

Updated 04/11/2024

Sign up

# Angular Advanced Training

2 days (14 hours)

We are [Angular 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7 & 6 Ready!](#)

## Presentation

Have you attended our [Angular training course](#) and would like to learn more? Do you have an Angular application and are having trouble maintaining it?

This training course will enable you to become an Angular expert, learning advanced Angular concepts and discovering the scope of its ecosystem.

This advanced Angular training course will teach you how to 100% test your application, how to solve orchestration problems on RxJS and all the tricks you need to boost your website's performance.

During this training course, you'll take part in a wide range of practical exercises. You'll have access to all the resources you need to master the advanced components of Angular.

At the end of this course, you'll know how to test your applications, write unit tests, develop and manage Angular components. Like all our training courses, this one will introduce you to the latest stable version and its new features: [Angular 17](#) and [Redux 5](#).

## Objectives

- Understanding advanced concepts
- Test your application thoroughly
- Component development and management
- Boost application performance

## Target audience

Angular Web Developer, Lead developer

## Prerequisites

Fundamental knowledge of Angular, or have completed our [Angular training course](#).

## Technical requirements

- Have Node.js installed
- An IDE, preferably Visual Studio Code
- Github Desktop or similar software

## Angular Advanced training program

### NX

- Introduction to cli Nx
- Definition of a monorepo
- Creating a workspace
- Application architecture

### LAZY LOADING

- Improving start-up performance
- Route integration: loadChildren
- Preloading Strategy: PreloadAllModules and other tracks

### PERFORMANCE OPTIMIZATION

- Component-level Lazy Loading
- Data Binding, manual mode: ChangeDetectorRef
- trackBy for \*ngFor
- Budgets
- RxJS subscription management

### ROUTE GUARDS & RESOLVE

- The different types of Guards
- CanActivate, CanActivateChild: protect a route
- CanDeactivate: securing the exit
- Pre-fetching with resolve

## NgRx (Workflow Redux)

- Redux in an Angular application with the @ngrx platform
- Application state management (store)
- Debugging with @ngrx/store-devtools
- Creating asynchronous actions with @ngrx/effects

## REACTIVE FORMS

- FormControl and FormGroup
- Custom controls (ControlValueAccessor)
- Custom and asynchronous validators

## UNIT TESTING AND E2E

- Unit testing with Jest
- Code coverage
- e2e tests with Cypress

Additional Intra modules: 1 extra day (choice of 2 chapters)

## ANIMATIONS

- States and transitions
- Animations with the router

## ANGULAR MATERIAL

- Introduction
- Study and implementation of some components
- Create your own Material libraries using CDK

## ADVANCED COMPONENTS AND GUIDELINES

- Understanding life cycles
- Component with content projection (ng-content, ng-container, ngTemplateOutlet, ...)
- HostBinding / HostListener
- ViewChild / ContentChild
- Attribute and structural directives
- Renderer

## INTERNATIONALIZATION

- Internationalization : i18n marker
- Managing texts to be translated
- Managing plurals

## SERVER-SIDE RENDERING: ANGULAR UNIVERSAL

- ServerModule
- Back-end engine (Node.js and others) : @nguniversal/express-engine

### Companies concerned

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

### Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

### Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

### Organization

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

### Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

### Sanction

A certificate will be issued to each trainee who completes the course.