

# Curso Angular Desde Cero - Aulas 1 a 16

## Bluuweb (Ignácio Gutierrez)

<https://www.youtube.com/watch?v=mog8EKQX5HI&list=PLPI81lqbj-4JaLibWSbTVrYTyHDadppKq>

Resumo do curso feito por Roberto Pinheiro

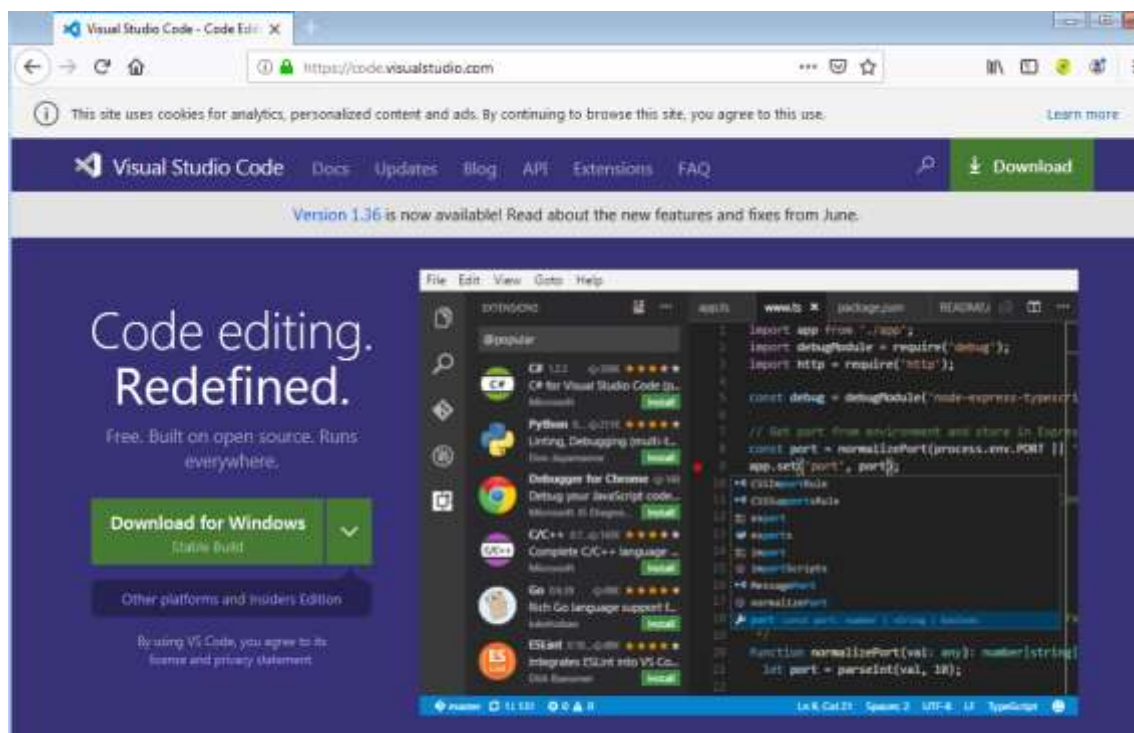
## Aula 01 - Instalação

Angular é um framework para aplicações web desenvolvido em TypeScript, de código aberto, mantido por Google que se utiliza para criar e manter aplicações de uma única página. Seu objetivo é aumentar as aplicações baseadas em navegador com capacidade de MVC (Model, View, Controller) em um esforço para fazer que o desenvolvimento e as provas sejam mais fáceis.

## Requisitos

- Instale o Visual Studio Code

<https://code.visualstudio.com/>



- Instale o Node (use a **versão LTS** --> mais estável)

<https://nodejs.org/en/download/>



- Instale o TypeScript

<https://www.typescriptlang.org/index.html#download-links>



tsc -v

```
C:\cmdr
λ tsc -v
Version 3.5.3
```

npm install -g typescript

```
C:\cmdr
λ npm install -g typescript
C:\Users\Beto\AppData\Roaming\npm\tsc -> C:\Users\Beto\AppData\Roaming\npm\node_modules\typescript\bin\tsc
C:\Users\Beto\AppData\Roaming\npm\tsserver -> C:\Users\Beto\AppData\Roaming\npm\node_modules\typescript\bin\tsserver
+ typescript@3.5.3
added 1 package from 1 contributor in 11.459s

C:\cmdr
λ |
```

- Instale o Angular CLI

<https://cli.angular.io/>



## ng new

The Angular CLI makes it easy to create an application that already works, right out of the box. It already follows our best practices!

npm install -g @angular/cli

```
C:\cmdr
λ npm install -g @angular/cli
C:\Users\Beto\AppData\Roaming\npm\ng -> C:\Users\Beto\AppData\Roaming\npm\node_modules\@angular\cli\bin\ng

> @angular/cli@8.1.2 postinstall C:\Users\Beto\AppData\Roaming\npm\node_modules\@angular\cli
> node ./bin/postinstall/script.js

? Would you like to share anonymous usage data with the Angular Team at Google under
Google's Privacy Policy at https://policies.google.com/privacy? For more details and
how to change this setting, see http://angular.io/analytics. No
+ @angular/cli@8.1.2
added 204 packages from 163 contributors and updated 35 packages in 112.556s

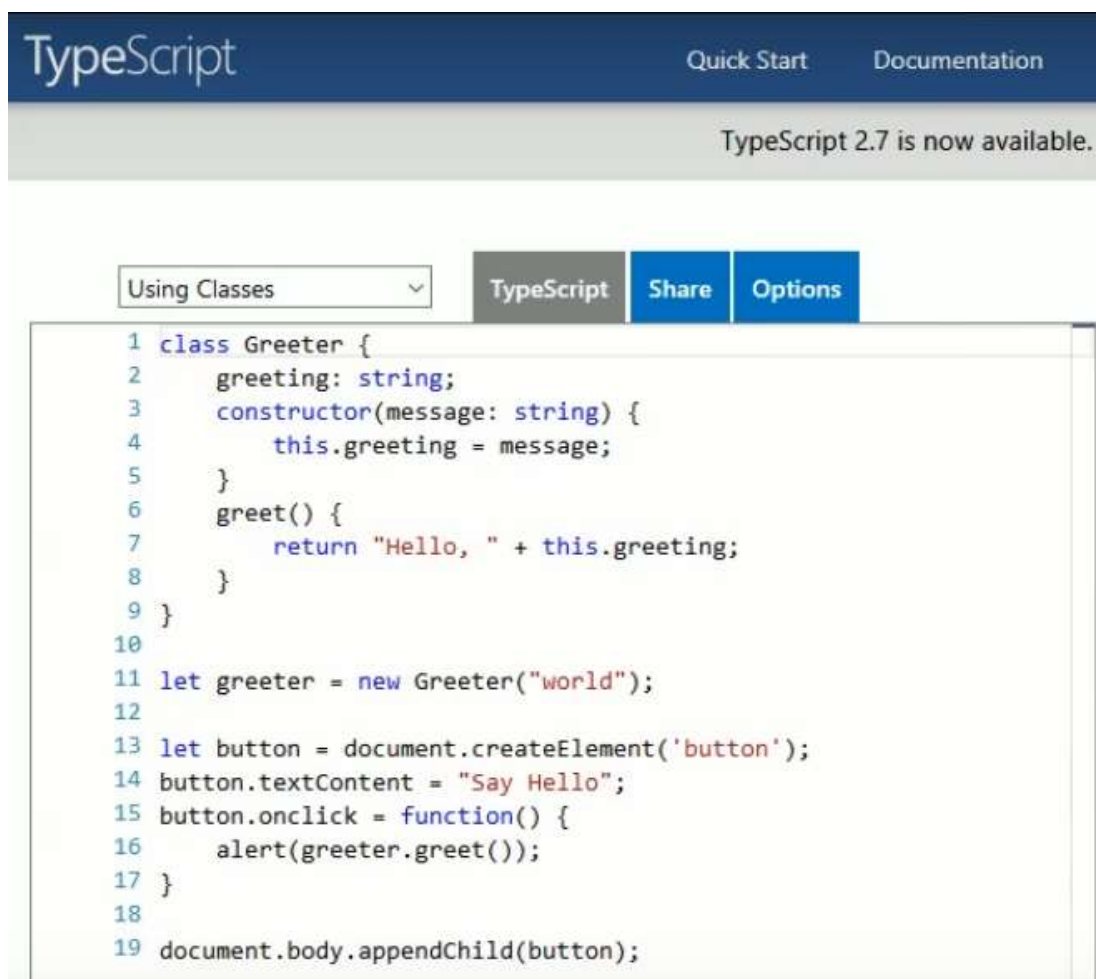
C:\cmdr
λ |
```

## Aula 02 - Fundamentos de TypeScript - parte 1

Os navegadores web lêem javascript, porém a grande maioria não lê typescript, porisso é necessário fazer a conversão (conversão ou compilação de typescript para javascript).

### Como utilizar e compilar arquivos JavaScript

### Código de TypeScript transformado em JavaScript



The screenshot shows the TypeScript Playground interface. At the top, there's a header with the TypeScript logo, links for 'Quick Start' and 'Documentation', and a message 'TypeScript 2.7 is now available.' Below the header, there's a dropdown menu set to 'Using Classes' and three buttons: 'TypeScript', 'Share', and 'Options'. The main area displays the following TypeScript code:

```
1 class Greeter {
2   greeting: string;
3   constructor(message: string) {
4     this.greeting = message;
5   }
6   greet() {
7     return "Hello, " + this.greeting;
8   }
9 }
10
11 let greeter = new Greeter("world");
12
13 let button = document.createElement('button');
14 button.textContent = "Say Hello";
15 button.onclick = function() {
16   alert(greeter.greet());
17 }
18
19 document.body.appendChild(button);
```

Run JavaScript

```
1 var Greeter = /** @class */ (function () {
2     function Greeter(message) {
3         this.greeting = message;
4     }
5     Greeter.prototype.greet = function () {
6         return "Hello, " + this.greeting;
7     };
8     return Greeter;
9 }());
10 var greeter = new Greeter("world");
11 var button = document.createElement('button');
12 button.textContent = "Say Hello";
13 button.onclick = function () {
14     alert(greeter.greet());
15 };
16 document.body.appendChild(button);
17
```

## index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta http-equiv="X-UA-Compatible" content="ie=edge">
  <title>Document</title>
</head>
<body>
  <script src="app1.js"></script>
</body>
</html>
```

## app1.ts

```
console.log('Olá mundo!');
let nome:string = 'Ignácio';
```

No terminal do VSC, entre com o comando:

```
tsc -w app1
```

Será gerado o arquivo **app1.js**:

**app1.js**

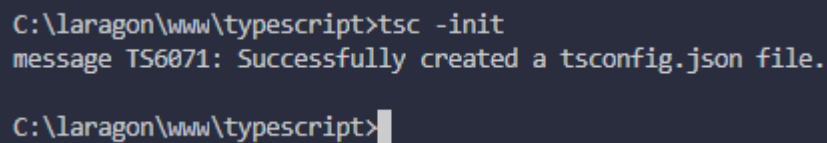
```
console.log('Olá mundo!');  
var nome = 'Ignácio';
```

**app2.ts**

```
console.log('Segundo arquivo');
```

No terminal, entre com o comando:

```
tsc init
```



```
C:\laragon\www\typescript>tsc -init  
message TS6071: Successfully created a tsconfig.json file.  
  
