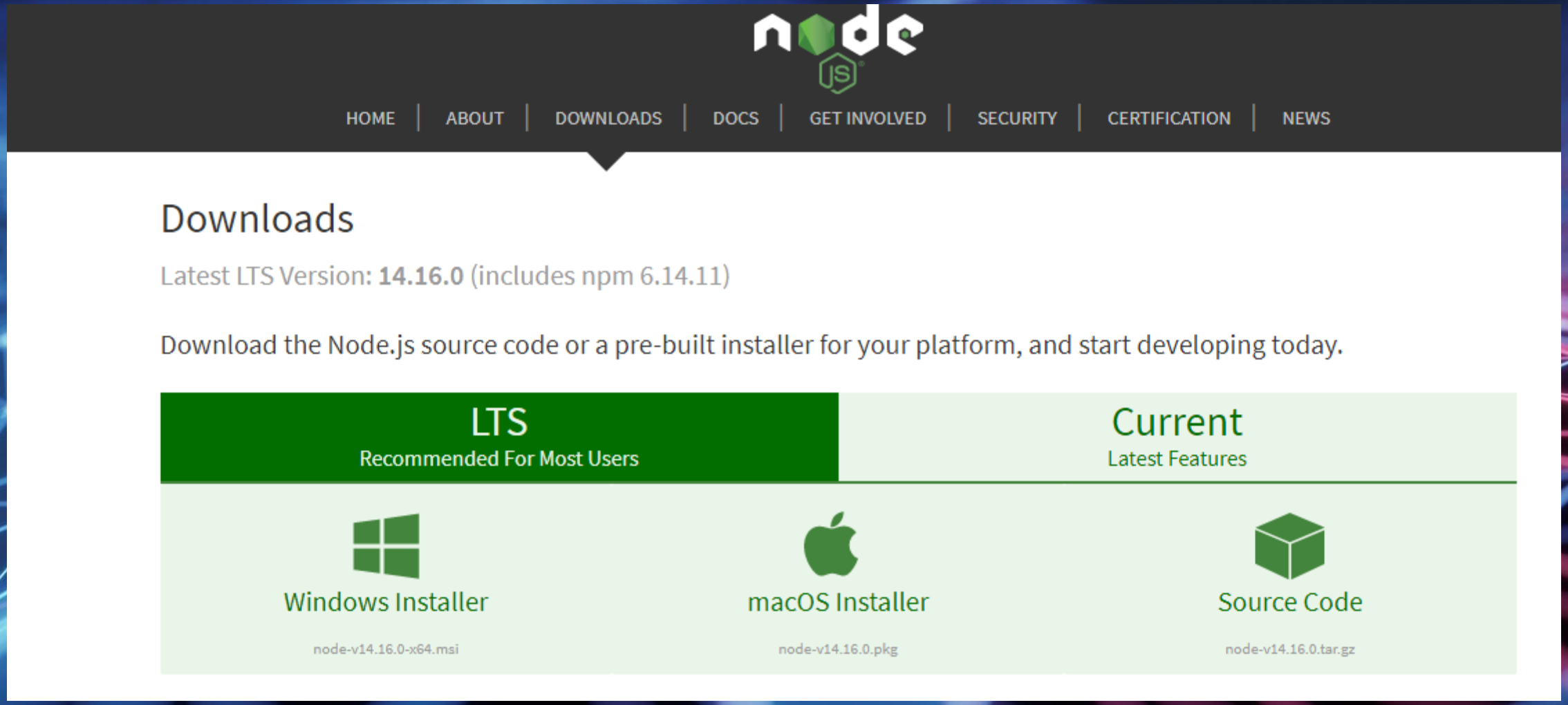
ANGULAR

C'EST PARTI

typescriptlang.org
TypeScript
Documentation
Download
Connect
Playground
Search
TypeScript 3.7 is now available. Get the latest version today!
TypeScript
JavaScript that scales.
TypeScript is a typed superset of JavaScript that compiles to plain JavaScript.
Any browser. Any host. Any OS. Open source.
Download
Documentation
#iHeartTypeScript
Dave Herman
@littlecalculist
I ported my first nontrivial JS lib to @typescriptlang and it was a pure joy. What a
Gabriela Mendes
@Kappyh
@typescriptlang is really awesome O-O'
Thiago Script
@thiagoviski
#TypeScript is really awesome! I'm glad to see people are using it in some of

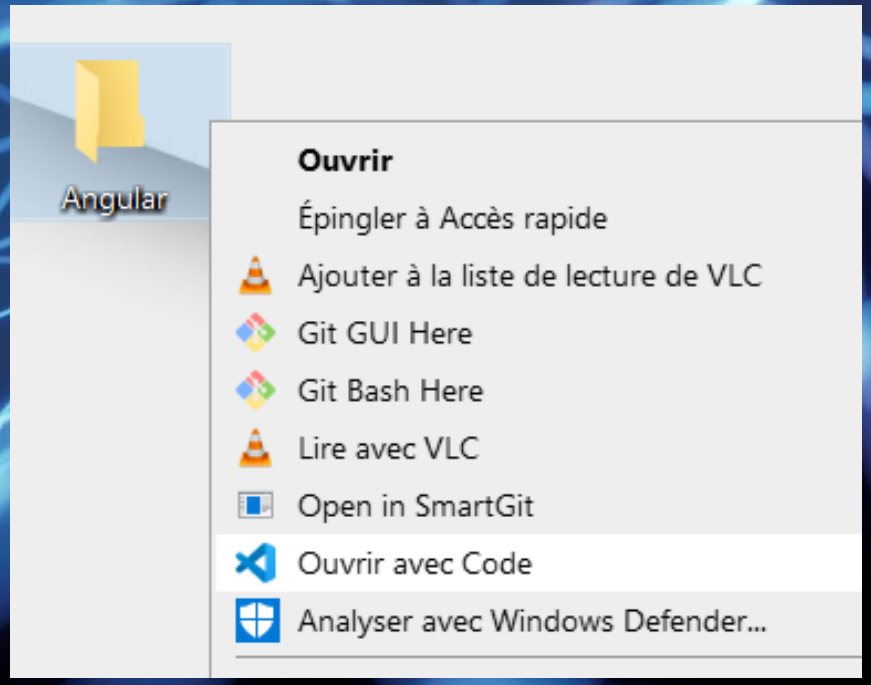
Visual Studio Code



dernières versions LTS…

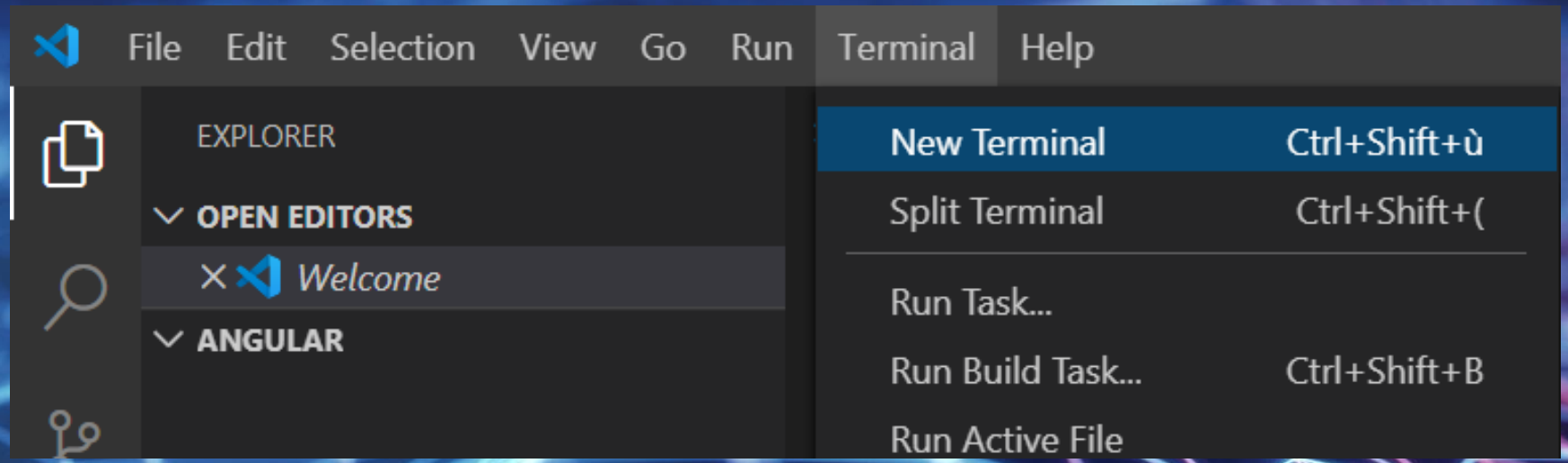
Créer un dossier Angular sur votre bureau

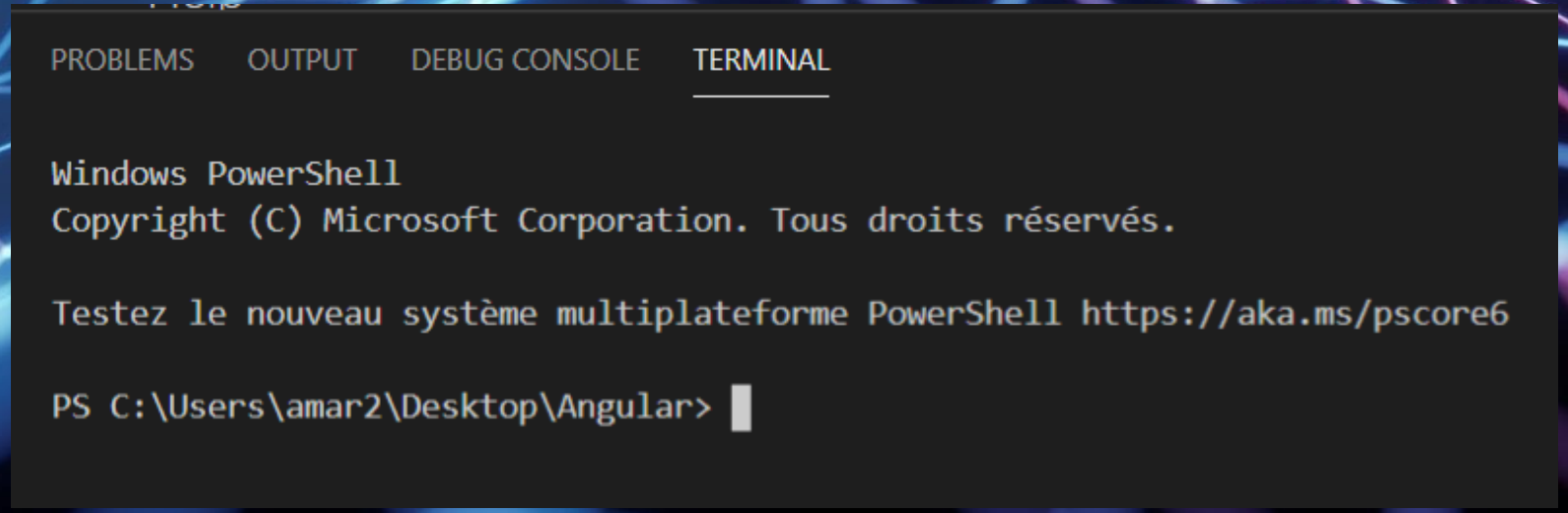
(ou ailleurs…)



