# Criando um app Angular e consumindo uma API REST [1 de 3]

https://medium.com/@andrewchanm/criando-um-app-angular-7-e-consumindo-uma-api-rest-1-de-3-7169d90ed8c1



Olá pessoal, sou o Andrew desenvolvedor .net, sempre pensei em compartilhar meu conhecimento, esse é minha primeira série de posts e escolhi Angular , então podem fazer críticas e sugestões, será muito bom o feedback.

Vamos lá primeiro post, vou mostrar como criar uma aplicação em Angular 7 em alguns passos, acredito que vai ser em três partes, vou ser mais prático, vou deixar alguns links úteis no final do post que podem ajudar, bom chega de papo, vamos ao código!!!

## 1. Instalando o Angular CLI

npm install -g @angular/cli

depois de instalar: (deve estar nessa versão)

ng version

Angular CLI: 10.1.0

Node: 12.18.3 OS: win32 x64

Agora vamos criar nossa aplicação com o nome lista-crud-app

```
ng new CadastroVeicular
```

algumas perguntas coloque "y" e "scss", aqui estamos dizendo que queremos que nossa aplicação tenha rotas e para que use o sass como formato de estilo da aplicação(compilador css).

```
? Would you like to add Angular routing? Yes
? Which stylesheet format would you like to use? SCSS [http://sass-lang.com ]
```

agora vamos entrar na nossa pasta e rodar aplicação, para ver se está tudo certo!

```
cd CadastroVeicular
```

em seguida, comando para rodar nossa app, por padrão ela abre no <a href="http://localhost:4200">http://localhost:4200</a>, ficará conforme abaixo(imagem 1):

```
ng serve
```

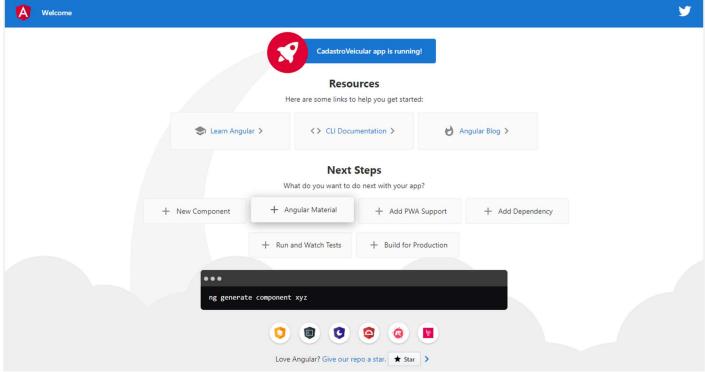


Imagem 1

# 2. Criando os nossos Componentes

Abra seu projeto em um editor, eu uso o Atom



Projeto aberto no Atom

Com o projeto em aberto, tecle CTRL + ' (tecla abaixo do ESC) para abrir o Terminal:

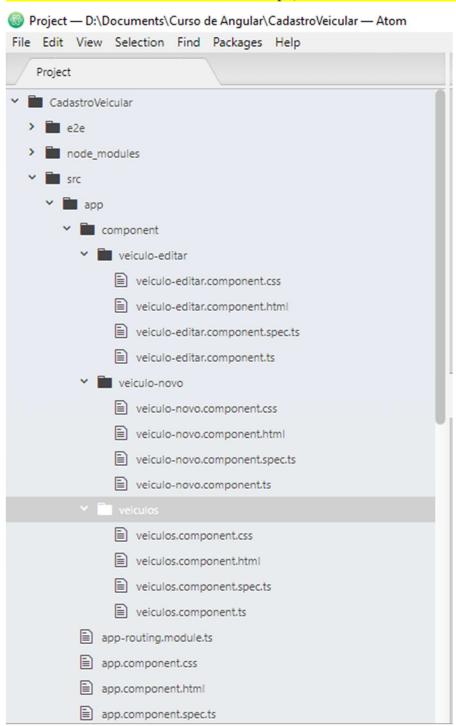
```
ng g c component/veiculos
ng g c component/veiculo-novo
ng g c component/veiculo-editar
```

aqui nós criamos o serviço e os componentes que precisamos para a nossa app tenha um CRUD (Create, Read, Update, Delete).

O Angular CLI provê um conjunto de comandos que permitem criar todos os artefatos do Angular, como diretivas, componentes, pipes e muitos outros. A sintaxe básica para isso é:

ng generate <tipo do artefato> <nome>

**Nota:** Para executar um comando desse tipo, você deve estar dentro do diretório do projeto.



Podemos ver que foi criado uma pasta para cada componente.

