

# Complete Angular Developer Course Guide

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## 2. Bootstrapping Angular

### The Angular CLI

- Angular CLI - <https://angular.dev/tools/cli>

### Everything Else

- Completed Code - <https://github.com/ZTMLuisRamirez/angular-basics/commit/360fab24c3a2dd6cc10cf45b192b80085d9794bf>

## 3. Optional: TypeScript

### Installing TypeScript

- TypeScript - <https://www.typescriptlang.org/>

### Variables

- Primitive Types - <https://www.typescriptlang.org/docs/handbook/2/everyday-types.html#the-primitives-string-number-and-boolean>

### Why Decorators?

- TC39 Proposals - <https://github.com/tc39/proposals>

### TypeScript Configuration

- TSConfig - <https://www.typescriptlang.org/tsconfig>

### Writing Decorators

- Completed Code - <https://github.com/ZTMLuisRamirez/typescript-intro>

## 4. Component Fundamentals

### Property Binding

- Dog Image - <https://picsum.photos/id/237/500/500>

### Type Assertions

- Lorem Picsum - <https://picsum.photos/images>
- EventTarget Interface - [https://microsoft.github.io/PowerBI-JavaScript/interfaces/\\_node\\_modules\\_typedoc\\_node\\_modules\\_typescript\\_lib\\_lib\\_dom\\_d\\_eventtarget.html](https://microsoft.github.io/PowerBI-JavaScript/interfaces/_node_modules_typedoc_node_modules_typescript_lib_lib_dom_d_eventtarget.html)

### Required Inputs

- Style Guide - <https://angular.dev/style-guide#avoid-aliasing-inputs-and-outputs>

### Emitting Events

- Prefix Guideline - <https://angular.dev/style-guide#dont-prefix-output-properties>

### Discovering Lifecycle Hooks

- Lifecycle Hooks - <https://angular.dev/guide/components/lifecycle>

### Scoped CSS

- Completed Code - <https://github.com/ZTMLuisRamirez/angular-basics/commit/afba4e1d1175aa6dfcbe591ef93757241321da70>

## 5. Transforming Content

### Angular Dev Tools

- Angular Devtools - <https://angular.dev/tools/devtools>

### Pipe Parameters

- Custom Format Options - <https://angular.dev/api/common/DatePipe>

### Dealing with Numbers

- Currency Codes - [https://en.wikipedia.org/wiki/ISO\\_4217](https://en.wikipedia.org/wiki/ISO_4217)

### Debugging with Pipes

- JSON Pipe - <https://angular.dev/api/common/JsonPipe>

### Understanding Directives

- Directives - <https://angular.dev/api#common>

## For Block

- Completed Code - <https://github.com/ZTMLuisRamirez/angular-basics>

## 6. Master Project: Component Design

### Introduction to Master Project

- Homepage Template - <https://gist.github.com/ZTMLuisRamirez/4e222cbc1dfa44de02ffc166915f720e>

### What is Tailwind?

- TailwindCSS - <https://tailwindcss.com/>

### Configuring Tailwind

- Tailwind Configuration - <https://tailwindcss.com/docs/configuration>
- Clips CSS Gist - <https://gist.github.com/ZTMLuisRamirez/190742936335d69668651ea1738d710b>

### Loading Static Assets

- Roboto Font - <https://fonts.google.com/specimen/Roboto>
- Autoplay Policy Changes - <https://developers.google.com/web/updates/2017/09/autoplay-policy-changes>
- hero.webm File

### Preventing the Default Behavior

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-6>

## 7. Master Project: Reactive Forms

### Form Validation

- Validation Functions - <https://angular.dev/api/forms/Validators>

### Form Controller Status

- AbstractControl Class - <https://angular.io/api/forms/AbstractControl>

### Validating Emails

- Email Validator - <https://angular.dev/api/forms/Validators>

## Validating Numbers

- Validators Min - <https://angular.dev/api/forms/Validators>

## Validating Passwords With Patterns

- Pattern Validator - <https://angular.dev/api/forms/Validators>
- Regular Expressions Tool - <https://regexr.com/>

## Input Masking

- NGX Mask - <https://www.npmjs.com/package/ngx-mask>

## Disabling Buttons

- FormGroup Class - <https://angular.dev/api/forms/FormGroup>

## Designing an Alert Component

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-7>

# 8. Master Project: Template Forms

## Registering a New Form

- NgForm - <https://angular.dev/api/forms/NgForm>

## Two-way Binding

- NgModel - <https://angular.dev/api/forms/NgModel>

## Attribute Validation

- Constraint Validation - [https://developer.mozilla.org/en-US/docs/Web/Guide/HTML/Constraint\\_validation](https://developer.mozilla.org/en-US/docs/Web/Guide/HTML/Constraint_validation)