Ouvrir le dossier dans VS Code

Terminal Command Line Interface

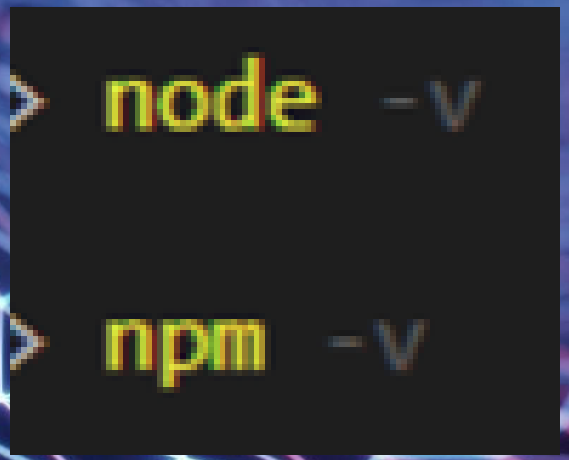




Vérifie la version et présence de Node et Npm

```
node -v
```

```
npm -v
```



SI vous aviez DEJA Node ou Npm mais pas à jour

```
npm install -g npm@latest
```

```
node install -g node@latest
```

Ou réinstaller via installer…

La CLI Angular ou mise à jour

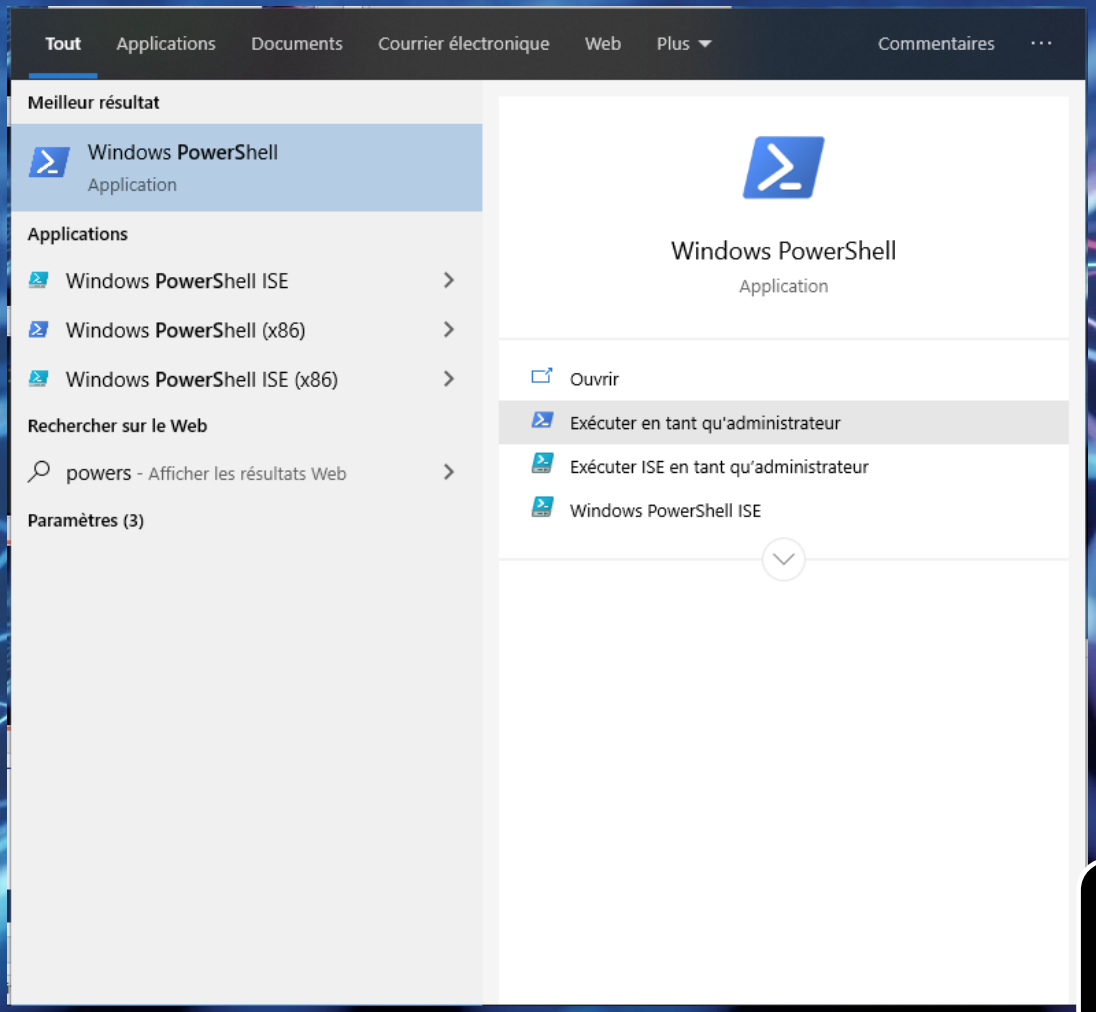
```
npm install -g @angular/cli
```

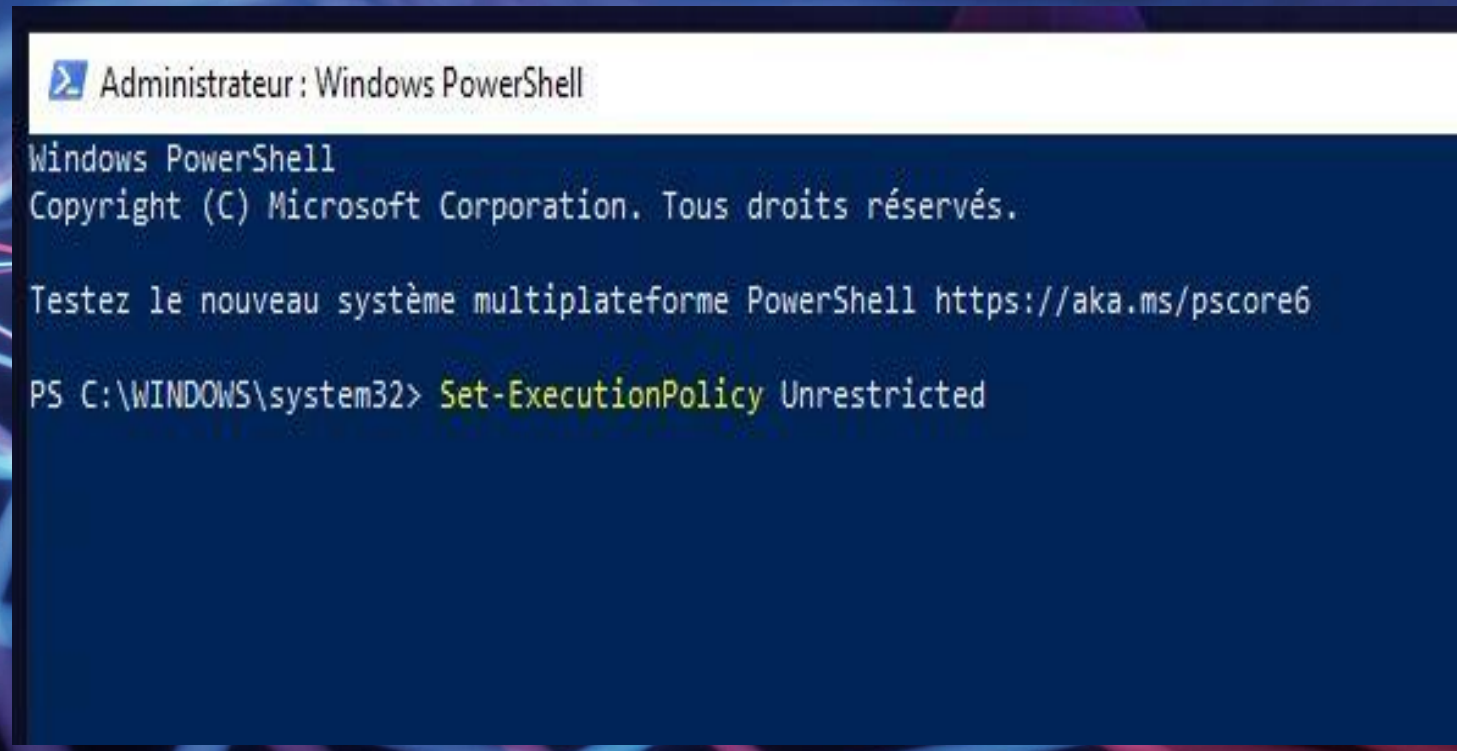
Pour mac

```
sudo npm install -g @angular/cli
```

```
npm install -g @angular/cli@latest
```

