

# Angular Training Notes

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## 1 Introduction

- Typescript is a superset of Javascript
- Compiles to Javascript
- Comes with types : number,string,boolean...etc.
- Angular enables **microservices** architecture on the front end part
- Microservices allow Front End and Back End decoupling, with communication through APIs
- AngularJS is only for version 1
- from version 2, it's called only **Angular**
- there is no version 3, Angular 2 to Angular 4 directly
- Angular enables Single Page Applications
- La structure d'un URL :

```
URL = URI + Segment (Static or Dynamic) + queries
\\ Example : https://www.google.com/search/ma?q=-----&s=-----
URI : www.google.com
search: static
ma : dynamic
q,s : queries
```

## 2 Setting up Environment

- Install Node JS
- Install Visual Studio Code

- check node is installed : Run command `node -v`
- check npm is installed : Run command `npm -v`
- install Angular : `npm install -g angular/cli`
- check Angular is installed : `ng version`
- -g option makes npm install packages globally
- generate new project  
**Example :** Let's create a project called ancfcc-basic :  
run this command : `ng new ancfcc-basic`
- Go to Visual Studio Code and open the folder ancfcc-basic
- Go to ancfcc-basic folder in the command line and launch the app ancfcc-basic with : `ng serve -open`
- if you want to change the default port(4200), do it with the command :  
`ng serve -open -port 5500`  
5500 is the new port
- Setting up JSON Server database :
  1. create json file database :  
`touch db.json`
  2. launch the server :  
make json server extension to watch the file :  
`json-server watch db.json -port 5000`

### 3 HTML Form validation

- required
- minlength
- maxlength
- use the model ngModel : to validate each input alone : `ngModel.errors`  
use variables in HTML with :

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**Example :** `<input required [(ngModel)]="article.title" #mytitle = "[ngModel]">`

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- ngForm : to validate the whole form, if only one input is invalid, the `ngForm.invalid` will be true

- use `ngClass` to change the class of HTML elements Example : `display` is a boolean variable in the component TypeScript class

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```
ngClass = "{
  'btn-success' : !display,
  'btn-dark' : display
}"
```

---

## 4 installing components and services

- generate new component : Run this command  
*ng g c name\_component\_here*
- generate new service : Run this command  
*ng g s name\_service\_here*
- `ng g c components/navbar --spec=false`

## 5 Some Javascript and TypeScript tips

- *var* : declaring variables on global scope
- *let* : declaring variables on **current scope only**
- *const* : declaring constants
- Templates Strings : Concatenate strings using \$  
**Example :**

---

```
console.log('Salam ${variable}')
```

---

- anonymous functions
- arrow functions
- Callbacks : provides asynchronous programming.
- delete element from list :

---

```
array.splice(indexofElement)
```

---

- `!!` : checking for emptiness  
**Example :**

---

```
if(!!string_here)
```

---

will check if string\_here is empty and return true, false otherwise

## 6 Some Google Cloud Products Tips

- Firebase vs Firestore :
  - Firebase is a platform : many products
  - one product is *Firestore* database
  - FirebaseAuth is a product of Firebase that provides security for Firestore

## 7 Some Bootstrap Tips

- Sizes :
  - lg : Large screens : TV
  - md : Medium screens : PCs
  - sm : Small screens : tablets
- bootswatch : a superset of bootstrap with ready themes

## 8 Some good visual studio extensions

- Bracket Pair Colorizer : colouring brackets in code
- Bootstrap 4 snippets : provides Bootstrap ready code snippets directly in Visual Studio Code
- Auto Import

## 9 Some nice npm packages

- sweetalert2
- emmet
- json-server install it with *npm install json-server*

## 10 Some Angular tips

- ng-template
- router-outlet

Example :

```
<router-outlet> </router-outlet>
```

Angular will look for the proper route in app.module.ts stored in array variable *routes* and

- Configure bootstrap : angular.json and build/scripts and copy path to CSS from node\_modules package
- Angular provides SPA, so while developing, pages should not refresh
- filtering with pipes is supported

```
{{lastName | capitalize}} will capitalize the variable lastName  
\\Some pipes : uppercase, lowercase, currency, date,...etc
```

- FormModule : for form driven \*ngForm
- ReactiveFormsModule : reactive forms

## 11 Good ressources

- Npm packages : <https://www.npmjs.org>
- Open source projects : [www.github.com](http://www.github.com)
- Regex validation : <https://www.regex101.com>
- Icons and fonts : <https://fontawesome.com/v4.7.0/>
- JSON viewer, a chrome pluggin for rendering pretty JSON data : <https://chrome.google.com/webstore/detail/json-viewer/gbmdgpbipfallnflgajpaliibnhdgobh>
- Fake online REST API for demos : <https://jsonplaceholder.typicode.com/>
- Mr Mohammed Idbrahim Youtube Channel : <https://www.youtube.com/channel/UCAeBi3qwZ9pj52yYHm3WEZQ>
- Mr Mohammed Idbrahim website : <https://brightcoding.teachable.com/>
- UIKit [www.getuikit.com](http://www.getuikit.com)
- Discord [www.discordapp.com](http://www.discordapp.com) for efficient team communication