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Angular 12 Development

(4 days)

Course overview

This course takes a thorough look at Angular 12, the latest version of the Angular framework. We can also run courses on earlier versions of Angular, if this is what you're looking for - just contact us to discuss the details.

What you'll learn

- Angular architectural concepts
- Creating and testing Angular apps
- Templates
- Data binding and forms
- Dependency injection
- Pipes
- Directives and transclusion
- Routing and navigation
- Calling REST services
- Web sockets
- Angular CLI

Prerequisites

- Familiarity with HTML and JavaScript programming

Course details

- **Angular Essentials:** Features in Angular 12 and earlier versions; Angular architecture components; Development tools state-of-play
- **TypeScript and Modern ECMAScript Essentials:** Overview of TypeScript and modern ECMAScript; Transpilation; Using the TypeScript Playground; Configuring and using the TypeScript transpiler
- **Understanding TypeScript Syntax:** Variables and types; Functions; Classes; Generics; Inheritance; Interfaces
- **Creating a Simple Angular Application:** Getting started with Angular CLI; Structure of an Angular application; Importing Angular libraries; Angular bundles; Angular components; Templates; Binding expressions; Bootstrapping Angular; Overview of routing
- **Data Binding:** A closer look at data binding; Two-way data binding; Delayed binding; Applying CSS styles and classes conditionally; Using structural directives; Differences in earlier versions of Angular

- **Pipes:** Using built-in pipes; Internationalization; Using promises, observables, and the async pipe; Defining custom pipes; Applying pipes programmatically
- **Forms:** Template-driven forms; Reactive forms; Dynamic (data-driven) forms; Validation techniques
- **Component Hierarchies:** Structuring applications; Defining component inputs; Defining component outputs; The mediator pattern
- **Dependency Injection:** Overview of dependency injection in Angular; Simple dependency injection; Using the provide() function; A hierarchy of injectors; Global provision; Injection into services; Values and factories
- **Closer Look at Angular Routing:** Route parameters and route data; Defining multiple router outlets; Lazy loading; Router lifecycle events
- **Calling Rest Web Services:** Overview of Rest services; Calling Rest services using HttpClient; Dealing with asynchronous results
- **Web Sockets:** Web Sockets concepts; Calling Web Sockets from JavaScript; Using RxJs Observables with Web Sockets
- **Implementing Custom Directives:** Attribute directives; Specifying parameters and events; Structural directives; Transclusion
- **A Closer Look at Angular CLI:** AOT vs. JIT compilation; Bundling and tree-shaking; Additional techniques
- **Testing Angular Applications:** Introduction to Jasmine and Karma; Running tests using Angular CLI; Testing components and services; Mocking techniques