

KOENIG SOLUTIONS · COURSE OUTLINE

# Angular 17

Learn to build Angular 17 applications with TypeScript, components, routing, forms, services and testing.

**5 Days**

DURATION

**8**

MODULES

**46**

TOPICS

## COURSE OVERVIEW

This course covers the fundamentals of Angular and TypeScript, including setting up the development environment and understanding the Angular directory structure. It then addresses standalone components, data binding and control-flow syntax, before moving into dependency injection, Angular forms and calling backend APIs with HttpClient. Component communication, routing, route guards, authentication with JWT tokens and functional interceptors are then covered, followed by directives, pipes, lazy loading and multi-route standalone applications. The course closes with unit testing using Jasmine and Karma and end-to-end testing with Cypress.

## WHO THIS COURSE IS FOR

Front-End Developers

Angular Developers

Web Developers

Software Engineers

QA Engineers

## LEARNING OBJECTIVES

- Explain Angular building blocks and TypeScript fundamentals
- Build standalone components using the Angular CLI
- Apply data binding techniques such as interpolation and event binding
- Implement control-flow syntax including @if, @for and @switch
- Configure dependency injection and Angular services
- Develop reactive and template-driven forms with validation
- Implement routing, child routes and route guards
- Apply JWT authentication with functional interceptors

# 8 Modules, 46 Topics

01

## Introduction to Angular and TypeScript

### TOPICS

- Introduction to Angular
- Introduction to TypeScript
- Setting up the Development Environment and Running the Angular Initial Application
- Angular Directory Structure
- Angular Building Blocks

02

## Components and Data Binding

### WORKING WITH STANDALONE COMPONENTS

@Component Decorator and its Metadata ·  
Generating a Component using the Angular CLI ·  
Invoking Components

### DATA BINDING

Interpolation · Property Binding · Event Binding · Two-way Binding

### CONTROL-FLOW GRAMMAR

Conditionals: @if · Conditionals: @else · Loops: @for ·  
Switch Statements: @switch · Switch Statements:  
@case · Switch Statements: @default

03

## Dependency Injection and HTTP Communication

### ANGULAR FORMS

- Template Driven Form and its validation
- Reactive Form and its validation
- model () function
- Interface
- Dependency Injection
- Working with Services

### CALLING BACKEND APIS

- Working with JSON Data
- CRUD operations from a Rest API using HttpClient
- Map, CatchError/ThrowError and Retry Operators

04

## Component Communication and Routing

ANGULAR COMPONENT COMMUNICATION WITH @INPUT/@OUTPUT DECORATOR

Required Inputs

INTRODUCTION TO ROUTING

Implementing Routing in an Angular App · Wildcard Route / Default Route · Navigate Programmatically · Implementing Child Routes · Named router outlets · multiple outlets in one view · Router Inputs

Working with Route Guards in Angular

05

## Authentication

TOPICS

- Implement JWT Token for authentication (Demonstration with available Token Based Api)
- Functional Interceptors

06

## Pipes & Directive

ATTRIBUTE DIRECTIVE

NgStyle, NgClass

PIPES

Introduction to Pipes in Angular · Using Built-in Pipes · Creating Custom Pipes in Angular

07

## Angular Best Practice

TOPICS

- Lazy Loading components
- Standalone Components and Multi-Route Application

08

## Unit Testing

TOPICS

Unit testing with Jasmine & Karma · E2E testing with cypress

#### WHAT IS INCLUDED

## Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

#### ABOUT KOENIG

## Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

#### FLEXIBLE DELIVERY

## Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

## Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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