

Angular 12: Components, Routing & Redux

Learn to build Angular 12 web applications using components, directives, forms, routing, HTTP services and Redux state management.

12

MODULES

71

TOPICS

COURSE OVERVIEW

This course covers building a first Angular web application and using TypeScript features such as classes and utilities within Angular projects. It examines Angular components and data binding, directives and pipes, reactive forms, and routing with route guards. It then covers dependency injection, HTTP communication with observables, data architecture, Redux state management with TypeScript, advanced component features such as lifecycle hooks and change detection, and unit and end-to-end testing.

WHO THIS COURSE IS FOR

Front-End Developers

Web Developers

Angular Developers

UI Developers

Software Engineers

LEARNING OBJECTIVES

- Explain Single Page Application architecture and Angular's role in it
- Apply TypeScript classes and utilities within Angular applications
- Build Angular components using data, property and event binding
- Implement custom directives and pipes for template logic
- Configure reactive forms with validation and dynamic form arrays
- Configure Angular routing with child routes and route guards
- Implement HTTP communication using HttpClient and observables
- Apply Redux with TypeScript for state management in Angular

12 Modules, 71 Topics

01

Writing Your First Angular Web Application

TOPICS

Introduction to Single Page Application · What do we need Angular for? · Setting up the Development Environment · Angular Application Architecture · First Angular App · Bootstrapping crash course

02

TypeScript

TOPICS

Angular is built in TypeScript · What do we get with TypeScript? · Built-in types

CLASSES

Properties · Methods · Constructors · Inheritance

UTILITIES

Fat Arrow Functions · Template String

03

Angular Components

TOPICS

- Angular Components and the @Component Decorator
- Creating an Angular Component using the Angular CLI
- Component Decorator Metadata
- Data Binding - String Interpolation - {{ }}
- Property Binding - []
- Event Binding - ()
- @Input and @Output Property Decorators
- Two-way Data Binding - [()]
- Attribute Binding - [attr.]
- Class Binding - [class.]
- Style Bindings - [style.]

04

Angular Directive and Pipes

TOPICS

- Introduction to Directives
- Built in Structural Directives
- Built in Attribute Directives
- Building custom Attribute Directives
- Building Custom Structural Directives
- Introduction to Pipes in Angular
- Using Built In Pipes
- Creating Custom Pipes in Angular
- Pure and Impure Pipes in Angular

05

Angular Forms

TOPICS

- Types of Form in Angular
- Reactive form in Angular
- Dynamically Adding or Removing Form Control(s) or Form Group(s) using Form Array(s)
- Validations to your Reactive Form
- Validations to your Reactive Form
- Resetting the value of a form

06

Angular Routing with Guards

TOPICS

- Why Do We Need Routing?
- How client-side routing works

COMPONENTS OF ANGULAR ROUTING

- Imports
- Routes
- Installing our Routes
- RouterOutlet using <router-outlet>
- RouterLink using [routerLink]
- Putting all together
- Implementing Child Routes
- Introduction to Route Guards in Angular
- CanActivate and CanActivateChild Guards in Angular
- CanDeactivate Guard in Angular
- Prefetching Data for a Component using Resolve

07

HTTP, Observables

TOPICS

- Dependency Injection
- Hierarchical Dependency Injection
- Introduction to Services in Angular
- GET data from a Rest API using HttpClient
- CRUD Operations using HttpClient, HttpParams and HttpHeaders
- Observables and Operators in Observables - Map, Retry, Catch
- Custom HTTP Headers

08

Data Architecture in Angular

09

Introduction to Redux with TypeScript

TOPICS

Redux · Storing our state · Setting up Redux

10

Intermediate Redux in Angular

11

Advance Component

TOPICS

Styling · Lifecycle Hooks · Advance Templates · Change Detection

12

Testing

TOPICS

End to end testing · Unit testing · Testing Services and component

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.

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