

# Angular 10

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- **Getting started and Single Page Applications**
  - Introduction to Single Page Application
  - What do we need Angular for?
  - Setting up the Development Environment
  - Angular Application Architecture
  - First Angular App
- **TypeScript and ESNext**
  - Introduction to TypeScript
  - Setting the environment to write Typescript
  - Variable Declarations
  - Types-primitives
  - Types – Reference and Special Types
  - Operators - Spread and Backticks
  - Operators - Destructure and Rest
  - Classes
  - Interface
  - Arrow Functions
  - Modules
  - Fetch
  - Async/await
- **Decorators**
  - What are decorators?
  - Angular Modules and the @NgModule Decorator
  - Declarations
  - imports and exports
  - providers, bootstrap, and entryComponents
  - Angular Application Bootstrap Mechanism
- **Angular Components**
  - Angular Components and the @Component Decorator
  - Creating an Angular Component using the Angular CLI
  - Component Decorator Metadata
  - View Encapsulation - Emulated, ShadowDom, None
  - 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.]

- Introduction to Lifecycle Hooks in Angular
- Lifecycle Hooks - When to use which method?
- View Queries - @ViewChild
- View Queries - @ViewChildren
- View Queries - @ContentChild and @ContentChildren
  
- **Angular Directive and Pipes**
  - 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
  
- **Angular Forms**
  - Types of Form in Angular
  - Reactive form in Angular
  - Dynamically Adding or Removing FormControl(s) or FormGroup(s) using FormArray(s)
  - Adding Synchronous Custom Validations to your Reactive Form
  - Adding Async Custom Validations to your Reactive Form
  - Resetting the value of a form
  
- **Angular Routing with Guards**
  - Implementing Routing in an Angular App
  - Abstracting the user link to a separate component
  - Implementing Child Routes
  - Path Match and Route Types
  - Introduction to Route Guards in Angular
  - CanActivate and CanActivateChild Guards in Angular
  - CanDeactivate Guard in Angular
  - Prefetching Data for a Component using Resolve
  
- **HTTP, Observables**
  - 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

- **Angular Material & Firebase**
  - Introduction to Firebase
  - Creating an App using the Firebase Console
  - Interacting with Firebase Realtime Database using methods on AngularFireList
  - Adding and Reading Data from Realtime Database in Firebase
  - Updating and Deleting Data from Realtime Database in Firebase