PowerShell En mode Administrateur





Set-ExecutionPolicy unrestricted

Possible bug

npm cache clean --force

Réinstaller node…et autres

NG pas npm

NG = Angular

ng help

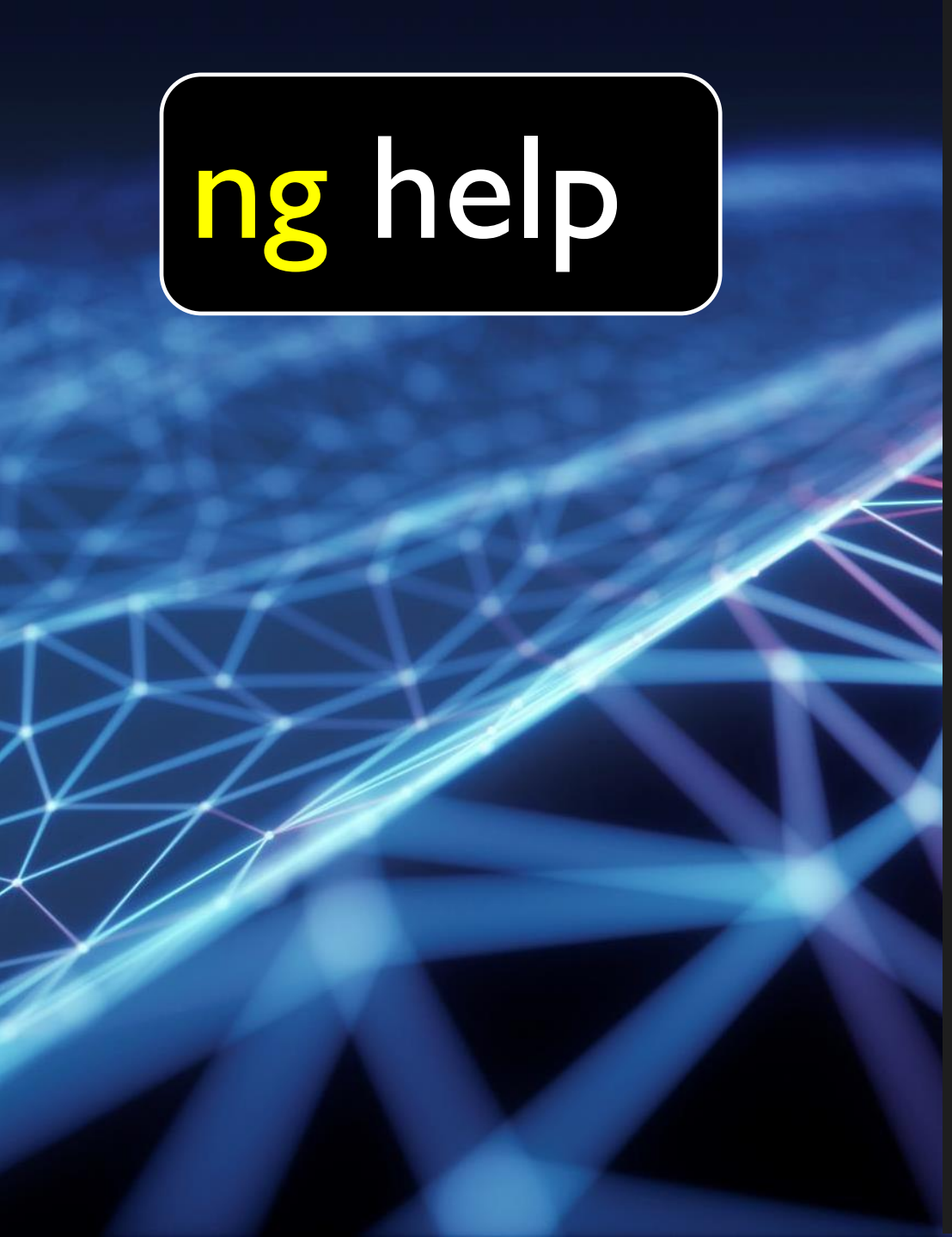
GOOD

PAS COOL

```
updated 1 package in 6.449s
PS C:\Users\amar2\Desktop\Angular> ng help
Available Commands:
  add Adds support for an external library to
  analytics Configures the gathering of Angul
  build (b) Compiles an Angular app into an ou
y.
  deploy Invokes the deploy builder for a spe
  config Retrieves or sets Angular configurat
  doc (d) Opens the official Angular documenta
  e2e (e) Builds and serves an Angular app, t
```

```
PS C:\Users\amar2\Desktop\Angular> ng help
ng : Impossible de charger le fichier C:\Users\amar2\App
plus d'informations, consultez about_Execution_Policies
Au caractère Ligne:1 : 1
+ ng help
+ ~~
    + CategoryInfo          : Erreur de sécurité : (:) [
    + FullyQualifiedErrorId : UnauthorizedAccess
```

ng help



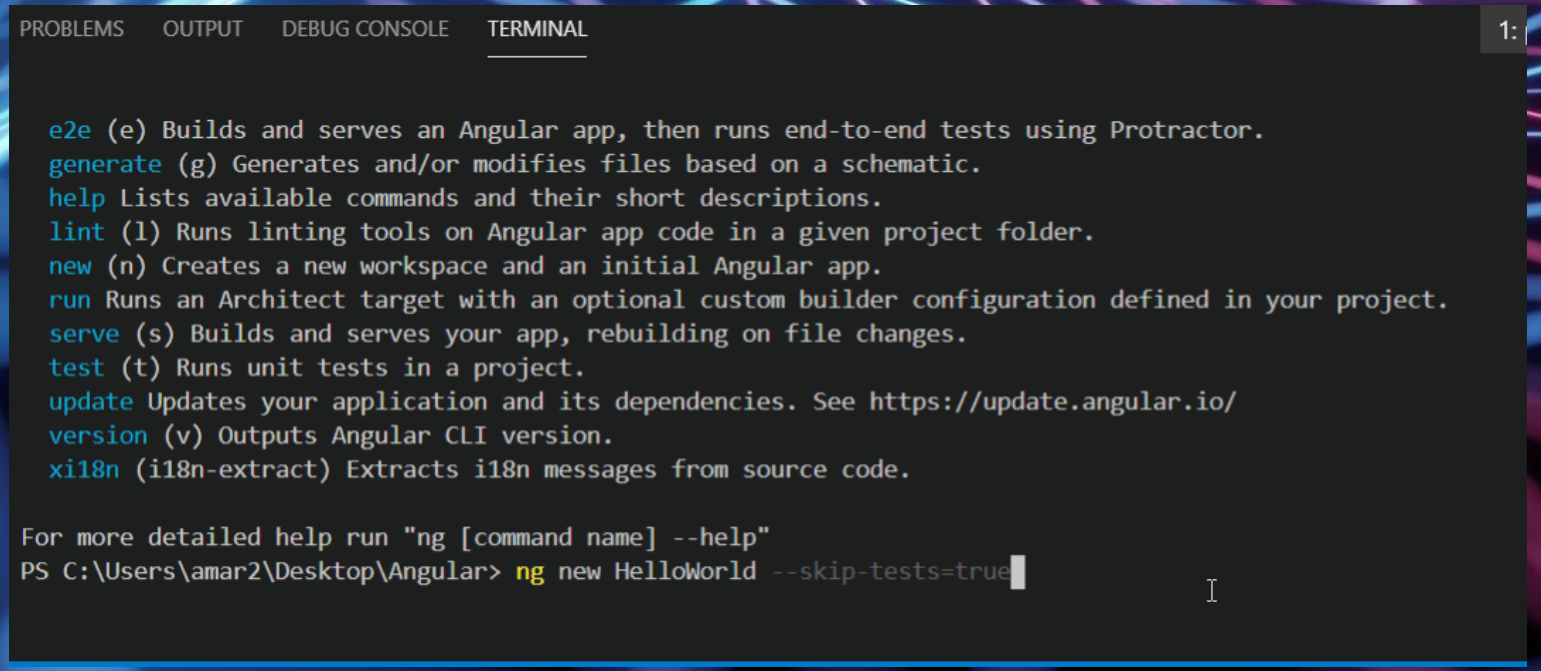
```
PS C:\Users\amar2\Desktop\Angular> ng help
Available Commands:
  add Adds support for an external library to your pro
  analytics Configures the gathering of Angular CLI us
  build (b) Compiles an Angular app into an output dir
y.
  deploy Invokes the deploy builder for a specified pr
  config Retrieves or sets Angular configuration value
  doc (d) Opens the official Angular documentation (ar
  e2e (e) Builds and serves an Angular app, then runs
  generate (g) Generates and/or modifies files based o
  help Lists available commands and their short descri
  lint (l) Runs linting tools on Angular app code in a
  new (n) Creates a new workspace and an initial Angul
  run Runs an Architect target with an optional custom
  serve (s) Builds and serves your app, rebuilding on
  test (t) Runs unit tests in a project.
  update Updates your application and its dependencies
  version (v) Outputs Angular CLI version.
  xi18n (i18n-extract) Extracts i18n messages from sou

For more detailed help run "ng [command name] --help"
```

Création d'un projet Angular:

```
ng new HelloWorld --skip-tests=true
```

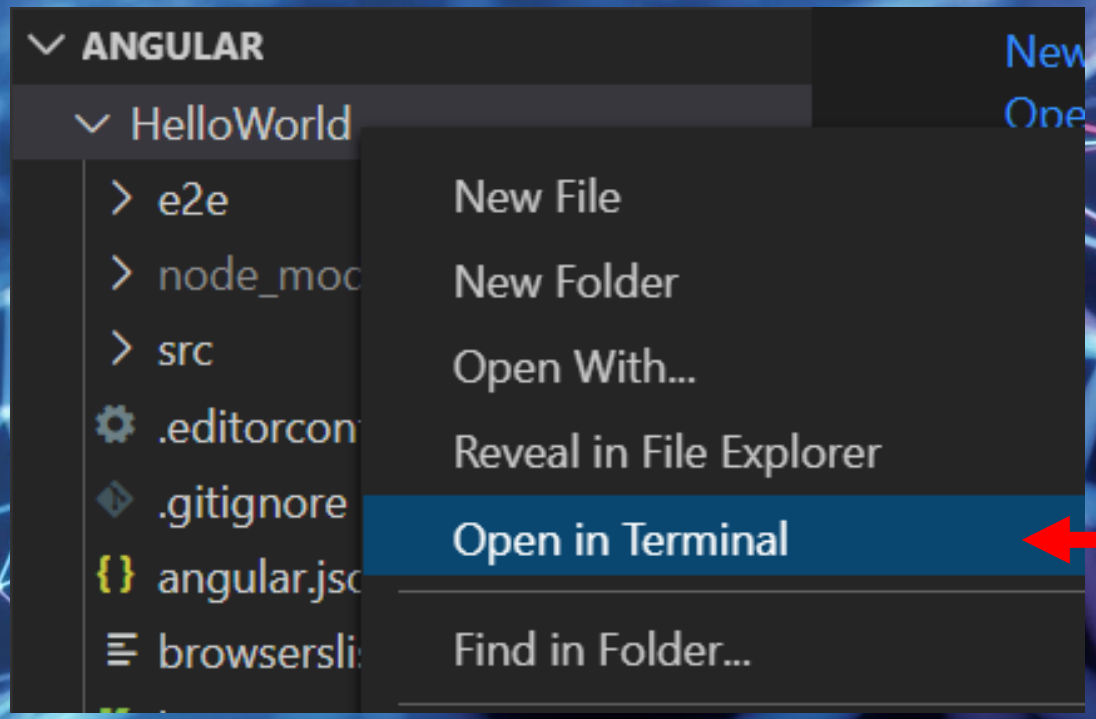
```
ng new HelloWorld --skip-tests=true --no-standalone
```

Routing Y Yes - - CSS en style



Se déplacer dans le bon dossier

```
PS C:\Users\amar2\Desktop\Angular>
```




```
PS C:\Users\amar2\Desktop\Angular\HelloWorld>
```

Pour vous plus tard

```
ng serve --help
```

```
For more detailed help run "ng [command name] --help"
```

```
--port
  Port to listen on.
```

