advanced IT technology or to acquire specific business knowledge or modern methods.

Placement upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency in various types of technologies, as well as their expectations and personal goals regarding the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Practical Course: 60% Practical, 40% Theory. Training materials distributed in digital format

to all participants.

Organization

The course alternates between theoretical input from the trainer, supported by examples and reflection sessions, and group work.

Assessment

At the end of the session, a multiple-choice questionnaire verifies that the skills have been properly acquired.

Certification

A certificate will be issued to each trainee who completes the entire training program.