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## Angular training

Learn the most powerful Web Framework on the market!

3 days (21 hours)

### Presentation

Join our Angular training course to master this essential framework for modern web development. Whether you're a developer, lead developer or software architect, this course will enable you to harness the full power of Angular to create fast, modular and maintainable web applications.

Our training course will give you a complete overview of the latest version of [ES2024](#) (modern JavaScript), the philosophy and templating of this famous framework. We'll also introduce you to the features introduced by the latest versions.

You'll then learn how to use the main components: services, dependency injection and router settings. The course concludes with advanced concepts such as asynchronous programming, RxJS and server communication via HTTP requests.

On completion of this program, you'll be able to develop a high-performance web application using both JavaScript and [TypeScript 5.6](#). You'll also be able to perform unit and functional tests.

Our training course will introduce you to the latest version of this technology, [Angular 18](#). This is your key to becoming a true Angular expert, capable of developing powerful, scalable web applications ready to face today's technical challenges.

### Objectives

- Discover the new features of the Angular framework
- How to develop a new Web application with Angular

- Designing Angular applications with JavaScript and TypeScript
- Using unit and functional testing in development
- Discover the latest version of the official ES2024 JavaScript specification
- Understanding the Framework's advanced mechanisms

## Target audience

- Web Developer
- Lead Developer
- Web Architect

## Prerequisites

- Knowledge of JavaScript or TypeScript, HTML5/CSS3
- [Test My Knowledge](#)

## Software requirements

- Minimum 8 GB ram (16 GB recommended) on Windows 10, macOS or Linux (Ubuntu type)
- A proxy-free Internet connection
- Nodejs installed
- An installed IDE such as Visual Studio Code

## Recommendations for pre- and post-course reading

- If you're not 100% comfortable with Angular components, we suggest this [article from Malcoded](#)
- An Angular guide [to mastering modules](#)
- To find out more, discover the [best development practices](#) for Angular
- A long, detailed article on the [use of routers](#)
- A long tutorial in English to [master the forms](#)

## Angular 18 training program

### Day 1 - Introduction

- ES2024: the new JavaScript
- ES2024 and modules
- TypeScript: typing JavaScript

### Framework basics

- Understanding the framework philosophy
- Templating
- Angular CLI, a tool to generate everything
- Practical work: First application and tooling

## Component

- Web Components
- Angular designers
- Property binding, read data from the component
- Event binding, customized events
- Lifecycle
- TP: First component

## Guidelines

- Directive: operation and creation
- The directives provided by Angular
- Attribute directives
- Structural directives
- Complex guidelines
- TP: First directive

## Modules

- Module declarations: imports and exports
- Module providers
- Introduction to "forRoot" and "forChild"
- Practical work: create, export and reuse a module

## Pipes

- Supplied transformers
- Formatting a channel
- Formatting collections
- Using a pipe as a service
- Practical work: Creating your own pipes

## Day 2 - Services, intercomponent communication Services

- Services provided
- Service injection
- Practical work: Injecting services provided by Angular

## Dependency injection (IOC)

- Principles
- Configuring your application
- Dependency injection: type-based and hierarchical
- Different types of providers
- Practical work: Creating your own services

## Router

- RouterModule: Route and URL configuration
- Defining routes, links and redirection, parameters
- Route hierarchies
- Nested views
- Routing lifecycle
- Practical work: Transforming a Web application into a Single Page Application

## Day 3 - Reactive programming, server communication

### Observables

- Introduction to RxJS
- The Observable concept
- The main operators
- Link with promises
- TP: first steps with RXJS

### Exchange with a server

- HTTP requests
- Communication with an API
- Display external data
- Displaying asynchronous data with AsyncPipe
- Practical work: retrieving and displaying data from a remote REST API

### Form

- Create a form
- Template-driven forms
- ngModel
- Reactive forms
- Validation and errors
- Observers
- Practical work: Creating your own validators, sending a POST request

### Performance

- Tips, best practices & tools
- Discovering different compilation strategies
- TP: Performance testing

## Advanced concepts

- Entertainment
- Advanced dependency injection (IoC)
- Unit testing

## What's new in Angular 17

- @defer
- SSR and Hydration
- Angular Signals
- What's new in standalone components

## Add-on module: Angular Advanced (2 days)

## Companies concerned

This 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.