Lancer deux projets Angular

ou un port diffèrent

On va s'organiser comme ça

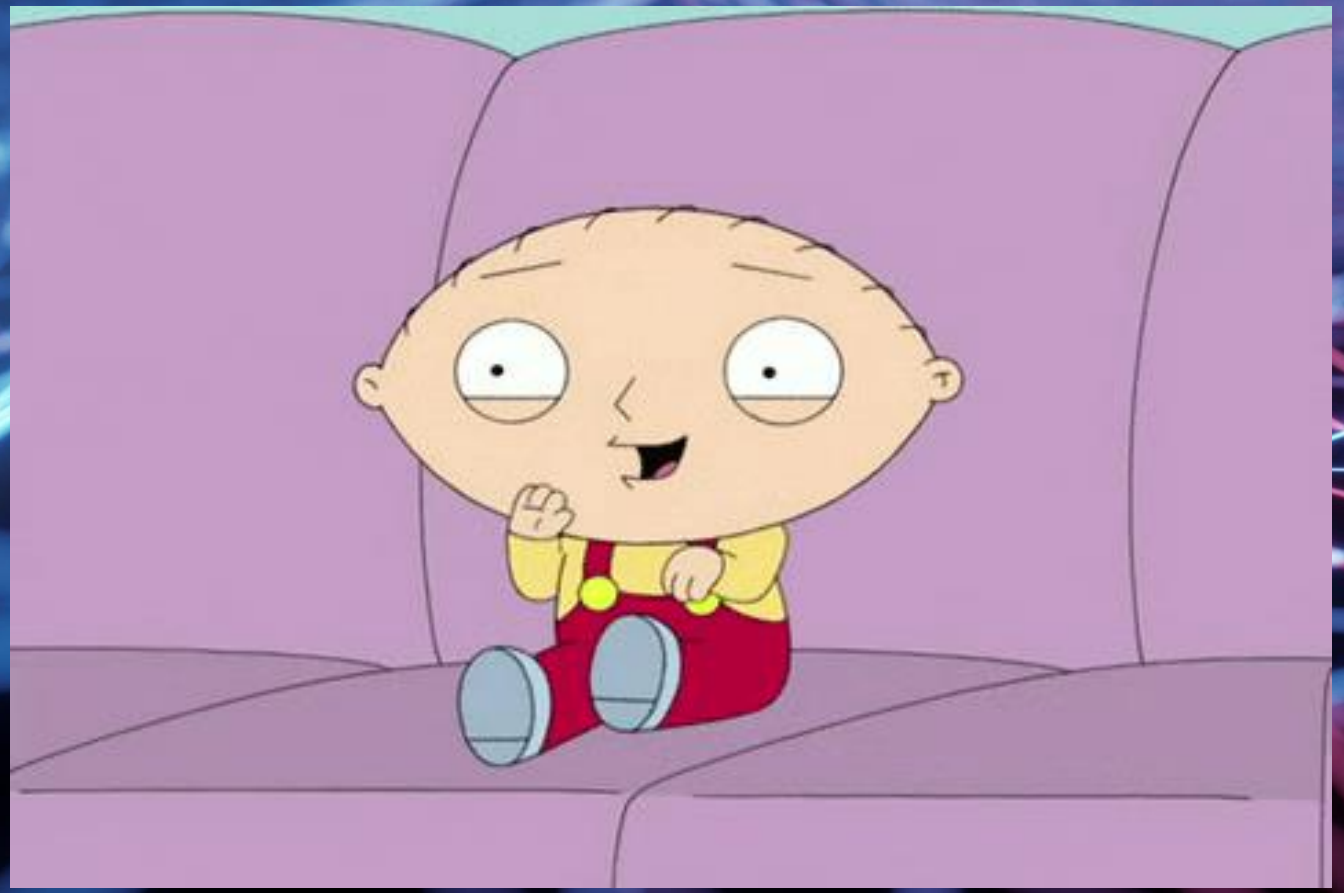
HelloWorld

Brouillon/Test/Prise de note codant

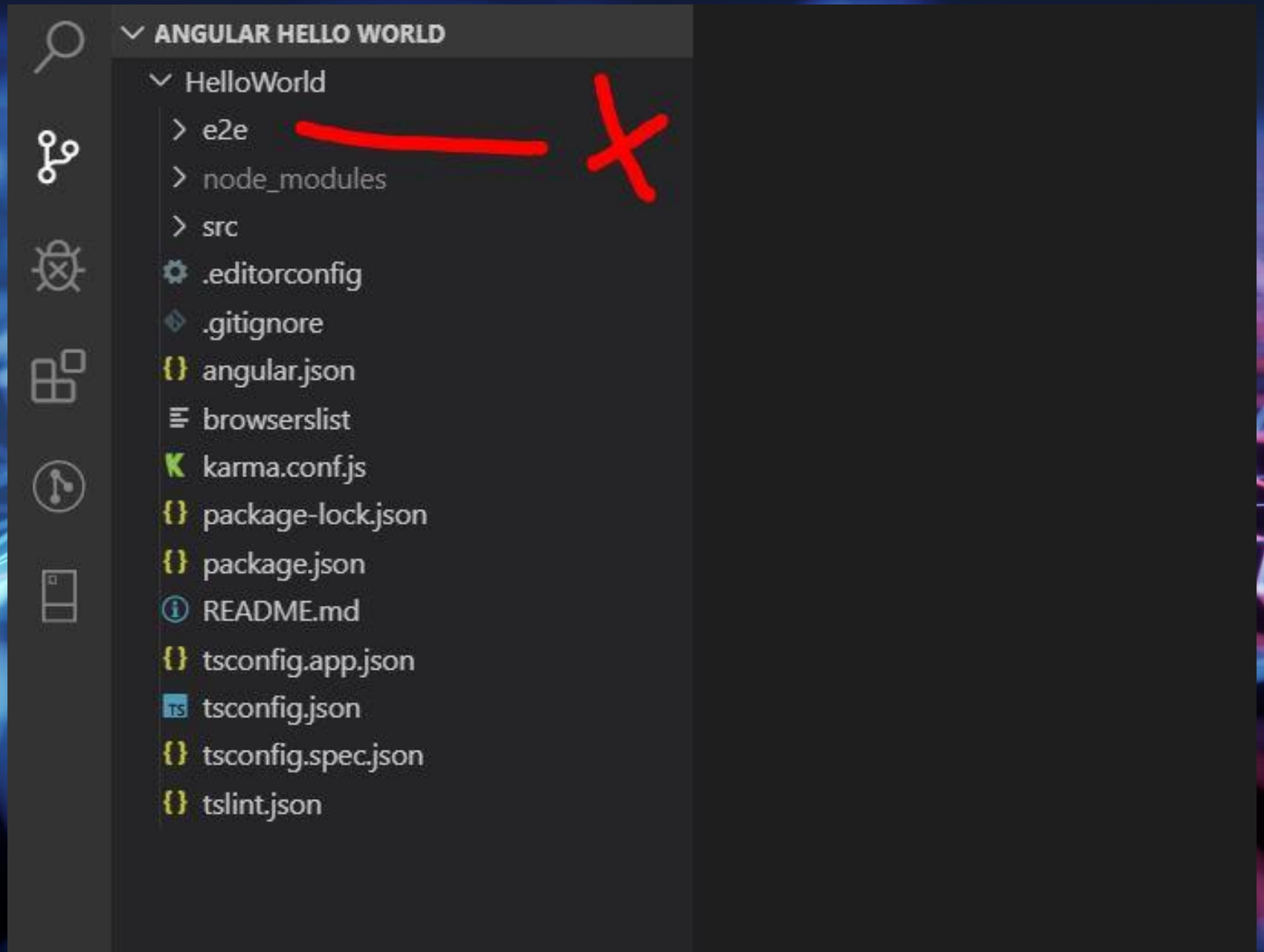
VraiProjet

Au propre & tous pareils

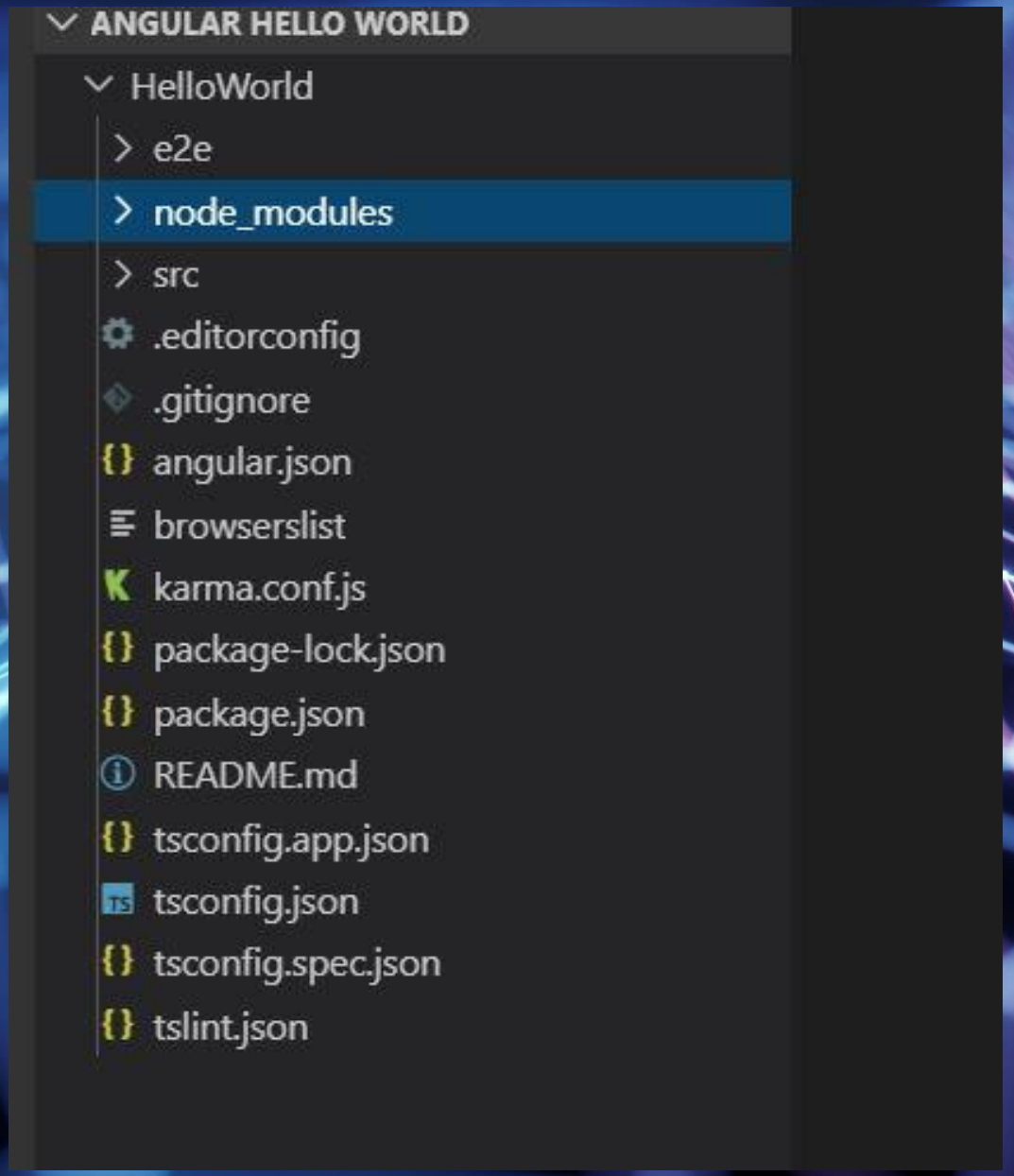
Petite visite guidée d'un projet Angular
C'est partie !