C:\laragon\www\typescript>
```

Será criado o arquivo **tsconfig.json**

Entre com o comando:

```
tsc -w
```

Será gerado o arquivo:

**app2.js**

```
"use strict";  
console.log('Segundo arquivo');
```

## Aula 03 - Fundamentos de TypeScript - parte 2

### Tipos de dados em Typescript

1) string: texto

```
let texto:string = "sou do tipo texto";
```

2) number: numérico

```
let numero:number = 1235;
```

3) boolean: true ou false

```
let status:boolean = true;
```

4) any: qualquer coisa

```
let qualquer:any = "texto";
```

```
let qualquer:any = 123;
```

5) string[]: array de caracteres

```
let arrayCaracter:string[] = ["texto1", "texto2", "texto3"];
```

6) number[]: array de números

```
let arrayNumero:number[] = [1, 2, 3];
```

7) boolean[]: array de booleanos

```
let arrayBoolean:boolean[] = [true, false];
```

8) any[]: array de qualquer coisa

```
let arrayQualquer:any[] = [1, "texto", false];
```



## Aula 04 - Fundamentos de TypeScript - parte 3

### Classes e construtores

**classes.ts**

```
class Calculadora{

    numero:number;

    constructor(valor:number){
        console.log('Iniciando calculadora...');
        this.numero = valor;
        console.log(this.numero);
    }

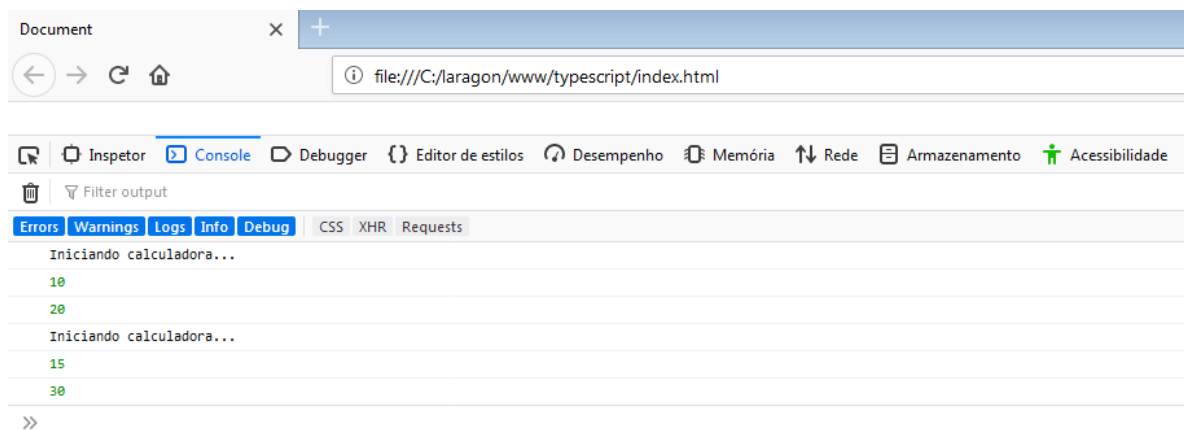
    somar(){
        return this.numero + this.numero;
    }
}

let calcA = new Calculadora(10);
console.log(calcA.somar());

let calcB = new Calculadora(15);
console.log(calcB.somar());
```

## classes.js

```
"use strict";
var Calculadora = /** @class */ (function () {
    function Calculadora(valor) {
        console.log('Iniciando calculadora...');
        this.numero = valor;
        console.log(this.numero);
    }
    Calculadora.prototype.somar = function () {
        return this.numero + this.numero;
    };
    return Calculadora;
})();
var calcA = new Calculadora(10);
console.log(calcA.somar());
var calcB = new Calculadora(15);
console.log(calcB.somar());
```



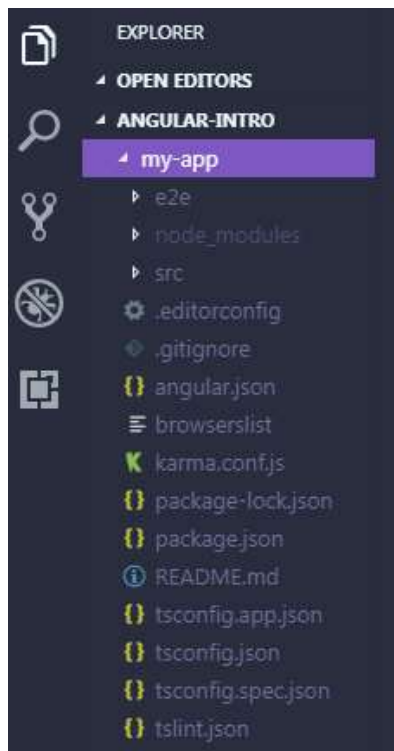
## Aula 06 - Instalação do primeiro projeto

<https://angular.io/>



- Crie uma pasta chamada **angular-intro** e dentro dela entre com o seguinte comando:

**ng new my-app**

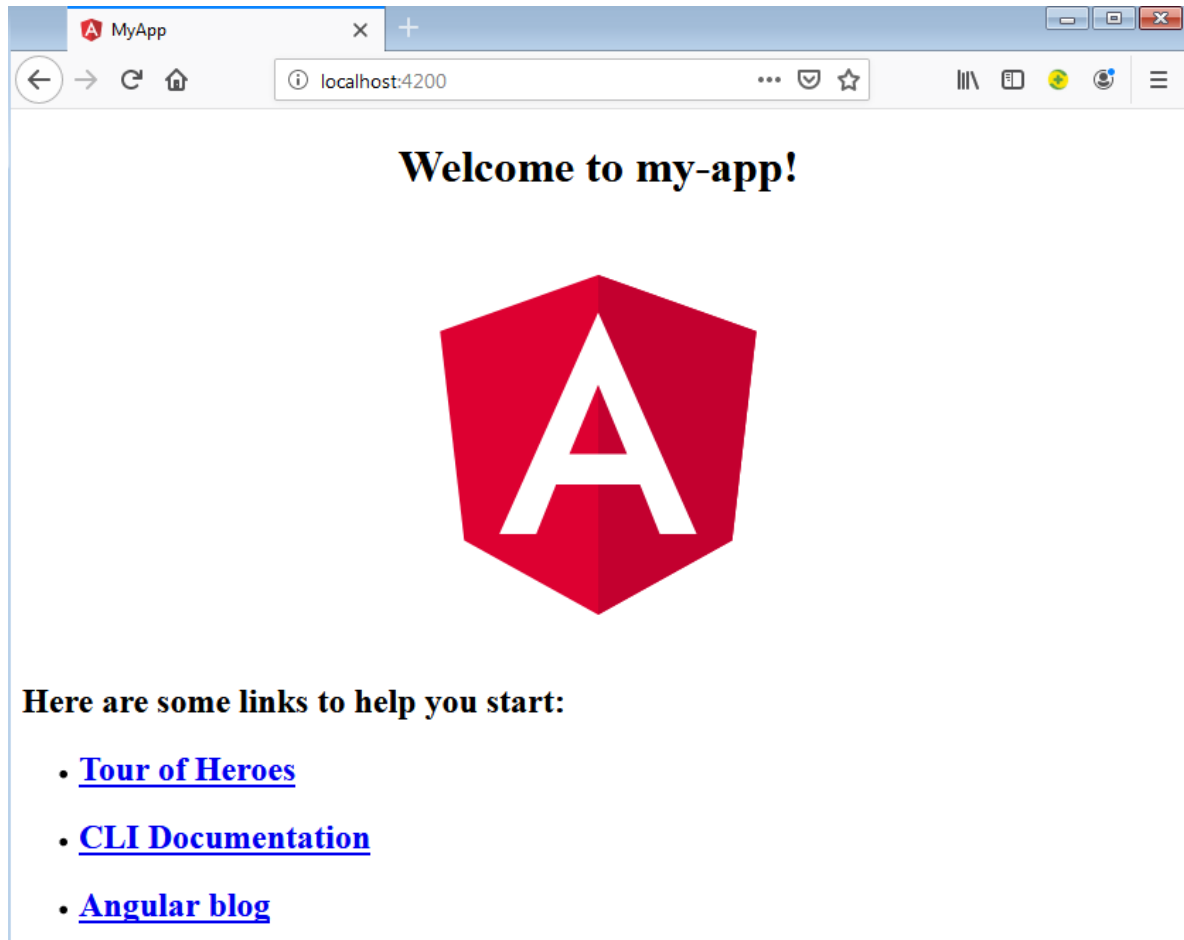


- Para iniciar o servidor do Angular, dentro da pasta **my-app**, entre com:

**ng serve**

No navegador entre com:

**http://localhost:4200/**



## Aula 07 - Olá mundo e primeiros conceitos chaves

**src/app/app.component.html**

```
<!--The content below is only a placeholder and can be replaced.-->
<div style="text-align:center">
  <h1>
    Welcome to {{ title }}!
  </h1>
  
</div>
<h2>Here are some links to help you start:</h2>
<ul>
  <li>
    <h2><a target="_blank" rel="noopener" href="https://angular.io/tutorial">Tour of
Heroes</a></h2>
  </li>
  <li>
    <h2><a target="_blank" rel="noopener" href="https://angular.io/cli">CLI
Documentation</a></h2>
  </li>
  <li>
    <h2><a target="_blank" rel="noopener" href="https://blog.angular.io/">Angular blog</a></h2>
  </li>
</ul>
```

src/app/app.component.ts

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

@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'my-app';
}
```

## src/index.html

```
<!doctype html>
<html lang="pt-br">
<head>
  <meta charset="utf-8">
  <title>MyApp</title>
  <base href="/">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
</head>
<body>
  <app-root></app-root>
</body>
</html>
```

## src/app/app.component.css

```
h1{
  color: green;
}
```

## src/app/app.component.ts

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

```
@Component({
  selector: 'app-root',
  templateUrl: './app.component.html',
  styleUrls: ['./app.component.css']
})
export class AppComponent {
  title = 'my first application';
}
```

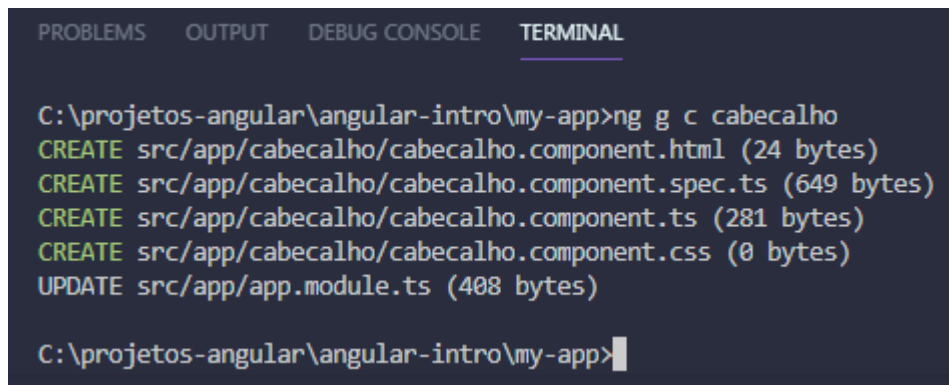


## Aula 08 - Como criar componentes com CLI

### Criando componentes

#### Criando o componente cabeçalho

ng g c cabeçalho



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

C:\projetos-angular\angular-intro\my-app>ng g c cabeçalho
CREATE src/app/cabeçalho/cabeçalho.component.html (24 bytes)
CREATE src/app/cabeçalho/cabeçalho.component.spec.ts (649 bytes)
CREATE src/app/cabeçalho/cabeçalho.component.ts (281 bytes)
CREATE src/app/cabeçalho/cabeçalho.component.css (0 bytes)
UPDATE src/app/app.module.ts (408 bytes)

