

KOENIG SOLUTIONS • COURSE OUTLINE

Angular 19

Learn to build, test and deploy Angular 19 applications, from components and services to routing, forms and state management.

5 Days

40 HOURS

5

MODULES

38

TOPICS

20

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers Angular 19 fundamentals, including the development environment, modules, components, templates and directives. It then addresses component communication, data binding, and services with dependency injection and HttpClient. Further topics include routing and navigation, template-driven and reactive forms, state management with NgRx, custom directives and pipes. The course concludes with unit testing using Jasmine and Karma, performance optimisation, and deployment to hosting platforms such as Firebase, Netlify or Vercel.

Who Should Attend

Beginner to Intermediate

LEARNING OBJECTIVES

- Explain Angular core concepts such as modules, components and templates
- Apply directives including `*ngIf`, `*ngFor` and `ngClass`
- Configure component communication using `@Input` and `@Output`
- Implement data binding including interpolation and two-way binding

PREREQUISITES

Basic understanding of HTML, CSS, JavaScript, and TypeScript. Prerequisites Topics (Self-study or Pre-training Session/ On Request): Before diving into Angular, attendees should be familiar with the following:

- HTML & CSS (2-3 Hours): Semantic HTML
- HTML & CSS (2-3 Hours): Forms and Input elements
- HTML & CSS (2-3 Hours): CSS basics (Selectors, Flexbox, Grid)
- HTML & CSS (2-3 Hours): Responsive design basics
- JavaScript Essentials (4-5 Hours): Variables (`let`, `const`, `var`)
- JavaScript Essentials (4-5 Hours): Functions and Arrow Functions
- JavaScript Essentials (4-5 Hours): ES6+ features (Destructuring, Spread, Rest)
- JavaScript Essentials (4-5 Hours): Promises and `Async/Await`
- JavaScript Essentials (4-5 Hours): DOM Manipulation
- JavaScript Essentials (4-5 Hours): Event Handling
- TypeScript Basics (4-5 Hours): Installing and setting up TypeScript
- TypeScript Basics (4-5 Hours): Variables and Data Types
- TypeScript Basics (4-5 Hours): Functions and Interfaces
- TypeScript Basics (4-5 Hours): Classes and Inheritance
- TypeScript Basics (4-5 Hours): Modules and Imports
- TypeScript Basics (4-5 Hours): Generics
- TypeScript Basics (4-5 Hours): Decorators

- Develop services with dependency injection and `HttpClient` for API calls
- Configure routing with route guards and lazy loading
- Build template-driven and reactive forms with validation
- Implement state management using `NgRx` actions, reducers and effects

How the Course Is Taught

Lecture + Hands-on Labs

COURSE SYLLABUS

5 Modules, 38 Topics

DAY 1

Introduction to Angular & Setting Up the Environment

8 hours

01

4 hours

Morning Session

INTRODUCTION TO ANGULAR

- What is Angular?
- Evolution of Angular (AngularJS to Angular 19)
- Advantages of Angular
- Real-world applications

SETTING UP THE DEVELOPMENT ENVIRONMENT

- Installing Node.js, Angular CLI
- Creating the first Angular application
- Understanding project structure
- Running an Angular application

UNDERSTANDING ANGULAR CORE CONCEPTS

- Modules (NgModule)
- Components (@Component)
- Templates and Views
- Directives (*ngIf, *ngFor, [ngClass], [ngStyle])

Afternoon Session - Hands-on Labs

4 hours

3 Activities

3 Activities

DAY 2

Components, Data Binding & Services

8 hours

02

4 hours

Morning Session

COMPONENT COMMUNICATION

@Input and @Output · Parent-child communication · Event binding and property binding

DATA BINDING IN ANGULAR

Interpolation ({{ }}) · One-way and two-way binding (ngModel) · Property binding · Event binding

ANGULAR SERVICES & DEPENDENCY INJECTION (DI)

Creating services with @Injectable · Understanding Dependency Injection · Using HttpClientModule for API calls

Afternoon Session - Hands-on Labs

4 hours

2 Activities

2 Activities

DAY 3

Routing, Forms & State Management

8 hours

03

4 hours

Morning Session

ROUTING & NAVIGATION

- Configuring routes with RouterModule
- Lazy loading & route guards
- Handling route parameters

FORMS IN ANGULAR

- Template-driven forms
- Reactive forms (FormGroup, FormControl, Validators)

Afternoon Session - Hands-on Labs

4 hours

2 Activities

2 Activities

DAY 4

Advanced Topics

8 hours

04

4 hours

Morning Session

STATE MANAGEMENT WITH NGRX (REDUX PATTERN)

Introduction to NgRx Store · Actions, Reducers, Selectors, Effects

DIRECTIVES & PIPES

Built-in and custom pipes · Custom directives

Afternoon Session - Hands-on Labs

4 hours

2 Activities

2 Activities

05

4 hours

Morning Session

UNIT TESTING IN ANGULAR

Writing tests using Jasmine & Karma · Testing services, components, and directives

PERFORMANCE OPTIMIZATION

Lazy loading modules · Change Detection Strategy · Best practices for production apps

DEPLOYMENT OF ANGULAR APPS

Building & optimizing the production version · Hosting on Firebase, Netlify, or Vercel

Afternoon Session - Hands-on Labs

4 hours

Activity

Activity

HANDS-ON ACTIVITIES

Practise What You Learn

MODULE	ACTIVITY
Afternoon Session - Hands-on Labs	LAB 1: SETTING UP ANGULAR PROJECT ■ Install Angular CLI and create a new Angular 19 project ■ Explore project structure and run the app ■ Modify app.component.ts and app.component.html LAB 2: CREATING COMPONENTS & USING DIRECTIVES ■ Create new components using CLI ■ Implement *ngIf and *ngFor ■ Apply ngClass and ngStyle
Afternoon Session - Hands-on Labs	LAB 3: COMPONENT COMMUNICATION ■ Create parent and child components ■ Implement @Input and @Output LAB 4: SERVICES & API CALLS ■ Create an Angular service ■ Fetch and display data using HttpClient
Afternoon Session - Hands-on Labs	LAB 5: IMPLEMENTING ROUTING ■ Create routes and use RouterModule ■ Implement route guards LAB 6: FORMS HANDLING ■ Build a form using Reactive Forms ■ Implement form validation

MODULE	ACTIVITY
Afternoon Session - Hands-on Labs	LAB 7: STATE MANAGEMENT WITH NGRX
	■ Set up NgRx store
	■ Manage state with actions and reducers
	LAB 8: CREATING CUSTOM DIRECTIVES & PIPES
Afternoon Session - Hands-on Labs	■ Implement a custom directive
	■ Create a custom pipe
	Lab 9: Writing Unit Tests: Write test cases for components & services
	Lab 10: Deploying Angular App: Deploy an Angular app to Firebase or Netlify

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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