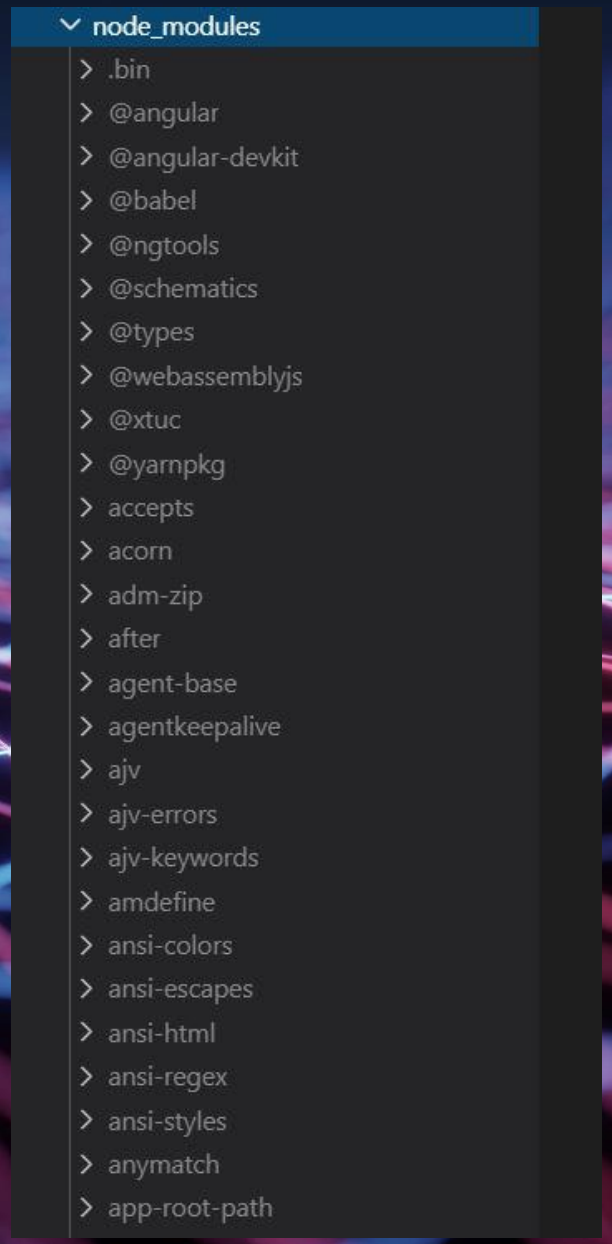


Dossier: e2e End to End

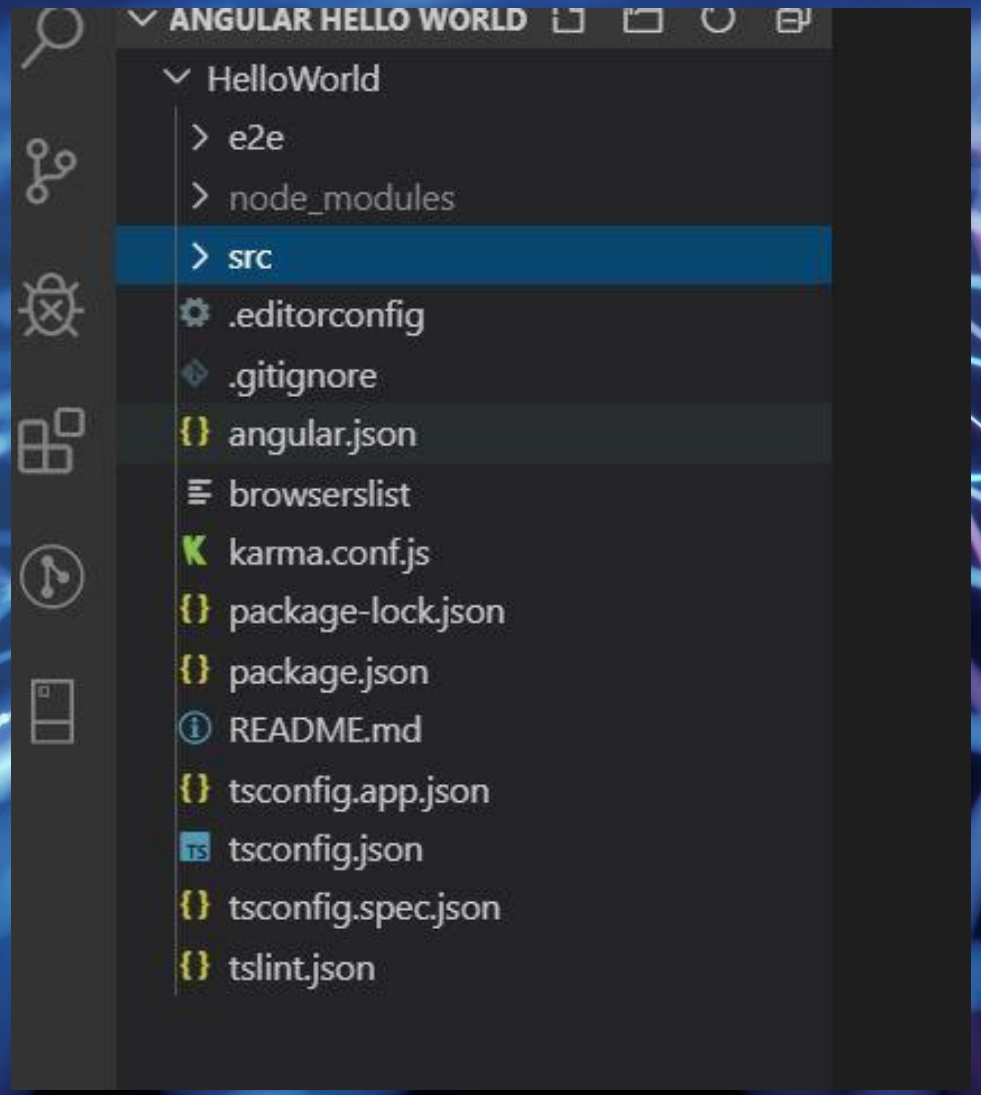


Dossier: node_modules

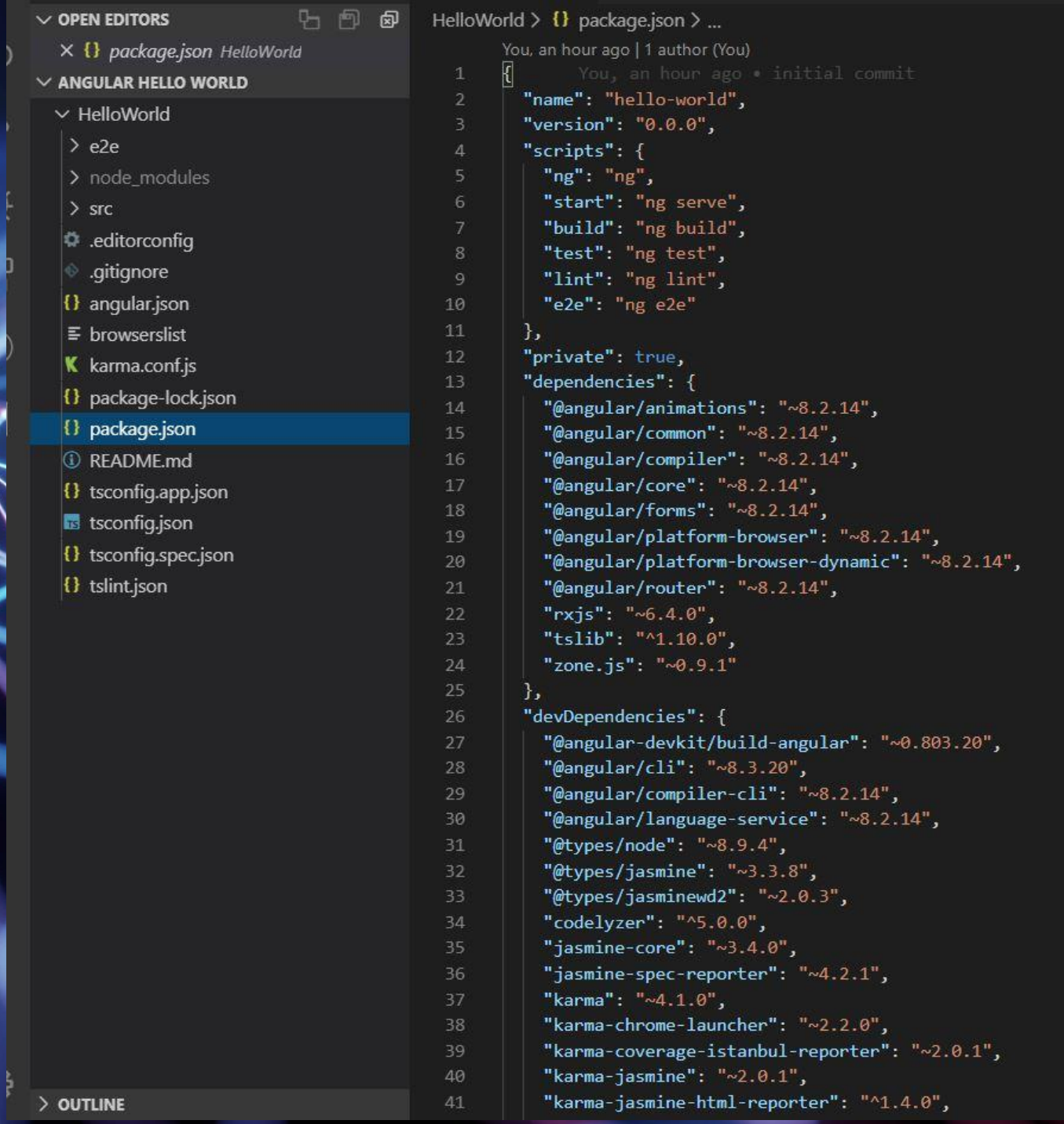




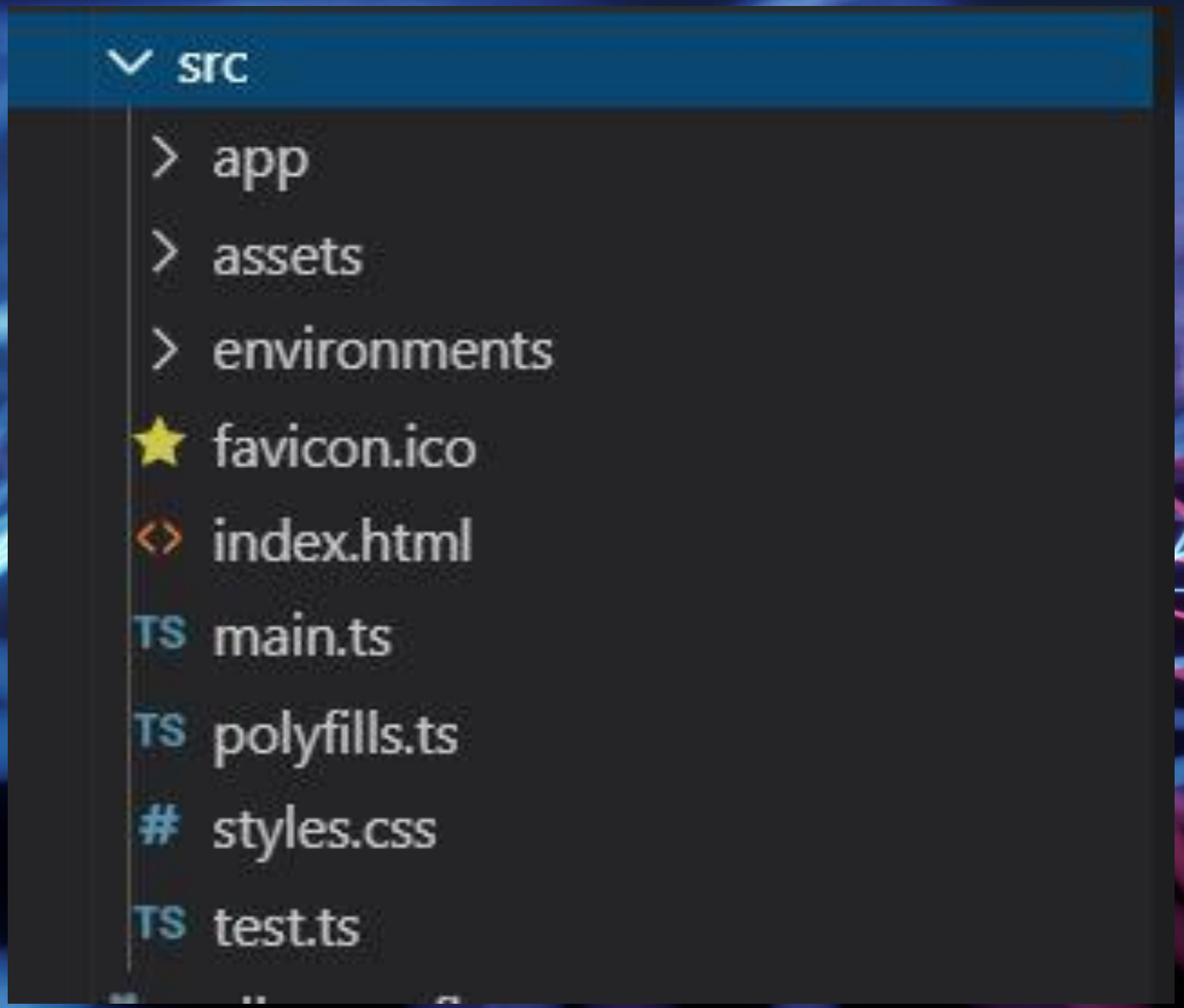
Dossier: src


ANGULAR HELLO WORLD
HelloWorld
e2e
node_modules
src
.editorconfig
.gitignore
angular.json
browserslist
karma.conf.js
package-lock.json
package.json
README.md
tsconfig.app.json
tsconfig.json
tsconfig.spec.json
tslint.json

Dossier: package.json



Dossier: le fameux src



Dossier: index du projet

index.html

HelloWorld > src > index.html > ...

You, a day ago | 1 author (You)

```
1   <!doctype html>
2   <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <title>HelloWorld</title>
6     <base href="/">
7     <meta name="viewport" content="width=device-width, initial-scale=1">
8     <link rel="icon" type="image/x-icon" href="favicon.ico">
9   </head>
10  <body>
11    <app-root></app-root>
12  </body>
13  </html>
14
```

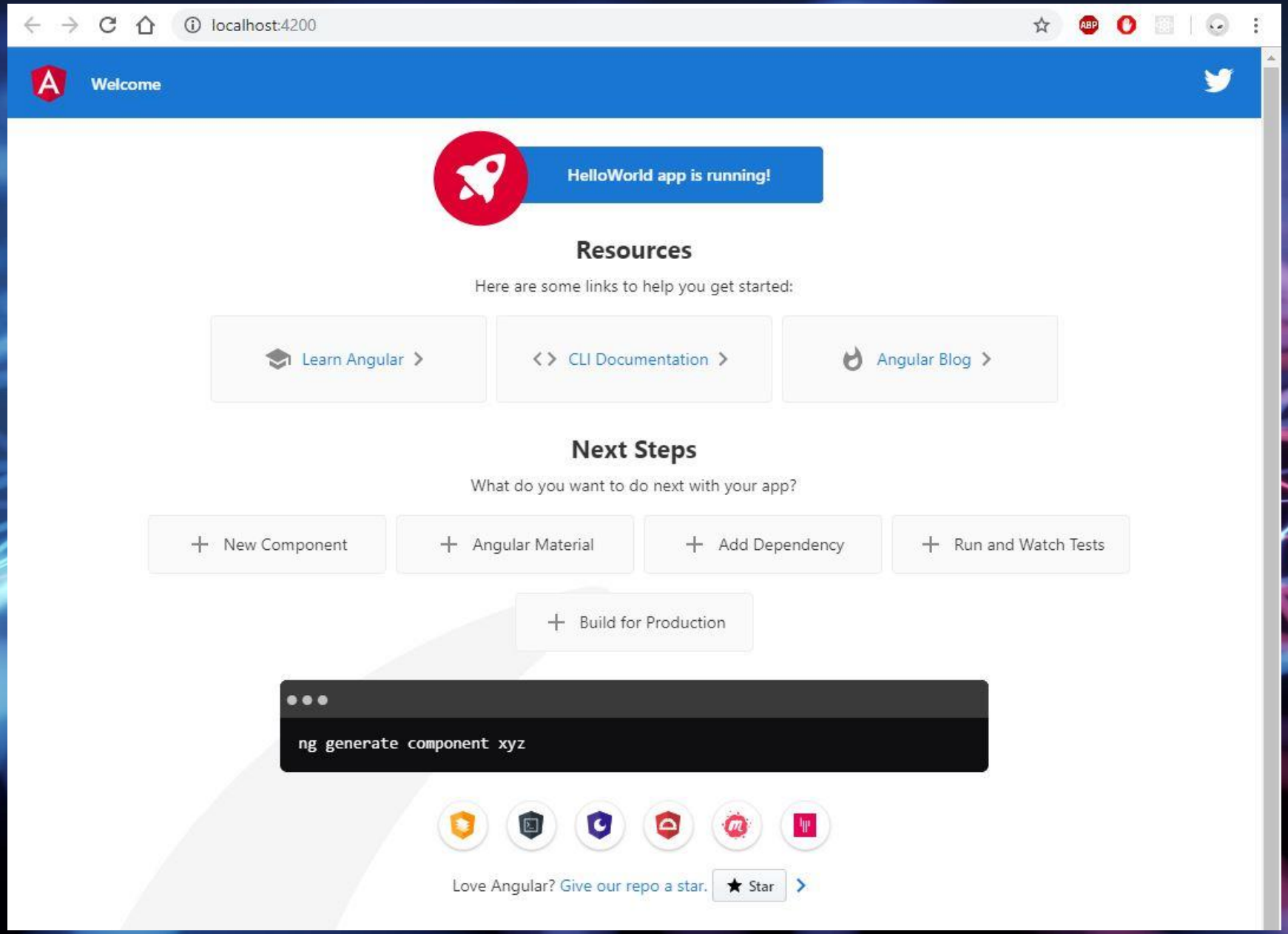
Démarrer le projet

```