#### Abra o arquivo "src/app/app.module.ts"

```
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';
import { FormsModule, ReactiveFormsModule } from '@angular/forms';
import { HttpClientModule } from '@angular/common/http';
import { AppRoutingModule } from './app-routing.module';
import { AppComponent } from './app.component';
import { VeiculosComponent } from
'./component/veiculos/veiculos.component';
import { VeiculoNovoComponent } from './component/veiculo-novo/veiculo-
novo.component';
import { VeiculoEditarComponent } from './component/veiculo-editar/veiculo-
editar.component';
@NgModule({
  declarations: [
    AppComponent,
   VeiculosComponent,
   VeiculoNovoComponent,
   VeiculoEditarComponent
  ],
  imports: [
   BrowserModule,
   AppRoutingModule,
   FormsModule,
   ReactiveFormsModule,
   HttpClientModule
 providers: [],
 bootstrap: [AppComponent]
export class AppModule { }
```

#### Componentes foram declarados no módulo

Ao realizar a criação dos componentes o próprio angular já importa e declara os componentes para nós, menos trabalho, mas é importante saber que sempre que temos um novo componente deve importar para o modulo que precisará injetar esse componente no contexto.

# 3. Configurando as Rotas

O componente de rotas já foi adicionado quando criamos o app, então só precisamos configurar ele, com os nosso componentes.

Vamos abrir o "src/app/app-routing.module.ts" e adicionar os seguintes imports.

```
import { VeiculosComponent } from
'./component/veiculos/veiculos.component';
import { VeiculoNovoComponent } from './component/veiculo-novo/veiculo-
novo.component';
import { VeiculoEditarComponent } from './component/veiculo-editar/veiculo-
editar.component';
```

e nossa constante array de rotas.

```
const routes: Routes = [
    { path: '', redirectTo: 'veiculos', pathMatch: 'full' },
    { path: 'veiculos', component: VeiculosComponent },
    { path: 'veiculos/:id', component: VeiculoEditarComponent },
    { path: 'veiculo-novo', component: VeiculoNovoComponent },
    { path: 'veiculo-editar', component: VeiculoEditarComponent }
];
```

#### abra e edite "src/app/app.component.html", vemos que já tem o <router-outlet></router-outlet>

```
<div>
  <nav class="navbar navbar-expand navbar-dark bg-dark">
        <a class="navbar-brand" href="#"> <img
            width="40"
            alt="Tinnova"</pre>
```