## Handling Form Submission

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-8>

# 9. Master Project: Intro to RXJS

## Introduction to RXJS

- Replit - <https://replit.com>

## Unsubscribing from Observables

- Subscription Object - <https://rxjs.dev/guide/subscription>

## Declarative Programming with Operators

- RXJS Reference - <https://rxjs.dev/api>

## The of and from Operators

- JSON Placeholder - <https://jsonplaceholder.typicode.com/>

## Marble Diagram

- Map Operator - <https://rxjs.dev/api/operators/map>

## Understanding Flattening Operators

- JSON Placeholder URL - <https://jsonplaceholder.typicode.com/todos/1>

# 10. Master Project: Authentication

## Setting up Firebase

- Firebase - <https://firebase.google.com/>

## Reviewing the Rules

- Firebase Rules - <https://firebase.google.com/docs/rules>

## Installing AngularFire

- Firebase Web Setup - <https://firebase.google.com/docs/web/setup>
- AngularFire - <https://github.com/angular/angularfire>

## User Registration

- AngularFire Authentication - <https://github.com/angular/angularfire/blob/master/docs/auth/getting-started.md>

## Connecting the User with their Data

- Create Account Function - [https://firebase.google.com/docs/reference/js/auth.md#createuserwithemailandpassword\\_21ad33b](https://firebase.google.com/docs/reference/js/auth.md#createuserwithemailandpassword_21ad33b)

## Database Rules

- Firebase Request Auth - <https://firebase.google.com/docs/reference/rules/rules.firestore.Request#auth>

## The Async Pipe

- Async Pipe - <https://angular.dev/api/common/AsyncPipe>

## Initializing Firebase First

- Firebase Installation - <https://firebase.google.com/docs/web/setup>

## Setting up the Login

- signInWithEmailAndPassword - <https://firebase.google.com/docs/reference/js/firebase.auth.Auth.html#signinwithemailandpassword>

### Sidebar: JSON Web Tokens

- JWT - <https://jwt.io/>
- Base64- <https://www.base64decode.org/>
- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-10>

## 11. Master Project: Custom Validators

### Validating Unique Emails

- AsyncValidator - <https://angular.dev/api/forms/AsyncValidator>
- fetchSignInMethodsForEmail - [https://firebase.google.com/docs/reference/js/auth.md#fetchsigninmethodsforemail\\_efb3887](https://firebase.google.com/docs/reference/js/auth.md#fetchsigninmethodsforemail_efb3887)

### Finalizing the Validator

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-11>

## 12. Master Project: Routing

### Understanding Routing

- Angular Router - <https://angular.dev/guide/routing>

### Registering Routes

- Route - <https://angular.dev/api/router/Route>

### Active Links

- RouterLinkActive Directive - <https://angular.dev/api/router/RouterLinkActive>

### Creating the Manage Route

- Manage Template - <https://gist.github.com/ZTMLuisRamirez/99c7e852bc2ca0adfd2bcb26bd2a34b8>

### Forcing Redirection

- Router - <https://angular.dev/api/router/Router>

## Route Parameters

- Video Template Gist - <https://gist.github.com/ZTMLuisRamirez/6ea04554f42a85f42d1355a07dbb4748>

## Learning more about Query Parameters

- Navigate Function - <https://angular.dev/api/router/Router>
- Navigation Extras - <https://angular.dev/api/router/NavigationExtras>

## Wildcard Routes

- Not Found Template - <https://gist.github.com/ZTMLuisRamirez/0a87a9c915231153e8496794f9f03da4>

## Route Guards

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-12>

# 13. Master Project: Uploading Files

## Handling Files

- HTML5 Video - [https://en.wikipedia.org/wiki/HTML5\\_video#Browser\\_support](https://en.wikipedia.org/wiki/HTML5_video#Browser_support)

## Uploading Files with Firebase

- UUID - <https://www.npmjs.com/package/uuid>

## Firebase Rules and Validation

- Firebase Secure Files - <https://firebase.google.com/docs/storage/security/secure-files>

## Handling Errors and Successful Uploads

- Error Code - <https://firebase.google.com/docs/storage/web/handle-errors>

## Fallback Upload

- Drag and Drop Support - <https://caniuse.com/dragndrop>

## Redirection after Upload

- Document Reference - <https://firebase.google.com/docs/reference/node/firebase.firestore.DocumentReference>

## Deleting a Clip from the Storage/Database

- Delete Files - <https://firebase.google.com/docs/storage/web/delete-files>
- Storage Security Rules - [https://firebase.google.com/docs/firestore/security/rules-structure#granular\\_operations](https://firebase.google.com/docs/firestore/security/rules-structure#granular_operations)

