

Angular Training

Duration

3 days (21 hours)

We are [Angular version 11, 10, 9, 8, 7, 6, 5, 4, 2 Ready !](#)

Presentation

[Angular](#) is the brand new framework from Google which is already the reference for modern web technologies. Like all our trainings, this one will present you the latest stable version as well as its new features ([Angular 11.1](#) released on November 18, 2020 at the date of the article).

Train now for [the most powerful Web Framework on the market!](#)

Angular offers increased performance with a modular, mobile-friendly design and improved productivity for your development teams. By embracing the new Web standards and the new features brought by ES6 and [TypeScript](#), Angular immediately benefits from a rich ecosystem and a growing community. Come and discover the richness and power of [TypeScript 4](#) designed by the no less famous Anders Hejlsberg. Discover

In this training, you will discover how to create your own reusable components with Angular. To exploit the full power of the framework, you will learn to master the various facets, including dependency injection, templates, routing, data-binding, as well as tests (unit and functional). Finally, you will be introduced to architectural best practices and the state of the art of development environments. Be the first to grasp new development concepts in order to write robust and efficient applications!

Objectives

- Discover the functionalities & the new features of the Angular framework
- Know how to develop a new web application with Angular
- Know how to design an Angular application with JavaScript and TypeScript 3.x & 4.x
- Know the advanced mechanisms of the framework

Target audience

- Web developer, Lead developer

Prerequisites

Knowledge of JavaScript or TypeScript

Our Angular 11 training program

Day 1 - Introduction

- ES6, the new JavaScript
- ES6 and modules
- TypeScript 3: the typing of JavaScript

The basics of the framework

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

What's new in Angular 11, 10, 9, 8, 7 and 6

- ng add / ng update: automatic configuration & migration
- Build with the Bazel compiler
- Angular Elements
- Angular Material + CDK Components
- Performance animations: goodbye polyfill
- Declaring services with Dependency Injection: Tree Shakable Providers
- Progressive Web App (PWA)
- Versions: RxJS 6 & TypeScript 3.x support
- Ivy

Component

- Web Components
- Angular decorators
- Property binding, send data to the component
- Event binding, custom events
- Lifecycle
- Practical: First component

Guidelines

- Directive: operation and creation
- Directives provided by Angular
- Attribute directives
- Structural directives

- Complex directives
- TP: First directive

Modules

- Declarations of a module: imports and exports
- The providers of a module
- Different types of modules: good and bad practices
- Practical work: creation of a module and factorization of an external library

Pipes

- The supplied transformers
- Formatting a channel
- Formatting collections
- Using a pipe as a service
- TP: Create your own pipes

Day 2 - Services, inter-component communication

Services

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

Injection of dependencies (IOC)

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

Router

- RouterModule: Route and URL configuration
- Route definitions, links and redirection, parameters
- Route hierarchies
- Nested views
- Routing lifecycle
- Lab: Transforming a Web Application into a Single Page Application

Day 3 - Reactive programming, server communication

Observables

- Introduction to RxJS
- The concept of Observable
- Main operations on observables
- Relationship to promises

Exchange with a server

- HTTP requests
- Communication with an API
- Displaying external data
- Displaying asynchronous data with AsyncPipe
- Lab: Creating a REST API for testing

Form

- Create a form
- Template-driven forms
- ngModel
- Reactive forms
- Validation and errors
- Observers
- Lab: Create your own validators, send a POST request

Performance

- Tips, best practices & tools
- Discovering the different compilation strategies
- TP: Testing the performance

Advanced concepts

- Animations
- Advanced dependency injection (IoC)
- HTTP requests to a REST API

Complementary Module : [Angular Advanced](#) (2 days))

Companies concerned

This training is intended for companies, small or large, wishing to train their teams to a new advanced computer technology.

Pedagogical methods

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

Organization

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

Validation

At the end of the session, a multiple-choice questionnaire is used to verify the correct acquisition of skills.

Sanction

A certificate will be given to each trainee who has completed the entire course.