

# Angular I: Basics

Course code: JS\_ANGULAR1

This course is designed for programmers who know the basics of TypeScript and want to learn how to use the Angular library services in their front-end web applications. You will learn, among other things, to use data binding, html templates, validate input data or interact with back-end APIs, but also to design architecture for large Angular applications composed of many components and services. The course assumes knowledge of the DOM object model in the browser at the course level [JS\_DOM1] and knowledge of TypeScript at the course level [JS\_TS1].

## For whom the course is intended

- This course is designed for students who want to learn the basics of front-end web application development using the Angular framework.

## What we will teach you

- The architecture and nomenclature of the Angular library
- Create front-end applications for data collection, validation and presentation
- Manage user events using the Angular library
- Create custom Angular components and share state between them
- Use template and reactive forms
- Interact with back-end APIs using the Angular library
- Use lazy loading components and advanced routing

## Required Entry Level Knowledge

- Course-level TypeScript syntax [JS\_TS]
- Course-level knowledge of DOM objects [JS\_DOM1]

## Course outline

Introduction to Angular

- What is Angular
- Why TypeScript

The development environment

- Hello World
- Project Structure

Library Architecture

- Modules, components, templates
- Modules vs stand-alone components
- Decorators and metadata
- Directives
- Services and dependency injection

Data presentation

- Data binding and expressions
- Directives and flow control blocks in templates
- Conditional Renovation
- re-rendering
- CSS, style, class

Interaction with the user

- Events and event handlers
- \$event object

Working with forms

- Reference variables in templates
- Template forms

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- Reactive forms

## Directives

- Creating attribute directives

## Component collaboration

- Inputs and outputs
- Services and dependency injection
- Signals

## Communication with the backend

- Angular HTTP client
- Observable and rxjs

## Navigation (routing)

- Basic navigation
- Nested routes
- Parametric routes
- Lazy loading

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