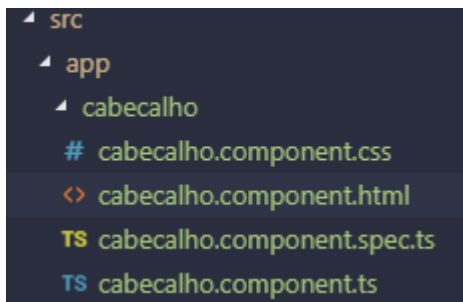
C:\projetos-angular\angular-intro\my-app>
```

#### src/app/app.module.ts

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

import { AppComponent } from './app.component';
import { CabecalhoComponent } from './cabeçalho/cabeçalho.component';

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



### src/app/cabecalho/cabecalho.component.ts

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

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

  constructor() {}

  ngOnInit() {
  }

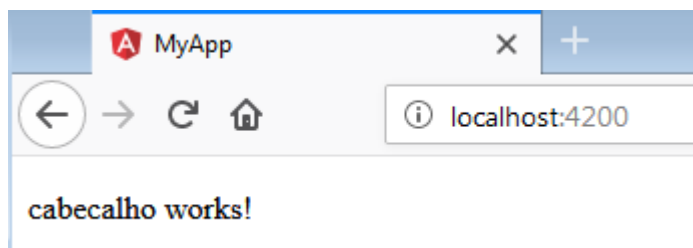
}
```

### src/app/cabecalho/cabecalho.component.html

```
<p>cabecalho works!</p>
```

### src/app/app.component.html

```
<app-cabecalho></app-cabecalho>
```





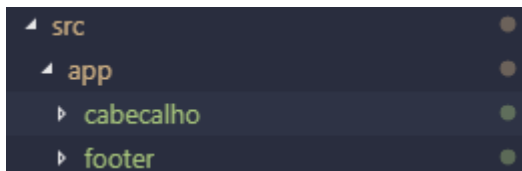
## Criando o componente footer

ng g c footer

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-intro\my-app>ng g c footer
CREATE src/app/footer/footer.component.html (21 bytes)
CREATE src/app/footer/footer.component.spec.ts (628 bytes)
CREATE src/app/footer/footer.component.ts (269 bytes)
CREATE src/app/footer/footer.component.css (0 bytes)
UPDATE src/app/app.module.ts (490 bytes)

C:\projetos-angular\angular-intro\my-app>
```



### src/app/app.module.ts

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

import { AppComponent } from './app.component';
import { CabecalhoComponent } from './cabecalho/cabecalho.component';
import { FooterComponent } from './footer/footer.component';

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

### src/app/footer/footer.component.ts

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

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

  constructor() {}

  ngOnInit() {
  }

}
```

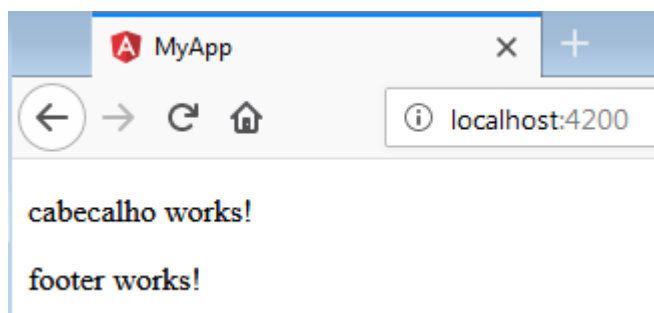
### src/app/footer/footer.component.html

```
<p>footer works!</p>
```

### src/app/app.component.html

```
<app-cabecalho></app-cabecalho>
```

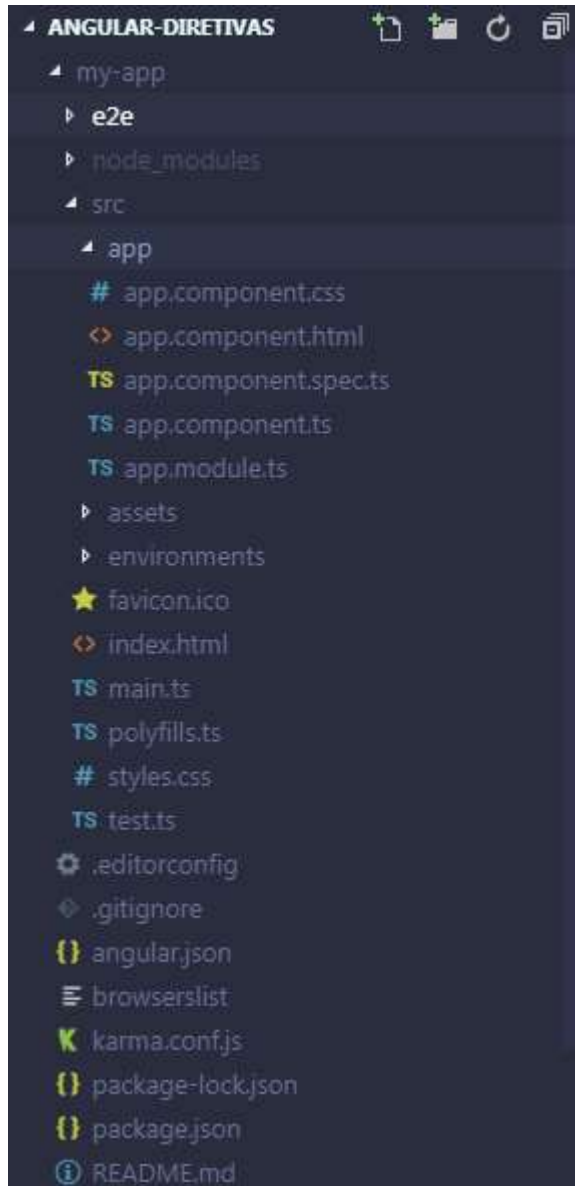
```
<app-footer></app-footer>
```



## Aula 09 - Diretiva ngIf

- Crie uma pasta chamada **angular-diretivas** e dentro dela entre com o seguinte comando:

**ng new my-app**



- Para iniciar o servidor do Angular, dentro da pasta **my-app**, entre com:

**ng serve**

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  2: node ▼

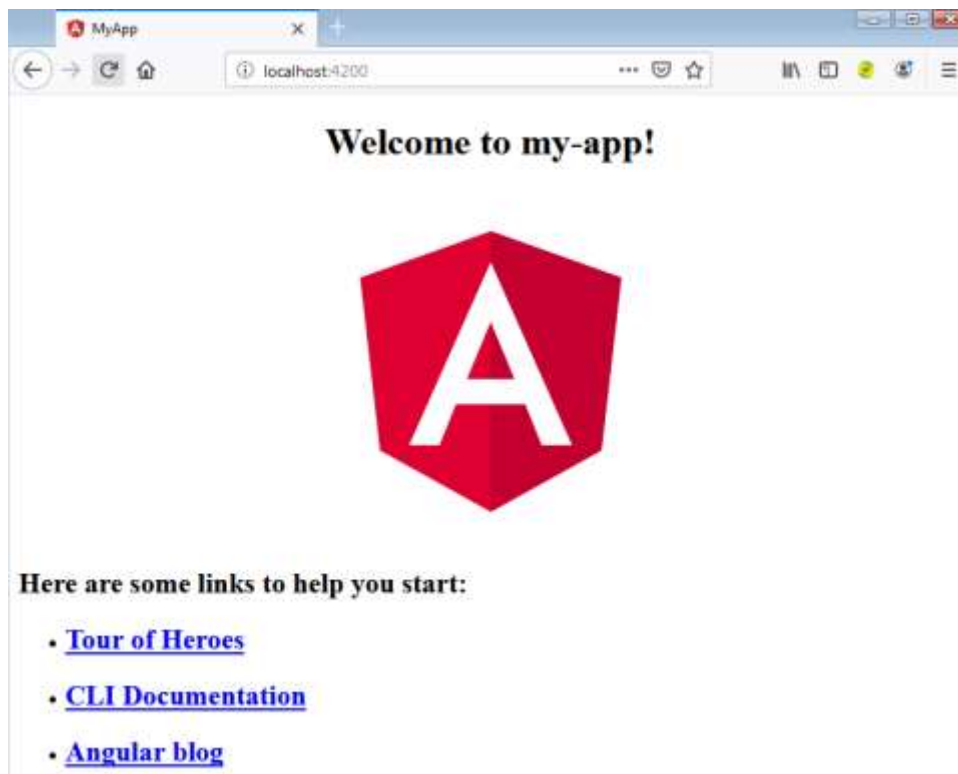
C:\projetos-angular\angular-diretivas>cd my-app

C:\projetos-angular\angular-diretivas\my-app>ng serve
10% building 3/3 modules 0 active i [wds]: Project is running at http://localhost:4200/webpack-dev-server/
i [wds]: webpack output is served from /
i [wds]: 404s will fallback to //index.html

chunk {main} main.js, main.js.map (main) 9.89 kB [initial] [rendered]
chunk {polyfills} polyfills.js, polyfills.js.map (polyfills) 251 kB [initial] [rendered]
chunk {runtime} runtime.js, runtime.js.map (runtime) 6.09 kB [entry] [rendered]
chunk {styles} styles.js, styles.js.map (styles) 16.3 kB [initial] [rendered]
chunk {vendor} vendor.js, vendor.js.map (vendor) 3.8 MB [initial] [rendered]
Date: 2019-07-25T17:37:45.253Z - Hash: 8cec30d3c569219db38d - Time: 24690ms
** Angular Live Development Server is listening on localhost:4200, open your browser on http://localhost:4200/ **
i [wdm]: Compiled successfully.
```

- No navegador entre com:

<http://localhost:4200/>



## Criando o componente ngif

ng g c ngif

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-diretivas\my-app>ng g c ngif
CREATE src/app/ngif/ngif.component.html (19 bytes)
CREATE src/app/ngif/ngif.component.spec.ts (614 bytes)
CREATE src/app/ngif/ngif.component.ts (261 bytes)
CREATE src/app/ngif/ngif.component.css (0 bytes)
UPDATE src/app/app.module.ts (388 bytes)

C:\projetos-angular\angular-diretivas\my-app>
```



## Incluindo o bootstrap 4

### src/index.html

```
<!doctype html>
<html lang="pt-br">
<head>
  <meta charset="utf-8">
  <title>MyApp</title>
  <base href="/">

  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
  <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
  integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
  crossorigin="anonymous">
</head>
<body>
  <app-root></app-root>
</body>
</html>
```