### **Sorting Completed Clips with Signals**

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-13>

## **14. Master Project: WebAssembly & Rust**

### **What is WebAssembly**

- Figma and WebAssembly - <https://www.figma.com/blog/webassembly-cut-figmas-load-time-by-3x/>
- WebAssembly Languages - <https://github.com/appcypher/awesome-wasm-langs>

### **Getting Started with Rust**

- Rust Installation Page- <https://www.rust-lang.org/tools/install>
- Rustup Book - <https://rust-lang.github.io/rustup/>
- Crates - <https://crates.io/>

### **Exploring the Starter Project**

- Cargo Manifest File - <https://doc.rust-lang.org/cargo/reference/manifest.html>

### **Data Types**

- Rust Data Types - <https://www.codingame.com/playgrounds/365/getting-started-with-rust/primitive-data-types>

### **Control Flow**



- Operators and Symbols -

<https://doc.rust-lang.org/book/appendix-02-operators.html>

## Results

- Error Handling -

<https://doc.rust-lang.org/book/ch09-00-error-handling.html>

- Completed Code -

<https://github.com/ZTMLuisRamirez/rust-fundamentals>

## Installing Webpack

- Webpack - <https://webpack.js.org/>

## Configuring Webpack

- rust-image-starter.zip

## Reading Files

- File Reader Methods -

<https://developer.mozilla.org/en-US/docs/Web/API/FileReader#methods>

## Compiling Rust with Webpack

- WASM Pack - <https://rustwasm.github.io/wasm-pack/>

## Importing WebAssembly

- wasm-bindgen Crate - <https://crates.io/crates/wasm-bindgen>

## Logging Files

- web-sys Crate - <https://crates.io/crates/web-sys>

## Base64 Decoding

- Base64 Crate - <https://crates.io/crates/base64>

## Loading an Image from Memory

- Image Crate - <https://crates.io/crates/image>

## Grayscale an Image

- `load_from_memory()` Function - [https://docs.rs/image/0.19.0/image/fn.load\\_from\\_memory.html](https://docs.rs/image/0.19.0/image/fn.load_from_memory.html)

## App Deployment

- Vercel - <https://vercel.com/>
- Completed Code - <https://github.com/ZTMLuisRamirez/image-effects>

# 15. Master Project: Processing Video with WebAssembly

## Understanding FFmpeg

- FFmpeg - <https://www.ffmpeg.org/>
- FFmpeg WASM - <https://github.com/ffmpegwasm/ffmpeg.wasm>

## Custom Asset Paths

- Node Glob - <https://github.com/isaacs/node-glob>

## Initializing FFmpeg

- Material Icons - <https://fonts.google.com/icons>
- Tailwind Animations - <https://tailwindcss.com/docs/animation>

## Generating a Screenshot

- FFmpeg - <https://www.ffmpeg.org/>

## Deleting Screenshots

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-15>

# 16. Master Project: Playing Videos

## Fixing Cross Origin Issues

- Gsutil - [https://cloud.google.com/storage/docs/gsutil\\_install](https://cloud.google.com/storage/docs/gsutil_install)

## Installing Videojs

- Videojs - <https://videojs.com/>

## Copying Links to the Clipboard

- Clipboard API - <https://caniuse.com/clipboard>
- `execCommand()` - [https://caniuse.com/mdn-api\\_document\\_execcommand](https://caniuse.com/mdn-api_document_execcommand)

- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-16>

## 17. Master Project: Deployment

### Production Budgets

- Configuring Budgets - <https://angular.io/guide/build#configuring-size-budgets>

### Deploying an App with Vercel

- Vercel - <https://vercel.com>
- Project Configuration - <https://vercel.com/docs/cli#project-configuration>
- GitHub Desktop - <https://desktop.github.com/>
- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-17>

## 18. Master Project: Testing

### Understanding Karma and Jasmine

- Angular Karma Config - <https://angular.dev/guide/testing#configuration>

### Writing a Sanity Test

- Jasmine Matchers - <https://jasmine.github.io/api/5.1/matchers>

### Angular's Test Bed Utility

- TestBed Class - <https://angular.dev/api/core/testing/TestBed>

### Testing a Component's Instance

- Component Fixture - <https://angular.dev/api/core/testing/ComponentFixture>

### Installing Cypress

- Cypress - <https://www.cypress.io/>
- Protractor - <https://protractor.angular.io/>

### Exploring Cypress

- Configuration File - <https://docs.cypress.io/guides/references/configuration#Configuration-File>

## Testing the Video Player

- Chai - <https://www.chaijs.com/>
- jQuery - <https://jquery.com/>
- Completed Code - <https://github.com/ZTMLuisRamirez/clips/tree/section-18>

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