ng serve
```

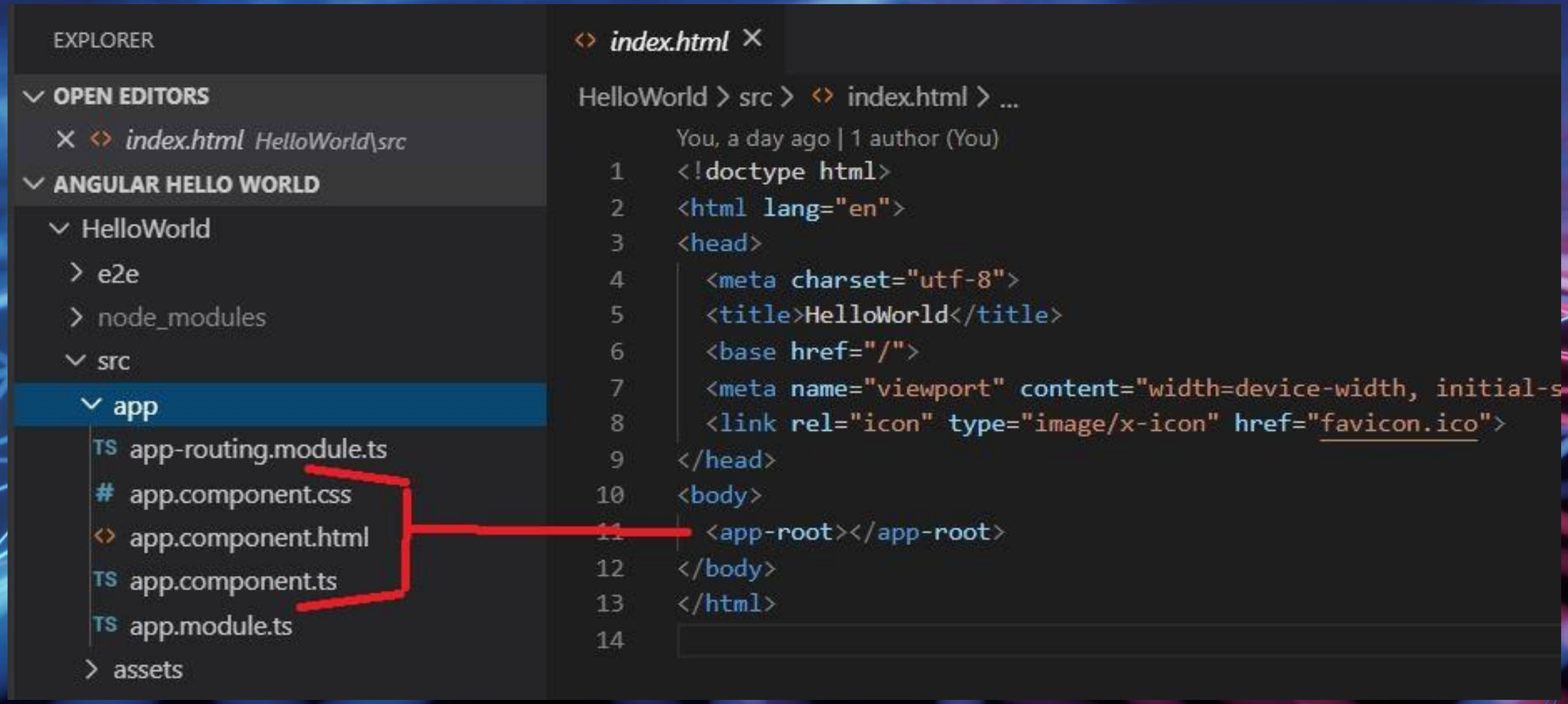
PROBLEMS DEBUG CONSOLE TERMINAL OUTPUT

```
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/environments/environment.ts.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/index.html.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/main.ts.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/polyfills.ts.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/styles.css.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in src/test.ts.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in tsconfig.app.json.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in tsconfig.json.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in tsconfig.spec.json.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in tslint.json.
The file will have its original line endings in your working directory
    Successfully initialized git.
PS C:\Users\Amar2050\Desktop\Angular Hello World> cd HelloWorld
PS C:\Users\Amar2050\Desktop\Angular Hello World\HelloWorld>
```