### src/app/ngif.component.html

```
<h1 class="container bg-dark text-white text-center my-4 py-4">ngIf show={{show}}</h1>

<div class="container">
  <button class="btn btn-warning" (click)="show = !show">Ação</button>
  <br><br>
  <p class="text-info" *ngIf="show">Lorem, ipsum dolor sit amet consectetur adipisicing elit. Soluta repellat in, harum nesciunt temporibus natus voluptas saepe cumque odit aspernatur minus dolores mollitia at ratione sed nulla, repudiandae quaerat facere!</p>
  <p class="text-danger">Lorem ipsum dolor sit amet consectetur adipisicing elit. Laboriosam aperiam ex, necessitatibus eveniet deserunt voluptatibus doloremque repellat dolorum dicta qui quos quo asperiores deleniti eos consequatur itaque, ut assumenda esse.</p>
</div>
```

### src/app/ngif.component.ts

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

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

  constructor() {}

  show:boolean = true;

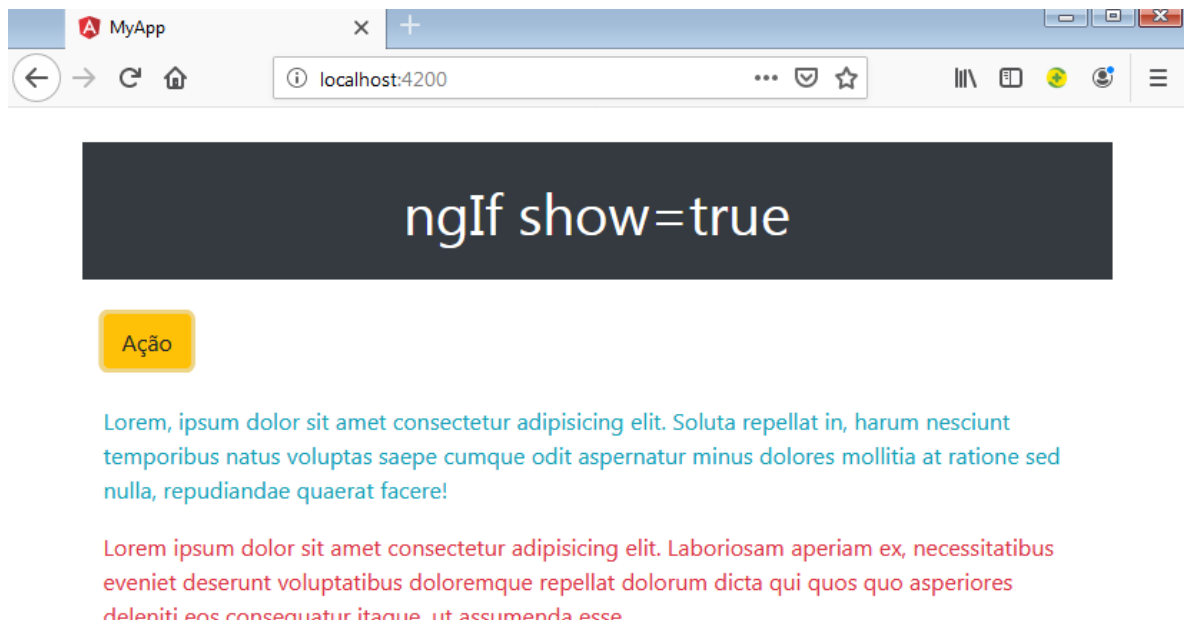
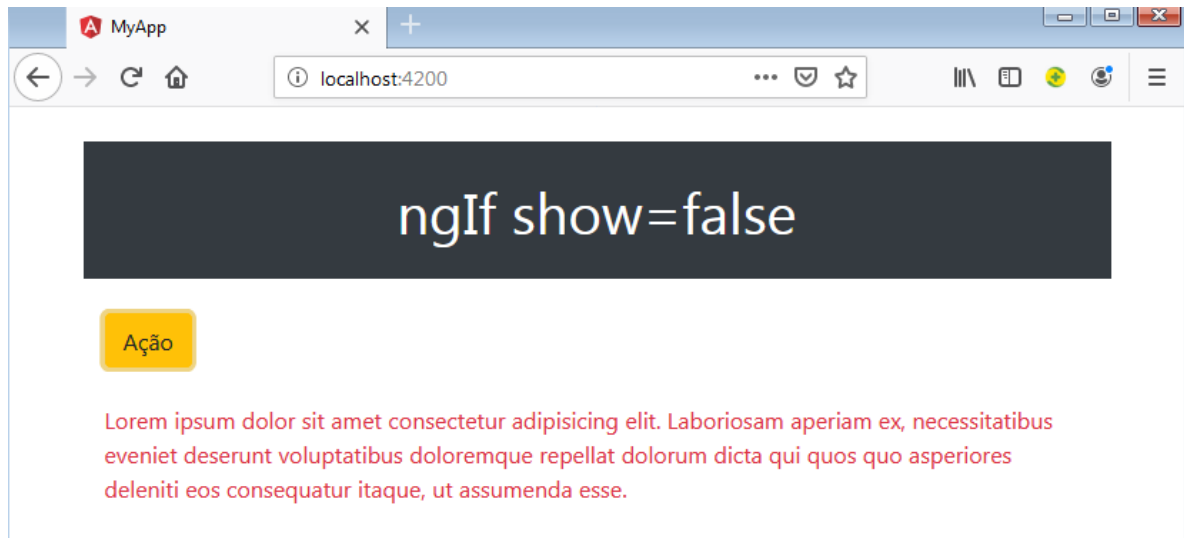
  ngOnInit() {
  }

}
```

### src/app/app.component.html

```
<app-ngif></app-ngif>
```







## Aula 10 - Diretiva ngIf/Else

### Criando o componente ngif-else

ng g c ngif-else

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-diretivas\my-app>ng g c ngif-else
CREATE src/app/ngif-else/ngif-else.component.html (24 bytes)
CREATE src/app/ngif-else/ngif-else.component.spec.ts (643 bytes)
CREATE src/app/ngif-else/ngif-else.component.ts (280 bytes)
CREATE src/app/ngif-else/ngif-else.component.css (0 bytes)
UPDATE src/app/app.module.ts (480 bytes)

C:\projetos-angular\angular-diretivas\my-app>
```

```
└─ ANGULAR-DIRETIVAS
  └─ my-app
    ├── e2e
    ├── node_modules
    └─ src
      ├── app
      ├── ngif
      └─ ngif-else
        ├── # ngif-else.component.css U
        ├── <> ngif-else.component.html U
        ├── TS ngif-else.component.spec.ts U
        ├── TS ngif-else.component.ts U
        ├── # app.component.css
        ├── <> app.component.html M
        ├── TS app.component.spec.ts
        ├── TS app.component.ts
        └── TS app.module.ts M
```

### src/app/ngif-else.component.ts

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

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

  show:boolean = true;

  constructor() { }

  ngOnInit() {
  }

}
```

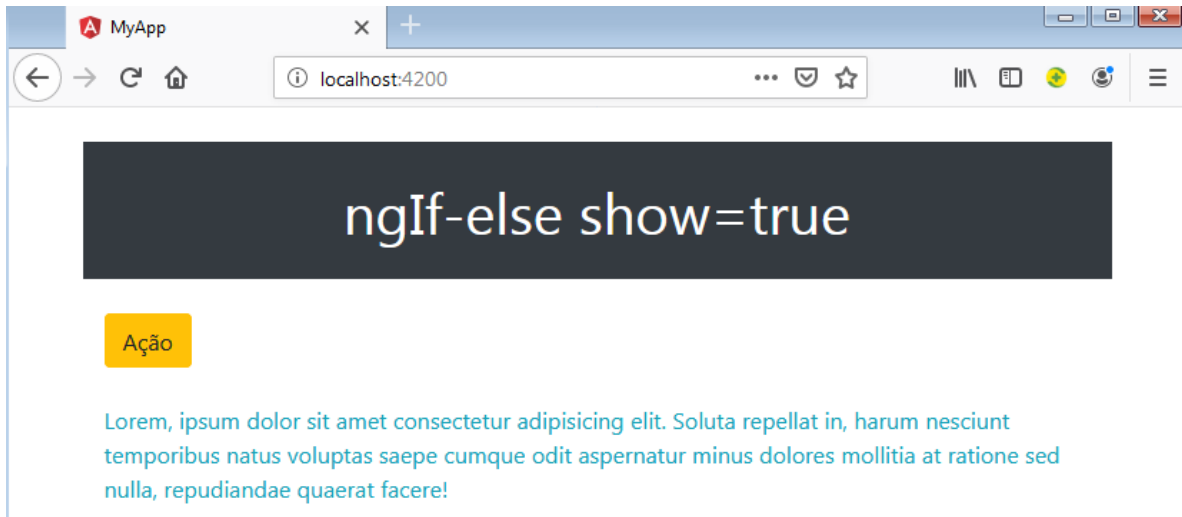
### src/app/ngif-else.component.html

```
<h1 class="container bg-dark text-white text-center my-4 py-4">ngif-else show={{show}}</h1>

<div class="container">
  <button class="btn btn-warning" (click)="show = !show">Ação</button>
  <br><br>
  <p class="text-info" *ngIf="show; else showDos">Lorem, ipsum dolor sit amet consectetur
  adipisicing elit. Soluta repellat in, harum nesciunt temporibus natus voluptas saepe cumque odit
  aspernatur minus dolores mollitia at ratione sed nulla, repudiandae quaerat facere!</p>
  <ng-template #showDos>
    <p class="text-danger">Lorem ipsum dolor sit amet consectetur adipisicing elit. Laboriosam
    aperiam ex, necessitatibus eveniet deserunt voluptatibus doloremque repellat dolorum dicta qui
    quos quo asperiores deleniti eos consequatur itaque, ut assumenda esse.</p>
  </ng-template>
</div>
```

### src/app/app.component.html

```
<!-- <app-ngif></app-ngif> -->
<app-ngif-else></app-ngif-else>
```



## Aula 11 - Diretiva ngClass

A diretiva **ngClass** é utilizada para inserir classes de forma dinâmica.

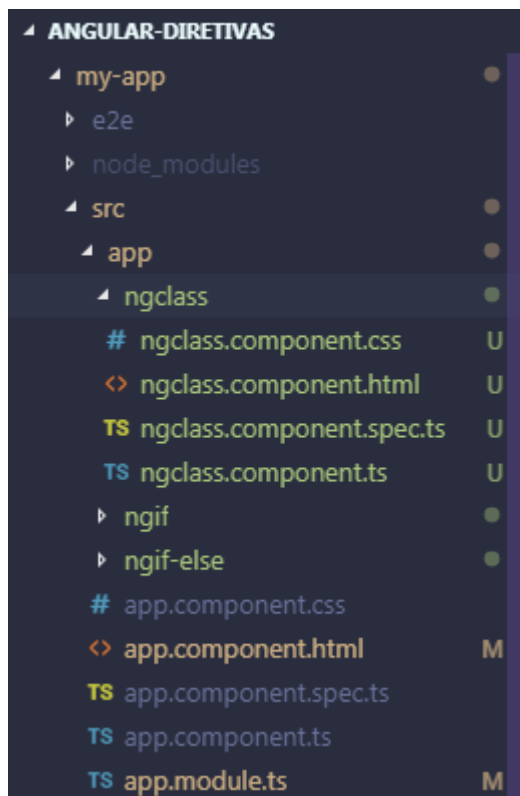
### Criando o componente ngclass

**ng g c ngclass**

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-diretivas\my-app>ng g c ngclass
CREATE src/app/ngclass/ngclass.component.html (22 bytes)
CREATE src/app/ngclass/ngclass.component.spec.ts (635 bytes)
CREATE src/app/ngclass/ngclass.component.ts (273 bytes)
CREATE src/app/ngclass/ngclass.component.css (0 bytes)
UPDATE src/app/app.module.ts (566 bytes)

C:\projetos-angular\angular-diretivas\my-app>
```



