

# **Angular 12**

#### Writing Your First Angular Web Application

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

## TypeScript

- Angular is built in TypeScript
- O What do we get with TypeScript?
- Built-in types
- Classes
  - Properties
  - Methods
  - Constructors
  - Inheritance
- Utilities
  - Fat Arrow Functions
  - Template String

# Angular Components

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.]



#### Angular Directive and Pipes

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

#### Angular Forms

- Types of Form in Angular
- o 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

## Angular Routing with Guards

- O 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
- o Introduction to Route Guards in Angular
- o CanActivate and CanActivateChild Guards in Angular
- o CanDeactivate Guard in Angular
- o Prefetching Data for a Component using Resolve



#### HTTP, Observables

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

# Data Architecture in Angular

# • Introduction to Redux with TypeScript

- o Redux
- Storing our state
- Setting up Redux

## • Intermediate Redux in Angular

## Advance Component

- Styling
- Lifecycle Hooks
- Advance Templates
- o Change Detection

#### Testing

- o End to end testing
- o Unit testing
- o Testing Services and component