

Junior Angular Developer

Course Duration: 40 Hours

Course code: JAD

1. Course Overview

This course is designed for aspiring frontend developers who want to start their journey with Angular, one of the most widely used frameworks for building scalable and dynamic web applications. The course covers everything from setting up the Angular environment, working with components, modules, and services, to handling data binding, directives, forms, routing, and HTTP communication. You will also gain exposure to Angular CLI, RxJS, and best practices for building production-ready applications. By the end of this course, learners will have the skills to develop and maintain Angular-based projects at a junior developer level.

2. What you'll learn?

By completing this course, you will be able to:

- Understand Angular architecture and how it fits into modern web development.
- Set up and configure the Angular development environment using Angular CLI.
- Create and manage components, templates, and modules.
- Work with data binding (interpolation, property, event, and two-way binding).
- Use directives to manipulate the DOM dynamically.
- Handle services and dependency injection in Angular.
- Build and validate forms using both template-driven and reactive approaches.
- Configure routing and navigation in Angular applications.
- Perform HTTP client requests and work with APIs.
- Implement basic RxJS concepts for handling asynchronous operations.
- Build, test, and deploy Angular applications.

3. Target Audience

- Beginners aspiring to become Angular Developers.
- Frontend developers transitioning from JavaScript/React/Vue to Angular.
- Students, professionals, and freshers preparing for junior-level Angular roles.

4. Pre-Requisites

Familiarity with:

- HTML, CSS, and JavaScript basics
- ES6+ features (classes, modules, arrow functions, etc.)
- Basic knowledge of TypeScript (preferred but not mandatory)

5. Course content

1. Understanding Angular

- What is Angular?
- Brief history and versions
- Overview of Single Page Applications (SPA)

2. Setting Up the Development Environment

- Installing Node.js and npm
- Angular CLI installation and setup
- Creating an Angular project
- Exploring the Angular project structure

3. Introduction to TypeScript

- Why TypeScript?
- Basic types, arrays, and objects
- Interfaces and classes

4. ES6+ Features Used in Angular

- Let and Const
- Arrow functions
- Modules and their usage
- Template literals

5. Components and Modules

- Creating a new component
- Understanding modules and components
- Component templates, metadata, and data binding

6. Directives and Pipes

- Built-in structural and attribute directives
- Creating custom directives
- Using and creating pipes for data transformation

7. Services and Dependency Injection

- Why services?
- Creating and injecting services
- Singleton services and their scope

8. Communicating with Backend

- HTTPClient Module
- Making GET and POST requests
- Handling observable data
- Using async pipes

9. Understanding Routing in Angular

- Configuring routes
- Router outlet and router links

- Route parameters

10. Advanced Routing Techniques

- Lazy loading modules
- Guards and their types (AuthGuard, ResolveGuard)

11. Template-Driven Forms

- Building a simple form
- Form validation
- Understanding ngModel

12. Reactive Forms

- Introduction to reactive forms
- Form controls and form groups
- FormArray and FormBuilder
- Reactive forms validation

13. Testing Angular Applications

- Introduction to Jasmine and Karma
- Writing unit tests for components and services
- Debugging techniques

14. Using Angular DevTools

- Installing Angular DevTools
- Exploring components, profiling change detection

15. Final Project

- Project: Building a Small Angular Application
- Requirements and specifications
- Design and development