### src/app/ngclass.component.ts

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

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

  show:boolean = true;

  constructor() { }

  ngOnInit() {
  }

}
```

### src/app/ngclass.component.html

```
<h1 class="container bg-dark text-white text-center my-4 py-4">[ngClass]</h1>

<div class="container">

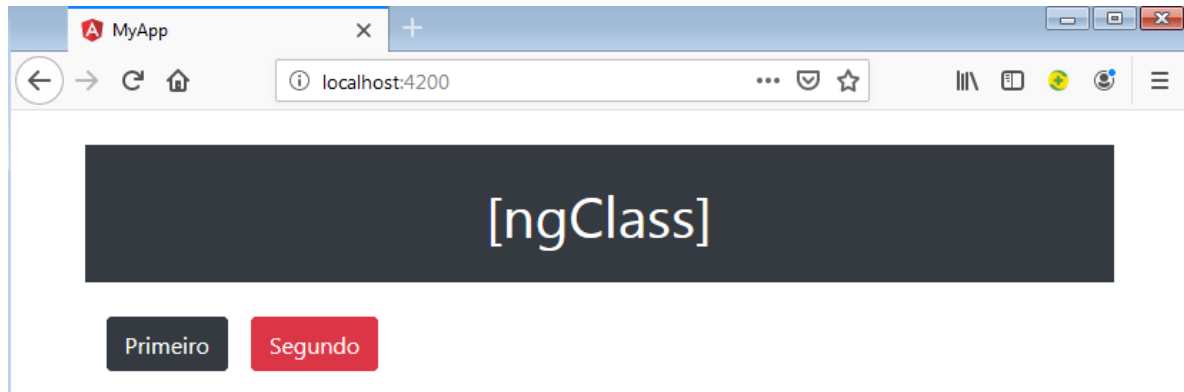
  <button class="btn btn-dark mb-3 mr-3" (click)="ativo='primeiro'">Primeiro</button>
  <button class="btn btn-danger mb-3 mr-3" (click)="ativo='segundo'">Segundo</button>

  <p class="text-info d-none" [ngClass]='{"d-block":ativo=="primeiro"}">Lorem, ipsum dolor sit amet
consectetur adipisicing elit. Soluta repellat in, harum nesciunt temporibus natus voluptas saepe
cumque odit aspernatur minus dolores mollitia at ratione sed nulla, repudiandae quaerat facere!</p>
  <p class="text-danger d-none" [ngClass]='{"d-block":ativo=="segundo"}">Lorem ipsum dolor sit
amet consectetur adipisicing elit. Laboriosam aperiam ex, necessitatibus eveniet deserunt
voluptatibus doloremque repellat dolorum dicta qui quos quo asperiores deleniti eos consequatur
itaque, ut assumenda esse.</p>

</div>
```

src/app/app.component.html

```
<!-- <app-ngif></app-ngif> -->  
<!-- <app-ngif-else></app-ngif-else> -->  
<app-ngclass></app-ngclass>
```



## Aula 12 - Diretiva ngFor

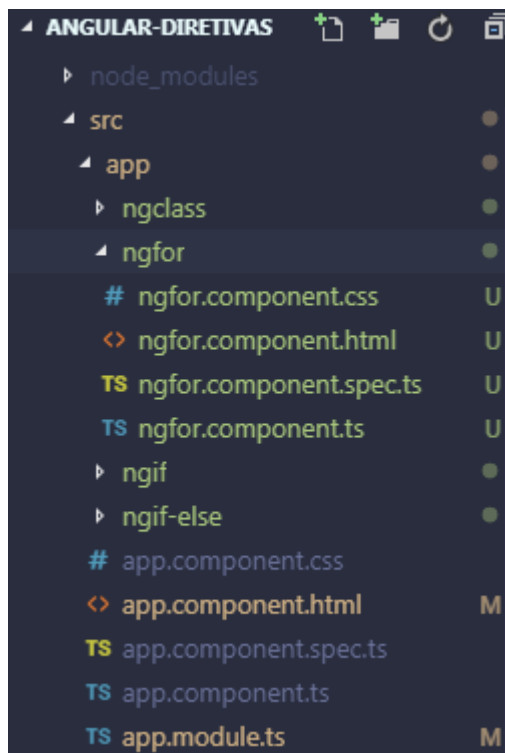
### Criando o componente ngfor

ng g c ngfor

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-diretivas\my-app>ng g c ngfor
CREATE src/app/ngfor/ngfor.component.html (20 bytes)
CREATE src/app/ngfor/ngfor.component.spec.ts (621 bytes)
CREATE src/app/ngfor/ngfor.component.ts (265 bytes)
CREATE src/app/ngfor/ngfor.component.css (0 bytes)
UPDATE src/app/app.module.ts (644 bytes)

C:\projetos-angular\angular-diretivas\my-app>
```



## src/app/ngclass.component.ts

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

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

  animais:Array<any> = [
    {tipo:'Cachorro', nome: 'Isabô', idade:5},
    {tipo:'Gato', nome: 'Fred', idade:3},
    {tipo:'Pato', nome: 'Donald', idade:7}
  ];

  constructor() { }

  ngOnInit() {
  }

}
```

## src/app/ngfor.component.html

```
<h1 class="container bg-dark text-white text-center my-4 py-4">[ngFor]</h1>

<div class="container">

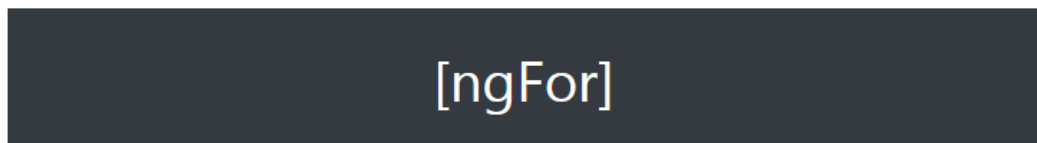
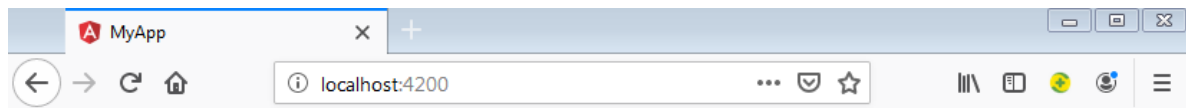
  <table class="table">
    <thead>
      <tr>
        <th scope="col">#</th>
        <th scope="col">Tipo</th>
        <th scope="col">Nome</th>
        <th scope="col">Idade</th>
      </tr>
    </thead>
    <tbody>
      <tr *ngFor="let animal of animais; index as i">
        <th scope="row">{{i+1}}</th>
        <td>{{animal.tipo}}</td>
        <td>{{animal.nome}}</td>
        <td>{{animal.idade}}</td>
      </tr>
    </tbody>
  </table>

</div>
```



src/app/app.component.html

```
<!-- <app-ngif></app-ngif> -->  
<!-- <app-ngif-else></app-ngif-else> -->  
<!-- <app-ngclass></app-ngclass> -->  
<app-ngfor></app-ngfor>
```

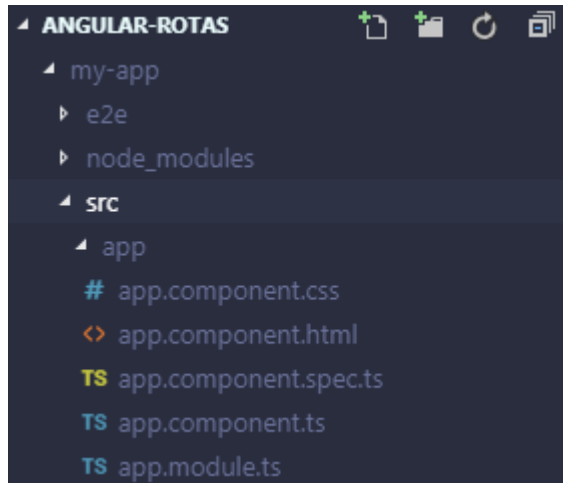


#	Tipo	Nome	Idade
1	Cachorro	Isabô	5
2	Gato	Fred	3
3	Pato	Donald	7

## Aula 13 - Configurando rotas (Parte 1)

- Crie uma pasta chamada **angular-rotas** e dentro dela entre com o seguinte comando:

**ng new my-app**

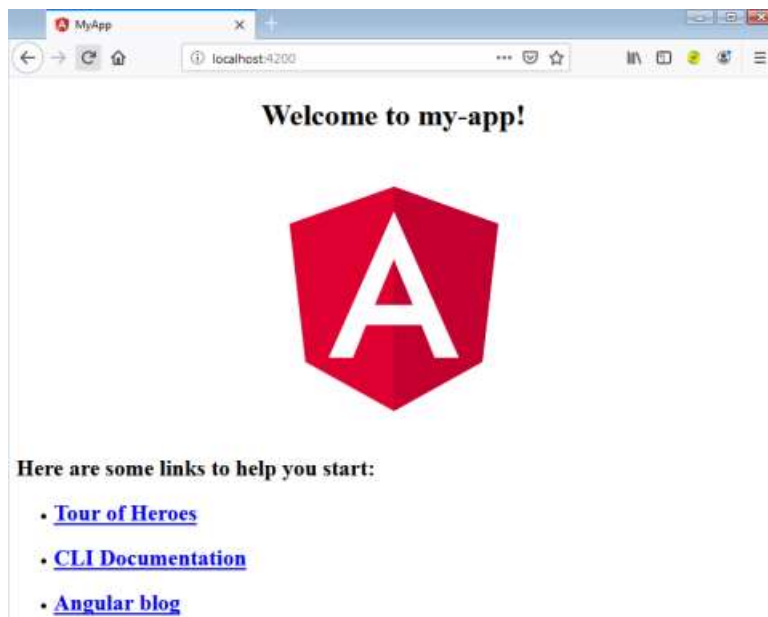


- Para iniciar o servidor do Angular, dentro da pasta **my-app**, entre com:

**ng serve**

- No navegador entre com:

**http://localhost:4200/**



- Crie os componentes a seguir:

ng g c header

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c header
CREATE src/app/header/header.component.html (21 bytes)
CREATE src/app/header/header.component.spec.ts (628 bytes)
CREATE src/app/header/header.component.ts (269 bytes)
CREATE src/app/header/header.component.css (0 bytes)
UPDATE src/app/app.module.ts (396 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

ng g c footer

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c footer
CREATE src/app/footer/footer.component.html (21 bytes)
CREATE src/app/footer/footer.component.spec.ts (628 bytes)
CREATE src/app/footer/footer.component.ts (269 bytes)
CREATE src/app/footer/footer.component.css (0 bytes)
UPDATE src/app/app.module.ts (478 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

ng g c contato

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c contato
CREATE src/app/contato/contato.component.html (22 bytes)
CREATE src/app/contato/contato.component.spec.ts (635 bytes)
CREATE src/app/contato/contato.component.ts (273 bytes)
CREATE src/app/contato/contato.component.css (0 bytes)
UPDATE src/app/app.module.ts (740 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

