

ANGULAR 6 BOOTCAMP

OVERVIEW

5 modules

8 hours/module

Google's Angular framework, is a much sought-after skill in the industry today. The Angular 6 Bootcamp gets you prepared for building enterprise-grade applications using Angular 6.

PREREQUISITES

- HTML, CSS and JavaScript knowledge
- Very basic algorithms and data structures knowledge (traversing and using arrays, using objects in JavaScript)
- Bootstrap knowledge is a plus, but not necessary

NOTE: Knowledge of Angular JS (Angular v1.x) or Angular 2/4/5 is **NOT** required.

CAPSTONE PROJECT

At the end of this bootcamp, participants will build a blogging application using Angular. A backend server shall be provided. The app will list blog articles, allow authenticated users to post articles, and also edit/delete articles they posted.

CHAPTERS AND TOPICS

DAY 1

Pre-requisites

Introduction to ES6

Basics of TypeScript

Reactive Extensions for JavaScript (RxJS) – Basics of Observables and observers

Basics of Bootstrap

The SystemJS Universal Module Loader

Webpack Fundamentals for Angular

Introduction to Angular

Installation - Gearing up for Angular application development

Scaffolding an Angular application using the Angular CLI

Understanding the Project Structure

Understanding the Build Process and How and Angular Application Bootstraps

Basics of the Angular CLI

DAY 2

Components

Introduction to the Sample Application – Product Cataloging Application

Creating Components

Using *ngIf, *ngFor, ngStyle, ngClass

CSS Encapsulation Strategies

Content Projection

Component Lifecycle Hooks

Data Binding

Binding Events

Binding to Properties and Attributes

2-way Data Binding

Pipes

Transforming Data with Pipes

The Built-in Pipes

Creating Custom Pipes

Sorting and Filtering using Pipes

Communication Between Components

Communication Patterns

The @Input and @Output Decorators

Change Detection

DAY 3

Routing

- Routing Concepts in a Single Page Application
- Configuring Routes
- Passing Parameters to a Route and Retrieving them
- Protecting Routes with Guards
- Using Route Resolvers

Modules

- Organizing features of an Application the Application - Defining Feature Modules
- Shared Modules
- Lazy-loading Modules

Services and Dependency Injection

- Injectors and providers
- Building and Registering a Service
- Injecting the Http Service
- Communicating with the backend using Http
- Using Querystring Parameters
- Authentication – Login, Logout and Passing Token to Authenticated Endpoints
- Hierarchy of injectors

DAY 4

Angular Forms

- Template-driven and Reactive Forms
- Form-related Classes
- Validating Template-driven Forms
- Creating Reactive Forms and Validating them
- Custom Validators

More About the Angular CLI (with various options and configurations)

- ng new
- ng serve
- ng generate
- ng test
- ng build

Testing

- Unit Testing using Karma
- Testing Mock Calls
- Testing Components
- Setting up for Integration Testing
- Creating Mock Services
- Using DebugElement
- Testing Components with Deep and Shallow Integrated Tests

DAY 5

Migrating from AngularJS to Angular

Basic Angular Migration

Migrating Components

Migrating Services

Transclusion and Content Projection

Testing

Migration of Routing

Building and Deploying

Linting using TSLint

Enabling Production Mode

AOT Compilation

Tree-shaking and Bundling with Rollup