<app-root></app-root>



<app-root></app-root>



Dans app.component.html
Hello World !

app.component.html

HelloWorld > src > app > app.component.html > div.container

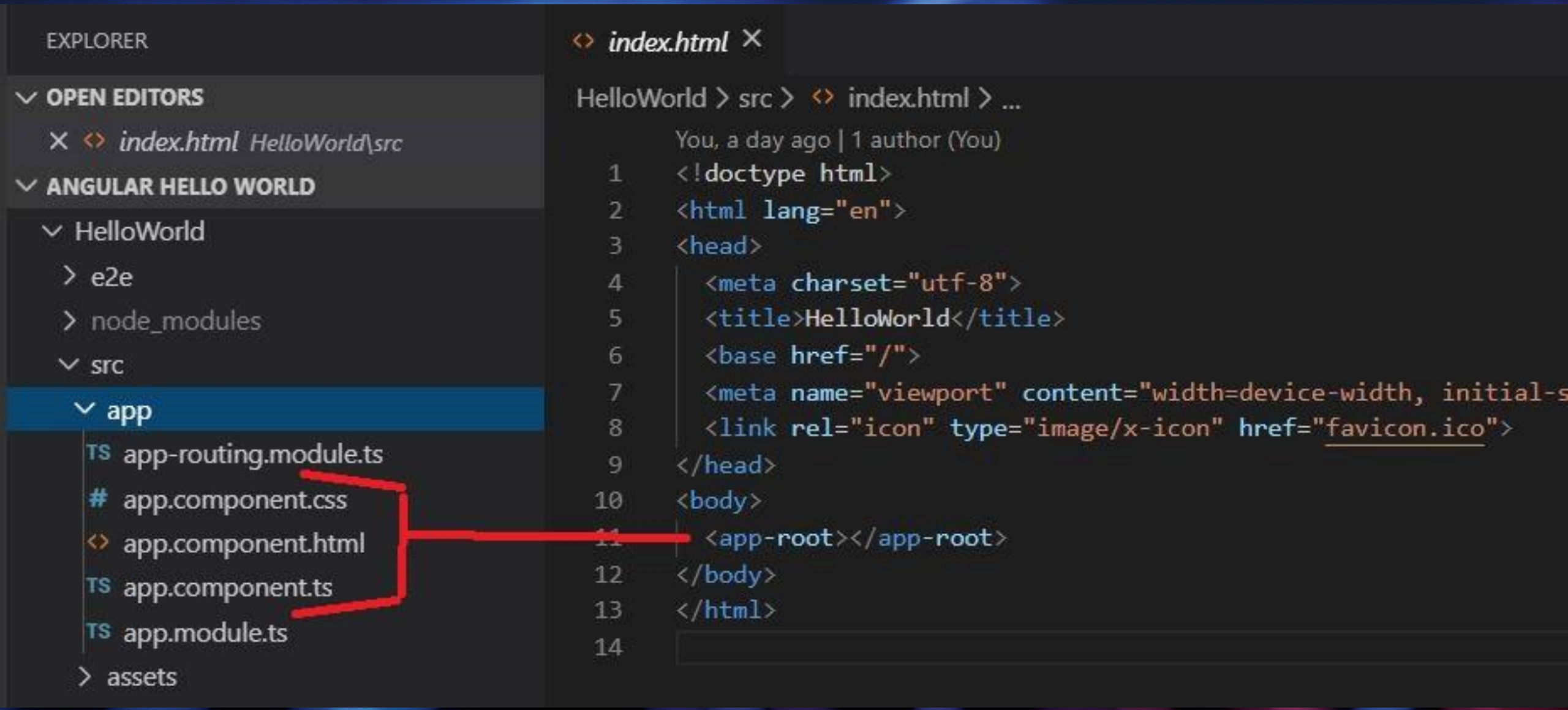
You, a few seconds ago | 1 author (You)

```
1  <div class="container">
2    <h1 class="my-5 bg-dark text-center text-danger">
3      Hello World !
4    </h1>
5  </div>      You, 2 minutes ago • Uncommitted changes
```

app.component.ts

```
1   import { Component } from '@angular/core';
2
    You, a day ago | 1 author (You)
3   @Component({
4     selector: 'app-root',
5     templateUrl: './app.component.html',
6     styleUrls: ['./app.component.css']
7   })
8   export class AppComponent {
9     title = 'HelloWorld';
10  }
11
```

Test css


EXPLORER
OPEN EDITORS
index.html HelloWorld\src
ANGULAR HELLO WORLD
HelloWorld
e2e
node_modules
src
app
app-routing.module.ts
app.component.css
app.component.html
app.component.ts
app.module.ts
assets
index.html
HelloWorld > src > index.html > ...
You, a day ago | 1 author (You)
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>HelloWorld</title>
<base href="/">
<meta name="viewport" content="width=device-width, initial-s
<link rel="icon" type="image/x-icon" href="favicon.ico">
</head>
<body>
<app-root></app-root>
</body>
</html>

npm install bootstrap --save

```
npm install bootstrap@4.6.1 --save
```

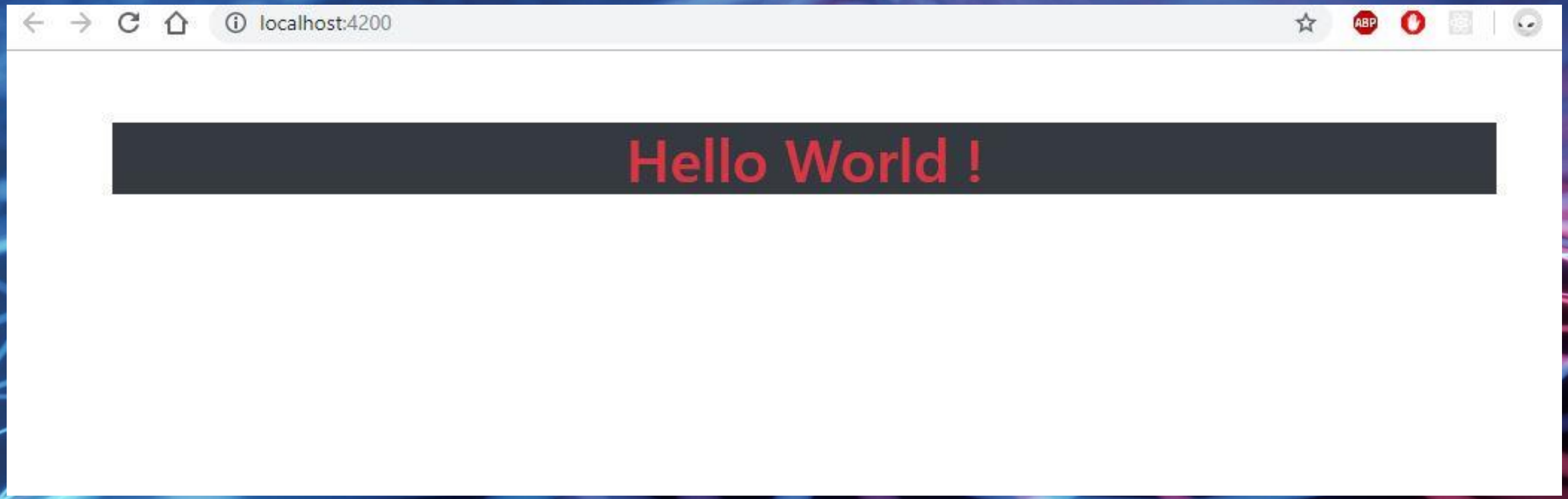
```
  "private": true,
  "dependencies": {
    "@angular/animations": "~8.2.14",
    "@angular/common": "~8.2.14",
    "@angular/compiler": "~8.2.14",
    "@angular/core": "~8.2.14",
    "@angular/forms": "~8.2.14",
    "@angular/platform-browser": "~8.2.14",      You, a day ago • initial commit
    "@angular/platform-browser-dynamic": "~8.2.14",
    "@angular/router": "~8.2.14",
    "rxjs": "~6.4.0",
    "tslib": "^1.10.0",
    "zone.js": "~0.9.1"
  },
  "devDependencies": {
```

```
ROBLEMS   DEBUG CONSOLE   TERMINAL   OUTPUT

S C:\Users\Amar2050\Desktop\Angular Hello World\helloworld> npm install bootstrap --save
```

angular.json

```
31      "root": "",
32      "sourceRoot": "src",
33      "prefix": "app",
34      "architect": {
35        "build": {
36          "builder": "@angular-devkit/build-angular:browser",
37          "options": {
38            "outputPath": "dist/HelloWorld",
39            "index": "src/index.html",
40            "main": "src/main.ts",
41            "polyfills": "src/polyfills.ts",
42            "tsConfig": "tsconfig.app.json",
43            "aot": false,
44            "assets": [
45              "src/favicon.ico",
46              "src/assets"
47            ],
48            "styles": [
49              "node_modules/bootstrap/dist/css/bootstrap.css",
50              "src/styles.css"
51            ],
52            "scripts": []        You, a day ago • initial commit
```

Hello World + Bootstrap



String Interpolation – dans le template

src > app > app.component.html > div.container

You, a few seconds ago | 1 author (You)

```
1  <div class="container">
2    <h1 class="my-5 bg-dark text-center text-danger">
3      {{ title }}
4    </h1>
5  </div>
```

You, a few seconds ago • Uncommitted changes

String Interpolation – dans la class

src > app > TS app.component.ts > ...

```
You, a few seconds ago | 1 author (You)
1   import { Component } from '@angular/core';
2
    You, a few seconds ago | 1 author (You)
3   @Component({
4     selector: 'app-root',
5     templateUrl: './app.component.html',
6     styleUrls: ['./app.component.css']
7   })
8   export class AppComponent {
9     title = 'Hello World 2.0 !';
10  }
11
```

Un component

Un composant

=

Une Classe + Une Vue (Template)

app.module.ts

src > app > TS app.module.ts > ...