```

└─┬─ ANGULAR-ROTAS
   │
   └─ my-app
      ├── e2e
      ├── node_modules
      └─ src
         ├── app
         │   ├── contato
         │   ├── footer
         │   └─ header
         ├── # app.component.css
         ├── <> app.component.html
         ├── TS app.component.spec.ts
         ├── TS app.component.ts
         └─ TS app.module.ts

```

## src/index.html

```

<!doctype html>
<html lang="pt-br">
<head>
  <meta charset="utf-8">
  <title>MyApp</title>
  <base href="/">

  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="icon" type="image/x-icon" href="favicon.ico">
  <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
crossorigin="anonymous">
</head>
<body>
  <app-root></app-root>
</body>
</html>

```

### src/app/app.module.ts

```
import { RouterModule, Routes } from '@angular/router';
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

import { AppComponent } from './app.component';
import { HeaderComponent } from './header/header.component';
import { FooterComponent } from './footer/footer.component';
import { ContatoComponent } from './contato/contato.component';

const routes: Routes = [
  { path: 'contato', component: ContatoComponent }
];

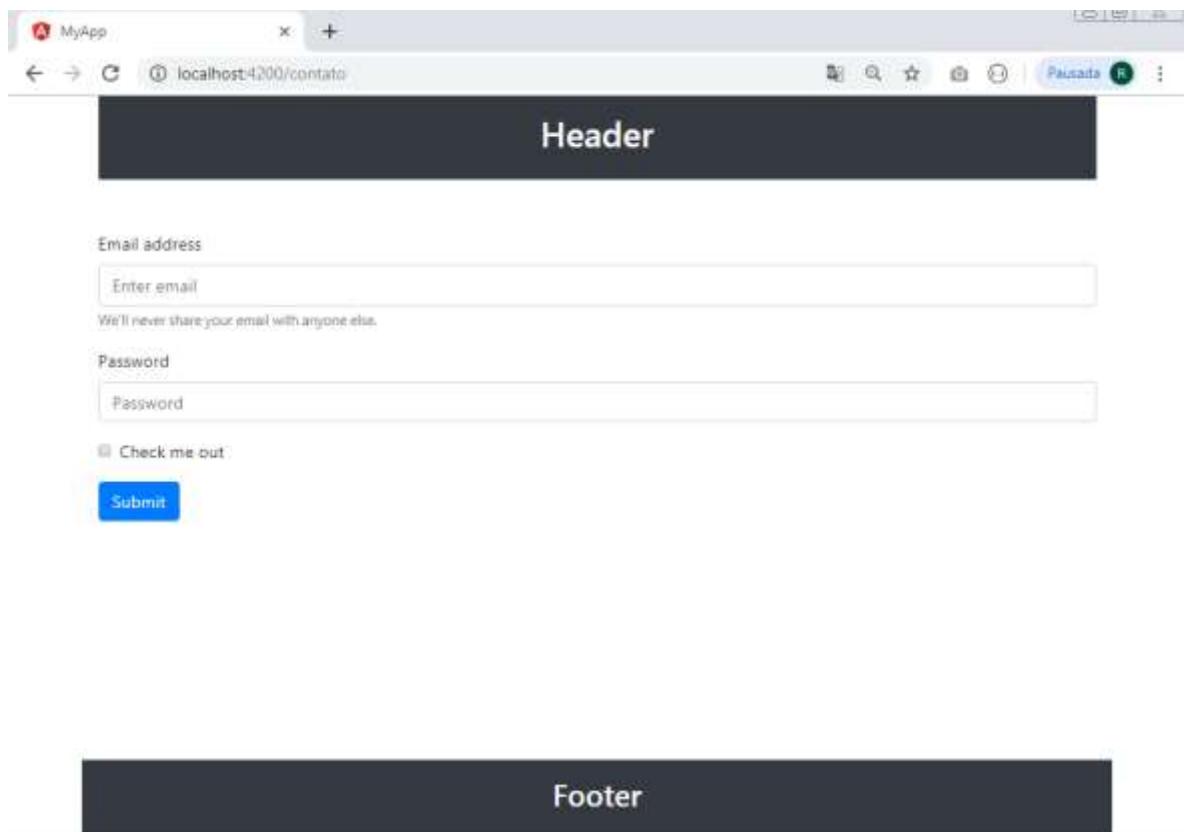
@NgModule({
  declarations: [
    AppComponent,
    HeaderComponent,
    FooterComponent,
    ContatoComponent
  ],
  imports: [
    BrowserModule,
    RouterModule.forRoot(routes)
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

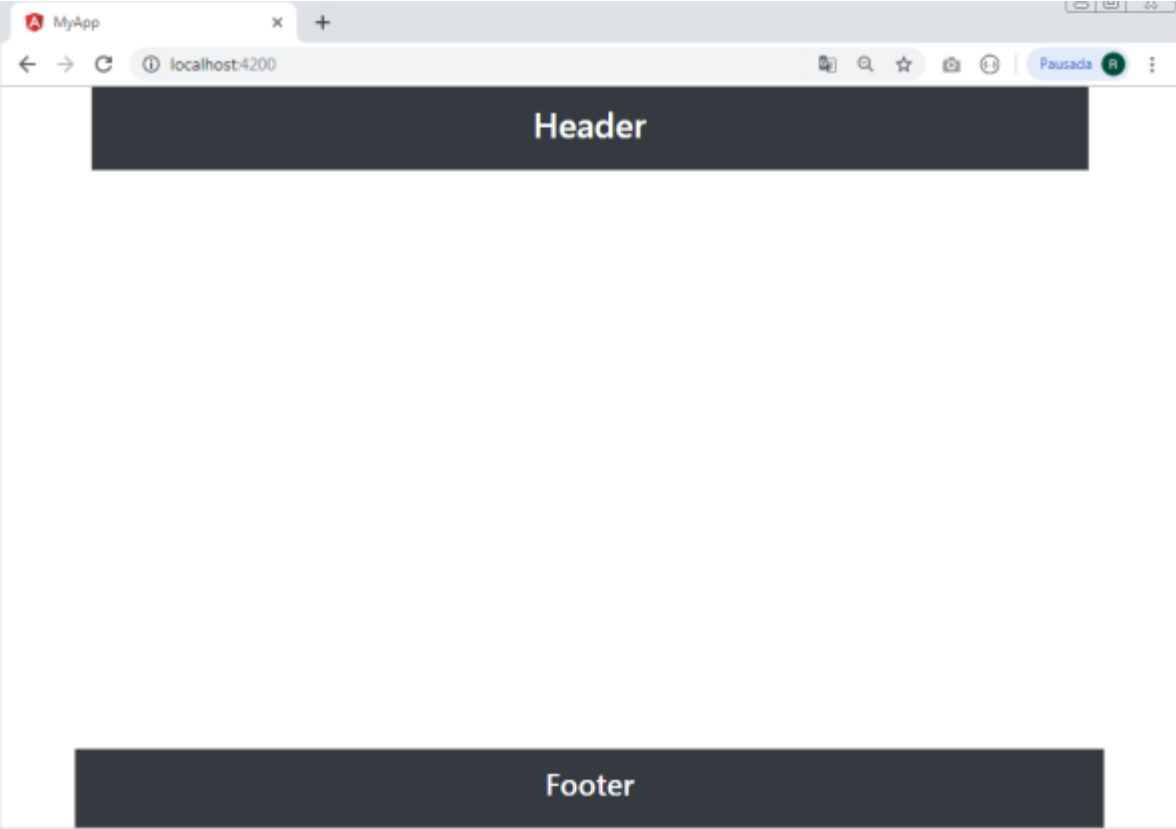
### src/app/app.component.html

```
<div class="container">
  <app-header></app-header>
  <router-outlet></router-outlet>
  <app-footer></app-footer>
</div>
```

src/app/contato/contato.component.html

```
<div class="mt-5">
  <form>
    <div class="form-group">
      <label for="exampleInputEmail1">Email address</label>
      <input type="email" class="form-control" id="exampleInputEmail1" aria-
describedby="emailHelp" placeholder="Enter email">
      <small id="emailHelp" class="form-text text-muted">We'll never share your email with anyone
else.</small>
    </div>
    <div class="form-group">
      <label for="exampleInputPassword1">Password</label>
      <input type="password" class="form-control" id="exampleInputPassword1"
placeholder="Password">
    </div>
    <div class="form-group form-check">
      <input type="checkbox" class="form-check-input" id="exampleCheck1">
      <label class="form-check-label" for="exampleCheck1">Check me out</label>
    </div>
    <button type="submit" class="btn btn-primary">Submit</button>
  </form>
</div>
```





## Aula 14 - Configurando rotas (Parte 2)

- Crie os componentes a seguir:

ng g c about

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c about
CREATE src/app/about/about.component.html (20 bytes)
CREATE src/app/about/about.component.spec.ts (621 bytes)
CREATE src/app/about/about.component.ts (265 bytes)
CREATE src/app/about/about.component.css (0 bytes)
UPDATE src/app/app.module.ts (988 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

ng g c home

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c home
CREATE src/app/home/home.component.html (19 bytes)
CREATE src/app/home/home.component.spec.ts (614 bytes)
CREATE src/app/home/home.component.ts (261 bytes)
CREATE src/app/home/home.component.css (0 bytes)
UPDATE src/app/app.module.ts (934 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

```
▲ ANGULAR-ROTAS
  ▲ my-app
    ▸ e2e
    ▸ node_modules
    ▲ src
      ▲ app
        ▸ about
        ▸ contato
        ▸ footer
        ▸ header
        ▸ home
        # app.component.css
        <> app.component.html
        TS app.component.spec.ts
        TS app.component.ts
        TS app.module.ts
```



## src/app/app.module.ts

```
import { RouterModule, Routes } from '@angular/router';
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

import { AppComponent } from './app.component';
import { HeaderComponent } from './header/header.component';
import { FooterComponent } from './footer/footer.component';
import { ContatoComponent } from './contato/contato.component';
import { AboutComponent } from './about/about.component';
import { HomeComponent } from './home/home.component';

const routes: Routes = [
  { path: 'contato', component: ContatoComponent },
  { path: 'about', component: AboutComponent },
  { path: '', component: HomeComponent, pathMatch: 'full' },
  { path: '**', redirectTo: '/', pathMatch: 'full' }
];

@NgModule({
  declarations: [
    AppComponent,
    HeaderComponent,
    FooterComponent,
    ContatoComponent,
    AboutComponent,
    HomeComponent
  ],
  imports: [
    BrowserModule,
    RouterModule.forRoot(routes)
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

## src/app/about/about.component.html

