

Angular Certification Training

Course Curriculum: Your 12 module Learning Plan

https://www.edureka.co/angular-training

About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

About Course

Edureka's Angular Certification Training will train you to develop efficient Angular applications by mastering the concepts of Angular 12. After completing this Angular online training, you will be able to build dynamic, responsive, and interactive web applications using Angular concepts such as Angular Modules, Components, Databinding, Angular Forms, Angular Directives and Pipes, Services and Dependency Injection (DI), Routing, Communication with backend services over HTTP protocol, Authentication with JWT, and Application Deployment.

Angular Training Curriculum

Getting Started with Angular

Learning Objectives: This module will introduce you to the basic constructs of web application development, MVC architecture, what is Angular and the differences between single and multiple page applications. You will also learn how to install Angular and make use of NPM packages.

Topics:

- Building Blocks of Web Application Development
- Web Application Architecture
- Introduction to Angular
- Angular Architecture
- Building blocks of Angular
- Angular Installation
- Angular CLI
- Angular CLI commands
- Understanding files in Angular

Hands-On:

• Installation of Node.js, Angular CLI and Visual Studio Code

Angular Components and Data Binding

Learning Objectives:In this module, you will learn about Angular Modules and Components. You will also learn how to build the application layout using selectors, templates, and styles

Topics:

Working of Angular Applications

- Angular App Bootstrapping
- Angular Modules
- Decorators and its types
- Angular Components
- Creating A Component Through Angular CLI
- Ways to specify selectors
- Template and styles
- Installing bootstrap to design application

Hands-On:

- Creating First Angular Application
- Build an application using Components

Databinding and Animations

Learning Objectives:In this module, you will learn about Angular Databinding and Animations.

Topics:

- Databinding
- Types of Databinding
- Component Interaction using @Input and @Output decorator
- Angular Animations
- Component Life-cycle Hooks

Hands-On:

- Bind data to an application using Databinding
- Use CSS animations

Angular Directives and Pipes

Learning Objectives:In this module, you will learn how to manipulate DOM and add filters using Angular directives and pipes.

Topics:

- Understanding Angular Directives
- @Component Directive
- Structural Directives
- Attribute Directives
- Custom Directives
- Pipes
- Built-in Pipes
- Chaining pipes
- Custom pipes
- PipeTransform Interface & Transform Function

Hands-On:

- Add built-in directives and create custom directives to manipulate DOM in an application
- Use built-in pipe and custom pipe to transform the output in an application

Angular Services and Dependency Injection

Learning Objectives:In this module, you will learn how to create Angular services and inject it using dependency injection.

Topics:

- Angular service
- Need for a service

- Dependency Injection
- Creating a service
- Hierarchical Injector
- Injecting A Service into Another Service
- Observables

Hands-On:

• Build a weather forecast application to display weather data using dependency injection

RxJS and HTTPClient

Learning Objectives: In this module, you will learn how to perform HTTP requests and receive response from the backend servers. **Topics:**

- RxJS Library
- Angular's Interaction with Backend
- Parts of an Http Request
- HttpClient

Hands-On:

• Fetch data for the weather forecast application using Httpclient and observables

Angular Routes and Navigation

Learning Objectives:In this module, you will learn how to configure Angular routes and navigate between different components.

Topics:

• Angular Router

- Setting Up Routes
- Adding Routes Using RouterLink
- Wildcard and Redirecting Routes
- Adding Navigation Programmatically
- Passing Route Parameters
- Extracting Parameters Using ActivatedRoute
- Optional Route Parameters
- Child Routes
- Route Guards
- Location Strategies

Hands-On:

- Build a server management application and make use of routing
- Make use of route guards to prevent navigation to different pages

Handling forms in Angular

Learning Objectives: In this module, you will learn how to deal with building a form using two approaches- template-driven and reactive. You will also learn about underlying building blocks of form model and types of directives with respect to the two types of forms **Topics:**

- Angular forms
- Types of forms
- Underlying building blocks of the form model
- Template-driven vs Reactive forms
- Template-driven forms
- Reactive Forms
- Dynamically adding data to a form

Hands-On:

- Build a user registration form using a template-driven approach
- Build a user registration form using a reactive approach

Validating Angular Forms

Learning Objectives:In this module, you will learn how to deal with form validation.

Topics:

- What is Form Validation?
- Types of Form Validation
- Built-in Validators
- Form control's status and validity
- Form Validation methods
- CSS classes for Form control
- Custom validators in Template Driven Forms

Hands-On:

• Add validation using custom validator for different fields in user registration form for both template-driven and reactive forms.

Authentication with JWT and Security

Learning Objectives: In this module, you will learn how to perform authentication using JWT (JSON Web Tokens)

Topics:

What is Authentication?

- Authentication and authorization
- Types of Authentication
- Where to store tokens?
- JSON Web Tokens (JWT)
- Authentication in Angular application
- Security threats in web application

Hands-On:

- Create Login and registration form and store user data using fake-backend provider
- Authenticate a user using JWT authentication for login form

Testing and Application Deployment In Angular

Learning Objectives:In this module, you will learn how to perform application testing.

Topics:

- Testing
- Why should we perform testing?
- Types of testing
- Testing Angular application using Jasmine and Karma
- Maintaining application code using Git
- Version control system
- Why should we use Git?
- Git file workflow
- Running application on production server: Nginx
- Architecture of Nginx
- How to configure Nginx?
- Deployment of an application using Docker

- Problems before containers
- How containers solve the problems
- What is Docker?
- Docker file
- Docker image
- Docker containers
- Docker hub
- Basic Docker commands

Hands-On:

• Testing Angular application

In-Class Project

Learning Objectives:In this module, you will perform an in-class project based on all the Angular concepts you have learned in the entire Edureka Angular course.

Projects

What are the system requirements for this Angular Online Training?

Hardware Requirements:

- Memory Minimum 4 GB RAM
- Processor Intel Core i3 CPU @2.00 GHz or above
- Storage 20 GB HDD/SDD or above

Software Requirements:

- Operating System Windows 7 or above, Ubuntu 14 or above
- Visual Studio Code (web application development)
- Chrome or Mozilla (latest version)

How will I execute the practicals?

All the Angular applications will be built and debugged using Visual Studio Code Editor. The detailed step by step installation guides are available on the LMS. Edureka's 24*7 technical support team is always available to promptly assist you with your queries.

Which Angular projects are a part of this Angular Training?

Project 1

In-Class Project

Domain: Tourism and Travel

Background: Mytrip.com is an online Bus Ticket booking web application with a customer base of approximately 1 million users. The website is designed with old asp.net technology and is

unable to handle the increase in web traffic. Therefore, help the company to upgrade its website using the Angular framework

Goal: The goal of this project is to build an online Bus Ticket booking application with effortless seat selection and payment process using Angular Framework.

Project 2

• Certification Project

Domain: Social Media

Background: Friends Book is a web application, which allows users to interact with people virtually and create a network of friends. It is designed using traditional web development methodologies. With the increase in the number of users, the performance of the website has reduced and there is no way to prevent unauthorized access to the restricted part of the website. Therefore, help the company to upgrade its website using the Angular framework.

Goal: The goal of this project is to develop a RESTful web application that can be easily adopted by users to engage them in social activities.