You, a minute ago | 1 author (You)

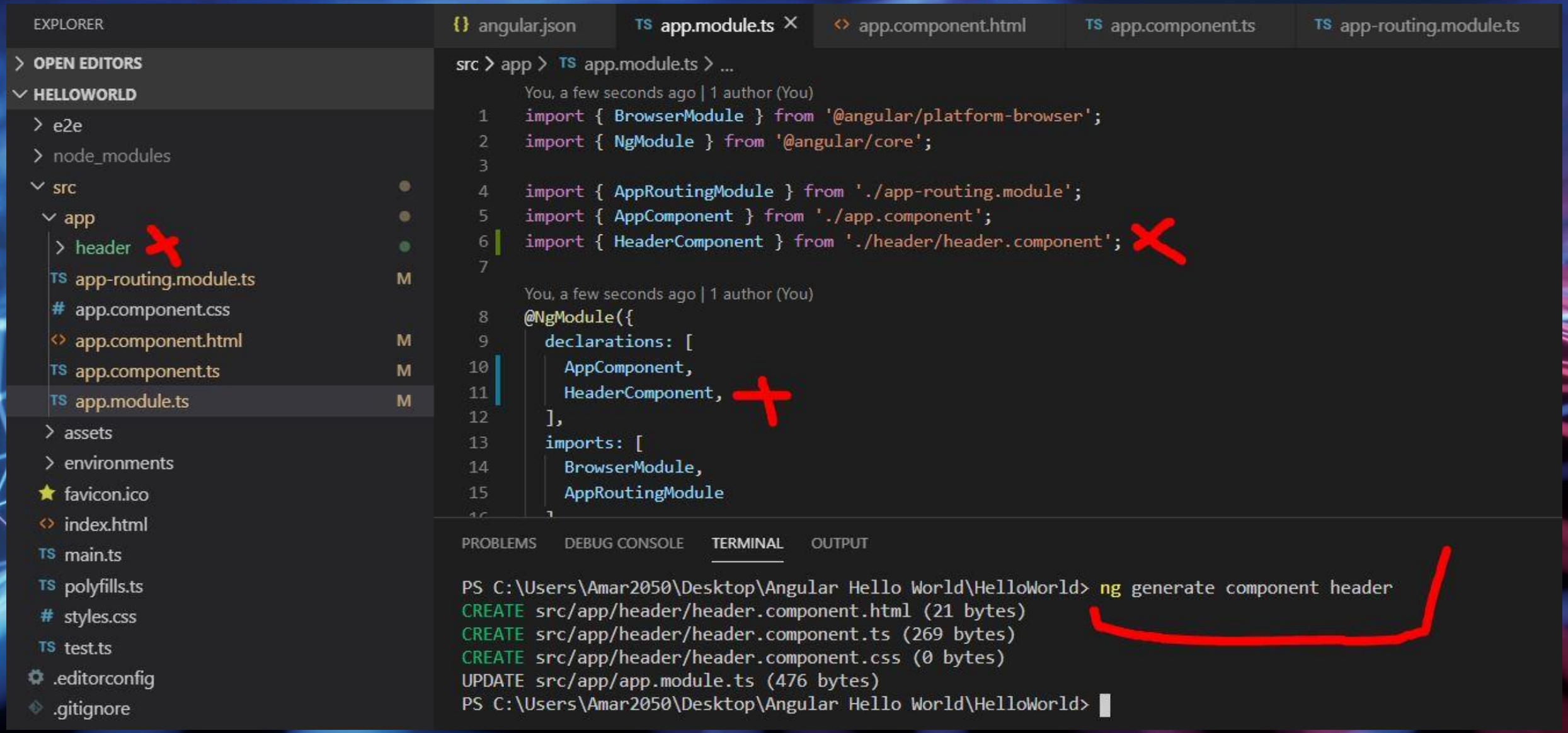
```ts
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

import { AppRoutingModule } from './app-routing.module';
import { AppComponent } from './app.component';

```

You, a minute ago | 1 author (You)

```ts
@NgModule({
  declarations: [
    AppComponent,
  ],
  imports: [
    BrowserModule,
    AppRoutingModule
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }

```

Créer un component

ng generate component header



Life Cycle

src > app > header > header.component.ts > ...

```ts
import { Component, OnInit } from '@angular/core';

@Component({
  selector: 'app-header',
  templateUrl: './header.component.html',
  styleUrls: ['./header.component.css']
})
export class HeaderComponent implements OnInit {

  constructor() { }

  ngOnInit() {
  }

}
```

Life Cycle

1er • ngOnChanges

2e • ngOnInit

3e • ngDoCheck

4e • ngAfterViewInit

5e • ngOnDestroy

header.component.html

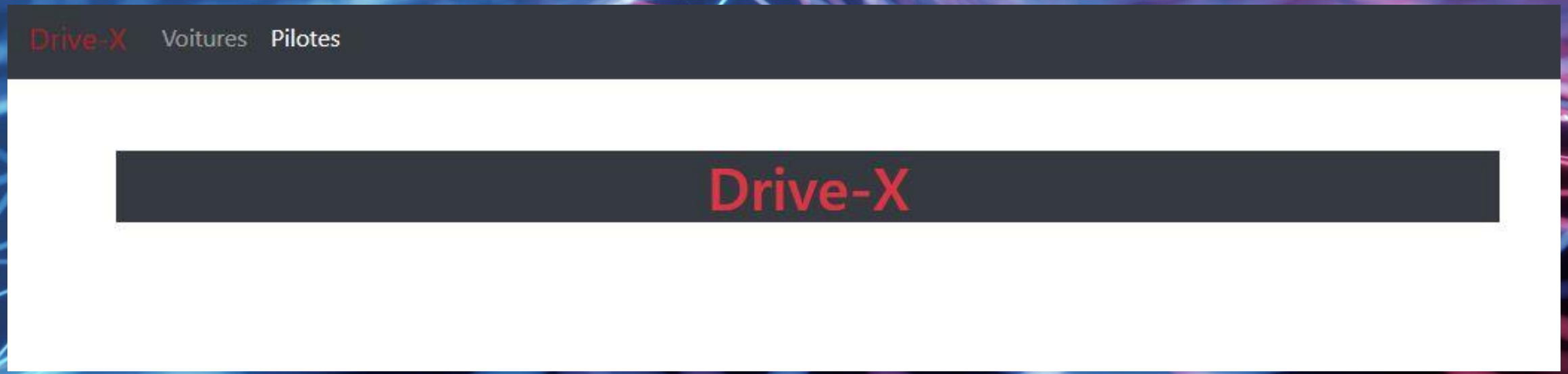
src > app > header > header.component.html > nav.navbar.navbar-expand.navl

```
1   <nav class="navbar navbar-expand navbar-dark bg-dark">
2
3       <a class="navbar-brand text-danger" href="#">Drive-X</a>
4
5       <ul class="navbar-nav ">
6           <li class="nav-item">
7               <a class="nav-link" href="#">Voitures</a>
8           </li>
9           <li class="nav-item active">
10              <a class="nav-link" href="#">Pilotes</a>
11          </li>
12      </ul>
13
14  </nav>
```

Intégrer un component statique

app.component.html

```
You, 10 minutes ago | 1 author (You)
1  <app-header></app-header>
2  <div class="container">
3    <h1 class="my-5 bg-dark text-center text-danger">
4      {{ title }}
5    </h1>
6  </div>          You, 10 minutes ago • Uncommitted changes
```


Drive-X
Voitures
Pilotes
Drive-X

Créer carsList et driversList component

```
PS C:\Users\Amar2050\Desktop\Angular Hello World\HelloWorld> ng generate component carsList
CREATE src/app/cars-list/cars-list.component.html (24 bytes)
CREATE src/app/cars-list/cars-list.component.ts (280 bytes)
CREATE src/app/cars-list/cars-list.component.css (0 bytes)
UPDATE src/app/app.module.ts (568 bytes)
PS C:\Users\Amar2050\Desktop\Angular Hello World\HelloWorld> ng generate component driversList
CREATE src/app/drivers-list/drivers-list.component.html (27 bytes)
CREATE src/app/drivers-list/drivers-list.component.ts (292 bytes)
CREATE src/app/drivers-list/drivers-list.component.css (0 bytes)
UPDATE src/app/app.module.ts (672 bytes)
PS C:\Users\Amar2050\Desktop\Angular Hello World\HelloWorld>
```

ng generate component carsList

ng generate component driversList

ponent.html

cars-list.component.html

src > app > cars-list > cars-list.component.html > ...

```
1    <h1 class="my-5">
2        Nos Vehicules
3    </h1>
4
```

drivers-list.component.html

src > app > drivers-list > drivers-list

```
1    <h1 class="my-5">
2        Nos Pilotes
3    </h1>
```

QUIZ 1/5

npm –v et node –v

C’est pour installer la version lts	• A
Vérifier la présence de node et npm et la version installé	• B
ça démarre un projet node ou npm avec la dernière version	• C
Ça configure notre machine pour npm et node	• D

QUIZ 1/5

npm –v et node –v

C’est pour installer la version lts	• A
Vérifier la présence de node et npm et la version installé	• B
ça démarre un projet node ou npm avec la dernière version	• C
Ça configure notre machine pour npm et node	• D

QUIZ 2/5

Après avoir installer la CLI de Angular

On peut utiliser le terme ng si notre machine nous permet l'utilisation de script	• A
Il faut télécharger Angular sur le site officiel	• B
On peut faire un ng create new MonProjet	• C
On peut faire un ng new MonProjet et rajouter des flags pour skiper des choses…	• D

QUIZ 2/5

Après avoir installer la CLI de Angular

On peut utiliser le terme ng si notre machine nous permet l'utilisation de script	• A
Il faut télécharger Angular sur le site officiel	• B
On peut faire un ng create new MonProjet	• C
On peut faire un ng new MonProjet et rajouter des flags pour skiper des choses...	• D

QUIZ 3/5

Un projet Angular c'est

Un ensemble de fichiers JS et HTML	• A
C'est bien !	• B
Un peu de toutes extensions mais on bosse dans le dossier SRC principalement	• C
Un framework de Google et un langage de programmation de Microsoft	• D

QUIZ 3/5

Un projet Angular c'est

- A — Un ensemble de fichiers JS et HTML
- B — C'est bien !
- C — Un peu de toutes extensions mais on bosse dans le dossier SRC principalement
- D — Un framework de Google et un langage de programmation de Microsoft

QUIZ 4/5

AppComponent

C’est un component de base	• A
Il faut le créer avec un ng generate component	• B
Je ne l’ai pas !	• C
C’est le component qui va accueillir les autres	• D

QUIZ 4/5

AppComponent

C’est un component de base	• A
Il faut le créer avec un ng generate component	• B
Je ne l’ai pas !	• C
C’est le component qui va accueillir les autres	• D

QUIZ 5/5

Un component c'est

- C'est 3 fichiers minimum • A
- C'est 1 fichier • B
- C'est une brique indépendante • C
- C'est des modules de services • D

QUIZ 5/5

Un component c'est

- C'est 3 fichiers minimum • A
- C'est 1 fichier • B
- C'est une brique indépendante • C
- C'est des modules de services • D