```
<div class="mt-5">
  <h2>Sobre Nós</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur,
  necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt
  tempore beatae ab minus, at earum cupiditate asperiores!</p>
</div>
```

## src/app/home/home.component.html

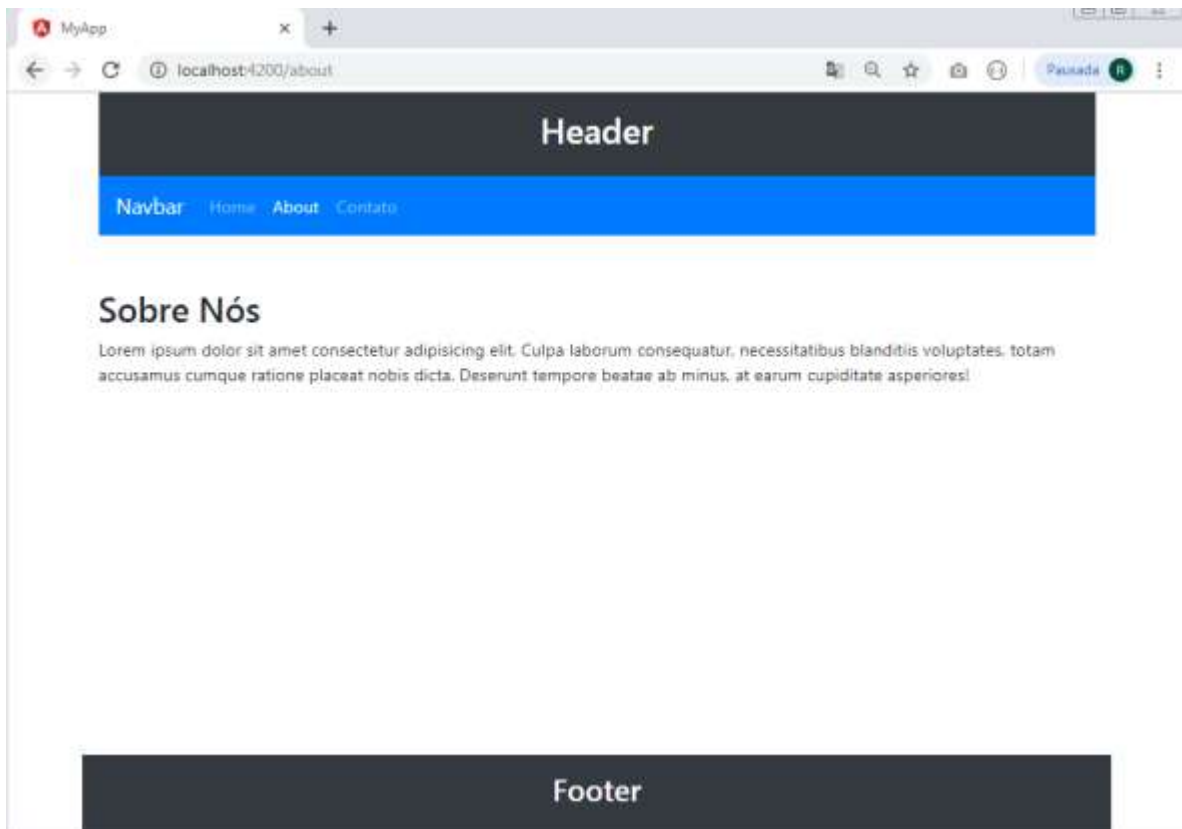
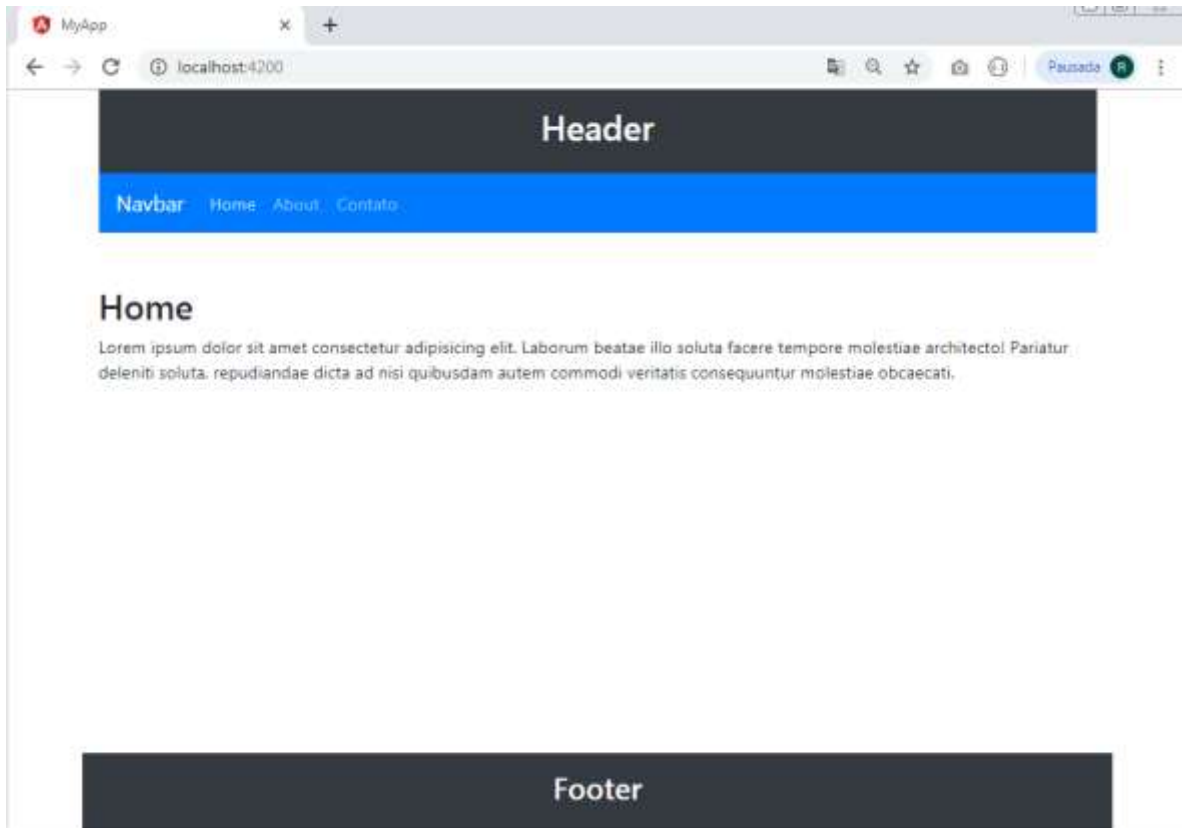
```
<div class="mt-5">
  <h2>Home</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Laborum beatae illo soluta facere
tempore molestiae architecto! Pariatur deleniti soluta, repudiandae dicta ad nisi quibusdam autem
commodi veritatis consequuntur molestiae obcaecati.</p>
</div>
```

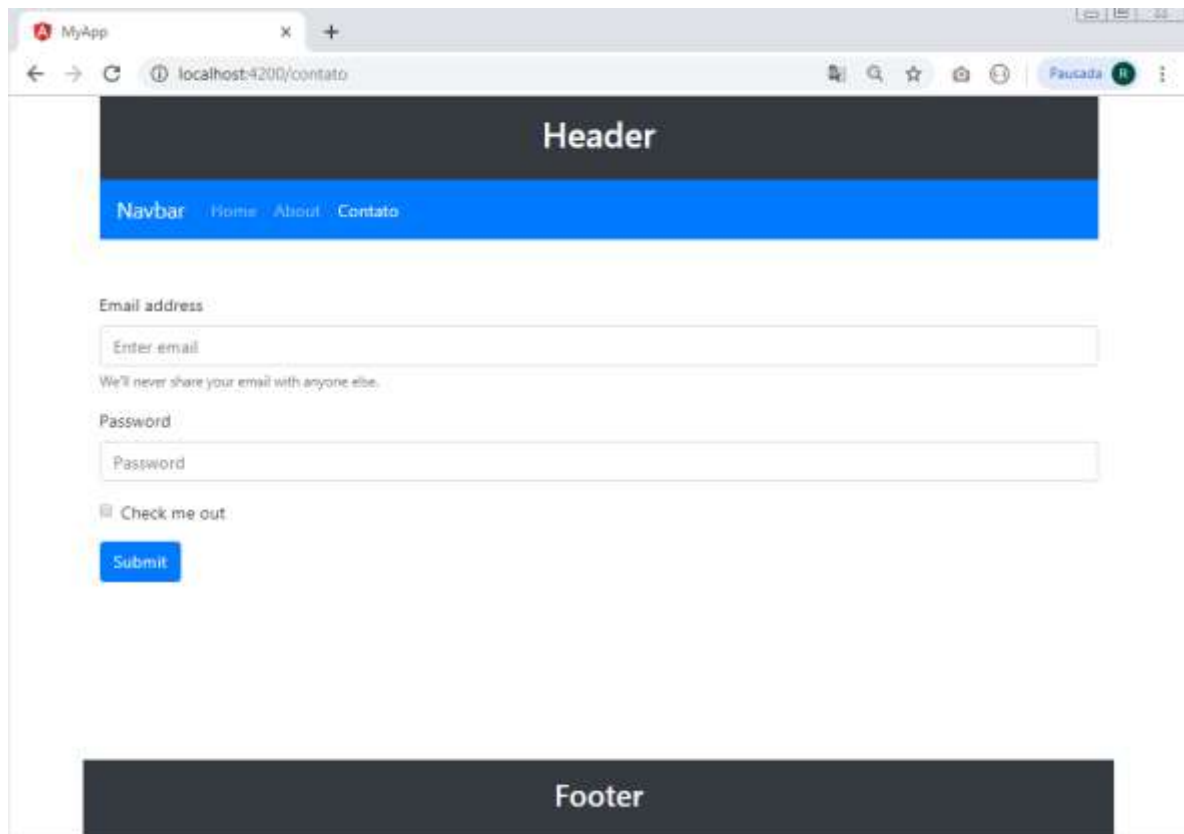
## src/app/header/header.component.html

```
<div class="bg-dark text-white text-center py-3">
  <h2>Header</h2>
</div>

<div>
  <nav class="navbar navbar-expand-lg navbar-dark bg-primary">
    <a class="navbar-brand" href="#">Navbar</a>
    <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-expanded="false"
aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>

