ANGULAR

Single page Applications

- Course Overview
- Introduction to Single Page Applications (SPA)
- What do we need Angular for
- Setting up the Development Environment
- Angular Application Architecture
- First Angular App

TypeScript and ESNext

- Module Introduction and Introduction to TypeScript
- Setting up the environment to write TypeScript
- Variable declarations (var, let, and const)
- Types - Primitives
- Types - Reference and Special Types
- Operators - Spread and Backticks
- Operators - Destructure and Rest
- Classes
- Interface
- Arrow Functions
- Modules
- Fetch
- Async or await

Decorators

- Module Introduction and an overview of Angular Modules
- What are decorators
- Angular Modules and the @NgModule Decorator
- Declarations
- Imports and Exports
- providers, bootstrap, and entryComponents
- Angular Application Bootstrap Mechanis

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Component Decorator

- Module Introduction

- Angular Components and the @Component Decorator

- Creating an Angular Component using the Angular CLI and on StackBlitz

- 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

- Using Lifecycle Hooks in Angular

- View Queries - View Child, View Children, Content Child, Content Children

- Change Detection Mechanism in Angular. ZoneJS, NgZones

Angular Routing

- Introduction to Routing

- Implementing Routing in an Angular App

- Creating a User List. Setting the stage for Child Routing

- 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

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Dependency Injection

- Introduction to Section
- DI as a Pattern, DI as a Framework and Types of Providers
- 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
- Behavior Subject and Sharing Data using Behavior Subjects

Directives Deep Dive

- Introduction to Section
- 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
- Decorators Revisited
- Building Custom Decorators in Angular
- Building a Custom Lifecycle Hook Class Logger Decorator
- Building Custom Property Decorator in Angular

Forms in Angular

- Introduction to Section
- Types of Form Building Strategies in Angular
- Creating Long Bootstrap forms quickly using VS Code using Emmet
- Adding FormControl(s) to a Template Driven form using the ngModel directive

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- Getting the JavaScript Object Representation of a form using ngForm directive

- Disabling the Submit Button on a Form using form's $invalid flag

- Getting the JavaScript Object Representation of a form in TypeScript Class

- Adding Checkbox, Radio Buttons and Select List to your Template Driven Form

- Creating Subsections in the form using NgModelGroup directive

- Steps to implement a Reactive form in Angular

- Quickly creating a Bootstrap form for our Reactive form using Emmet

- Creating a Reactive form in the TypeScript class & connecting it to the template

- Adding form Validations to a Reactive Form

- 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

HTTP, Promises, and Observables

- Understand Working with RxJS

- Understand Angular Interaction with HTTP GET

- Describe the Process of Sending Data to the Server

- Explain the Difference Between Promises and Observables

Testing

- Understand Tools and Setup

- Understand Testing of Angular Class

- Describe Testing Service

- Understand Testing DOM

- Explain End to End Testing