    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="navbar-nav mr-auto">
        <li class="nav-item" routerLinkActive="active">
          <a class="nav-link" [routerLink]="['/home']">Home <span class="sr-
only">(current)</span></a>
        </li>
        <li class="nav-item" routerLinkActive="active">
          <a class="nav-link" [routerLink]="['/about']">About</a>
        </li>
        <li class="nav-item" routerLinkActive="active">
          <a class="nav-link" [routerLink]="['/contato']">Contato</a>
        </li>
      </ul>
    </div>
  </nav>
</div>
```



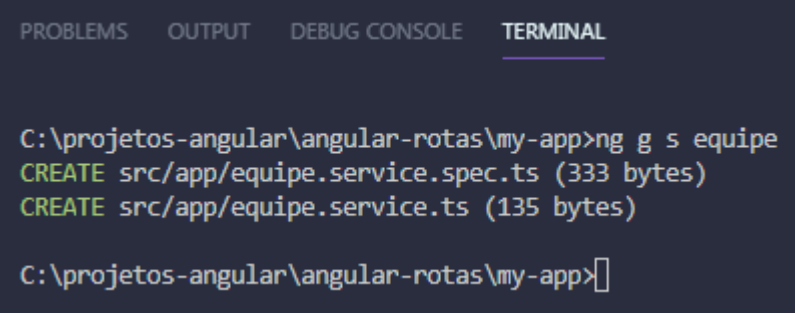


## Aula 15 - Fundamentos - Serviços

Os serviços servem para consumir informação que está disponível em todo o nosso site.

- Crie o seguinte serviço:

ng g s equipe



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g s equipe
CREATE src/app/equipe.service.spec.ts (333 bytes)
CREATE src/app/equipe.service.ts (135 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

### Vinculando o serviço à app.module.ts

#### src/app/app.module.ts

```
import { RouterModule, Routes } from '@angular/router';
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

// Serviços
import { EquipeService } from './equipe.service';

import { AppComponent } from './app.component';
import { HeaderComponent } from './header/header.component';
import { FooterComponent } from './footer/footer.component';
import { ContatoComponent } from './contato/contato.component';
import { AboutComponent } from './about/about.component';
import { HomeComponent } from './home/home.component';

const routes: Routes = [
  { path: 'contato', component: ContatoComponent },
  { path: 'about', component: AboutComponent },
  { path: '', component: HomeComponent, pathMatch: 'full' },
  { path: '**', redirectTo: '/', pathMatch: 'full' }
];
```

```

@NgModule({
  declarations: [
    AppComponent,
    HeaderComponent,
    FooterComponent,
    ContatoComponent,
    AboutComponent,
    HomeComponent
  ],
  imports: [
    BrowserModule,
    RouterModule.forRoot(routes)
  ],
  providers: [
    EquipeService
  ],
  bootstrap: [AppComponent]
})
export class AppModule { }

```

#### **src/app/about/about.component.ts**

```

import { Component, OnInit } from '@angular/core';
import { EquipeService } from '../equipe.service';

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

  equipe:any[] = [];

  constructor(private _servico:EquipeService) {
    this.equipe = _servico.obterEquipe();
  }

  ngOnInit() {
  }

}

```

## src/app/equipe.service.ts

```
import { Injectable } from '@angular/core';
```

```
@Injectable({  
  providedIn: 'root'  
})
```

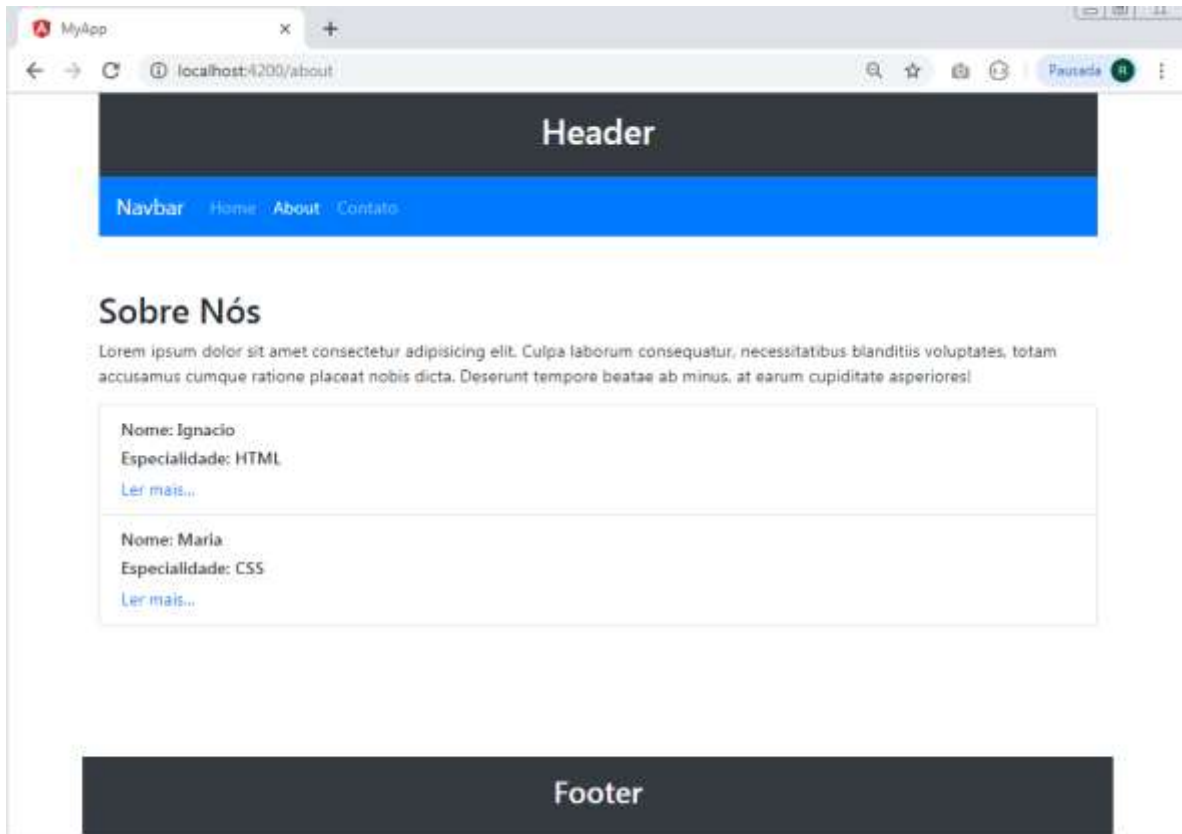
```
export class EquipeService {
```

```
  equipe:any[] = [  
    {  
      nome: 'Ignacio',  
      especialidade: 'HTML',  
      descricao: 'Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur,  
      necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt  
      tempore beatae ab minus, at earum cupiditate asperiores!'  
    },  
    {  
      nome: 'Maria',  
      especialidade: 'CSS',  
      descricao: 'Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur,  
      necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt  
      tempore beatae ab minus, at earum cupiditate asperiores!'  
    },  
  ]
```

```
  constructor() {  
    console.log('Funcionando serviço');  
  }
```

```
  obterEquipe(){  
    return this.equipe;  
  }
```

```
}
```

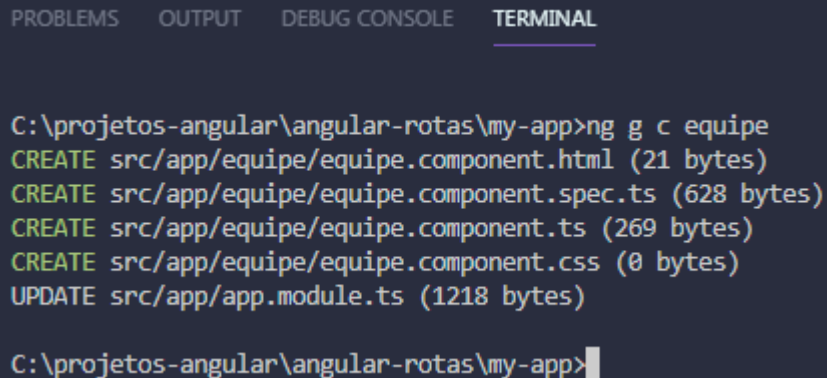




## Aula 16 - Rotas dinâmicas

- Crie o componente a seguir:

ng g c equipe



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

C:\projetos-angular\angular-rotas\my-app>ng g c equipe
CREATE src/app/equipe/equipe.component.html (21 bytes)
CREATE src/app/equipe/equipe.component.spec.ts (628 bytes)
CREATE src/app/equipe/equipe.component.ts (269 bytes)
CREATE src/app/equipe/equipe.component.css (0 bytes)
UPDATE src/app/app.module.ts (1218 bytes)

C:\projetos-angular\angular-rotas\my-app>
```

### src/app/app.module.ts

```
import { RouterModule, Routes } from '@angular/router';
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';

// Serviços
import { EquipeService } from './equipe.service';

import { AppComponent } from './app.component';
import { HeaderComponent } from './header/header.component';
import { FooterComponent } from './footer/footer.component';
import { ContatoComponent } from './contato/contato.component';
import { AboutComponent } from './about/about.component';
import { HomeComponent } from './home/home.component';
import { EquipeComponent } from './equipe/equipe.component';

const routes: Routes = [
  { path: 'contato', component: ContatoComponent },
  { path: 'equipe/:id', component: EquipeComponent },
  { path: 'about', component: AboutComponent },
  { path: '', component: HomeComponent, pathMatch: 'full' },
  { path: '**', redirectTo: '/', pathMatch: 'full' }
];
```

```

@NgModule({
  declarations: [
    AppComponent,
    HeaderComponent,
    FooterComponent,
    ContatoComponent,
    AboutComponent,
    HomeComponent,
    EquipeComponent
  ],
  imports: [
    BrowserModule,
    RouterModule.forRoot(routes)
  ],
  providers: [
    EquipeService
  ],
  bootstrap: [AppComponent]
})
export class AppModule { }

```

### src/app/about/about.component.html

```

<div class="mt-5">
  <h2>Sobre Nós</h2>
  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur,
  necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt
  tempore beatae ab minus, at earum cupiditate asperiores!</p>

  <ul class="list-group">
    <li class="list-group-item" *ngFor="let item of equipe, index as i">
      <h6>Nome: {{ item.nome }}</h6>
      <h6>Especialidade: {{ item.especialidade }}</h6>
      <a [routerLink]="['/equipe', i]">Ler mais...</a>
    </li>
  </ul>

</div>

```

## src/app/equipe.service.ts

```
import { Injectable } from '@angular/core';

@Injectable({
  providedIn: 'root'
})
export class EquipeService {

  equipe:any[] = [
    {
      nome: 'Ignacio',
      especialidade: 'HTML',
      descricao: 'Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur, necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt tempore beatae ab minus, at earum cupiditate asperiores!'
    },
    {
      nome: 'Maria',
      especialidade: 'CSS',
      descricao: 'Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa laborum consequatur, necessitatibus blanditiis voluptates, totam accusamus cumque ratione placeat nobis dicta. Deserunt tempore beatae ab minus, at earum cupiditate asperiores!'
    },
  ]

  constructor() {
    console.log('Funcionando serviço');
  }

  obterEquipe(){
    return this.equipe;
  }

  obterUm(i){
    return this.equipe[i];
  }

}
```

## src/app/equipe/equipe.component.ts

```
import { Component, OnInit } from '@angular/core';
import { Router, ActivatedRoute, ParamMap } from '@angular/router';
import { EquipeService } from '../equipe.service';

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

  equipe:any[] = [];

  constructor(private rota:ActivatedRoute, private _servico:EquipeService) {
    this.rota.params.subscribe(params=>{
      console.log(params['id']);
      this.equipe = this._servico.obterUm(params['id']);
    })
  }

  ngOnInit() {
  }

}
```