src="data:image/svg+xml;base64,PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRG LTgiIHN0YW5kYWxvbmU9Im5vIj8+CjxzdmcKICAgeG1sbnM6ZGM9Imh0dHA6Ly9wdXJsLm9yZy9 kYy91bGVtZW50cy8xLjEvIgogICB4bWxuczpjYz0iaHR0cDovL2NyZWF0aXZ1Y29tbW9ucy5vcm cvbnMjIqogICB4bWxuczpyZGY9Imh0dHA6Ly93d3cudzMub3JnLzE5OTkvMDIvMjItcmRmLXN5b nRheClucyMiCiAgIHhtbG5zOnN2Zz0iaHR0cDovL3d3dy53My5vcmcvMjAwMC9zdmciCiAgIHht bG5zPSJodHRwOi8vd3d3LnczLm9yZy8yMDAwL3N2ZyIKICAgeG1sbnM6c29kaXBvZGk9Imh0dHA 6Ly9zb2RpcG9kaS5zb3VyY2Vmb3JnZS5uZXQvRFREL3NvZG1wb2RpLTAuZHRkIgogICB4bWxucz ppbmtzY2FwZT0iaHR0cDovL3d3dy5pbmtzY2FwZS5vcmcvbmFtZXNwYWNlcy9pbmtzY2FwZSIKI CAgc29kaXBvZGk6ZG9jbmFtZT0iVGlubm92YS5zdmciCiAgIGlua3NjYXBlOnZlcnNpb249IjEu MCAoNDAzNWE0ZmI0OSwgMjAyMC0wNS0wMSkiCiAgIGlkPSJzdmc4IgogICB2ZXJzaW9uPSIxLjE iCiAgIHZpZXdCb3g9IjAgMCAyOTcgMjEwIgogICBoZWlnaHQ9IjIxMG1tIgogICB3aWR0aD0iMj k3bW0iPqoqIDxkZWZzCiAqICAqaWQ9ImRlZnMyIiAvPqoqIDxzb2RpcG9kaTpuYW11ZHZpZXcKI CAgICBpbmtzY2FwZTp3aW5kb3ctbWF4aW1pemVkPSIwIgogICAgIGlua3NjYXBlOndpbmRvdy15 PSIwIgogICAgIGlua3NjYXBlOndpbmRvdy14PSIwIgogICAgIGlua3NjYXBlOndpbmRvdy1oZWl naHQ9IjcyOCIKICAgICBpbmtzY2FwZTp3aW5kb3ctd2lkdGg9IjEzNjYiCiAgICAgc2hvd2dyaW Q9ImZhbHNlIgogICAgIGlua3NjYXBlOmRvY3VtZW50LXJvdGF0aW9uPSIwIgogICAgIGlua3NjY XBlOmN1cnJlbnQtbGF5ZXI9ImxheWVyMSIKICAgICBpbmtzY2FwZTpkb2N1bWVudC11bml0cz0i bW0iCiAqICAqaW5rc2NhcGU6Y3k9IjM4Mi44NjIwMiIKICAqICBpbmtzY2FwZTpjeD0iODgxLjg 3NDUzIgogICAgIGlua3NjYXBlOnpvb209IjAuMzUiCiAgICAgaW5rc2NhcGU6cGFnZXNoYWRvdz 0iMiIKICAqICBpbmtzY2FwZTpwYWdlb3BhY2l0eT0iMC4wIqoqICAqIGJvcmRlcm9wYWNpdHk9I jEuMCIKICAqICBib3JkZXJjb2xvcj0iIzY2NjY2NiIKICAqICBwYWdlY29sb3I9IiNmZmZmZmYi CiAgICAgaWQ9ImJhc2UiIC8+CiAgPG1ldGFkYXRhCiAgICAgaWQ9Im1ldGFkYXRhNSI+CiAgICA 8cmRmOlJERj4KICAgICAgPGNjOldvcmsKICAgICAgICAgcmRmOmFib3V0PSIiPgogICAgICAgID xkYzpmb3JtYXQ+aW1hZ2Uvc3ZnK3htbDwvZGM6Zm9ybWF0PqoqICAqICAqIDxkYzp0eXBlCiAqI CAqICAqICAqcmRmOnJlc291cmNlPSJodHRwOi8vcHVybC5vcmcvZGMvZGNtaXR5cGUvU3RpbGxJ bWFnZSIgLz4KICAgICAgICA8ZGM6dGl0bGU+PC9kYzp0aXRsZT4KICAgICAgPC9jYzpXb3JrPgo gICAgPC9yZGY6UkRGPgogIDwvbWV0YWRhdGE+CiAgPGcKICAgICBpZD0ibGF5ZXIxIgogICAgIG lua3NjYXBlOmdyb3VwbW9kZT0ibGF5ZXIiCiAgICAgaW5rc2NhcGU6bGFiZWw9IkxheWVyIDEiP qoqICAqPHBhdGqKICAqICAqIG1kPSJwYXRoODqzIqoqICAqICAqZD0ibSAzOC4yNTMwNzqsNTYu MjIxMTk3IGMqLTIuNzUzMDA0LDEuMjU1OTq0IC03Ljq1ODIwNiw2LjE0Mzc5NCAtNi43MDI3NTc sOS40ODq4MyAwLjq2MzE2MywyLjQ5ODkwNSA0LjIwNjk4NSw0Ljc4NDQxMyA2LjA0MDkyNCw2Lj YxODMzIGwgMTQuNTYwMzIzLDE0LjU2MDMyNSA0LjYzMjgzMSw0LjYzMjgzMSBjIDAuNTU2MTYsM C41NTcyNjMqMS42MTkwNjMsMS4zMjYzMTMqMS41OTq50DqsMi4yMDYxMDkqLTAuMDM2NjIsMS42 MDc1OTMgLTMuMTgxNjUyLDMuNzg4NzczIC00LjI0NjMyLDQuODUzNDQyIEwgNDMuOTg4OTYzLDE wOC43MjkxNyBjIC0xLjA4MjA5NywxLjA4MjEgLTMuNDIyMzM4LDIuNjY3ODUgLTMuODEzOTIyLD QuMTkxNjEgLTAuMjcwNjksMS4wNTM4NiAwLjk2NjA1NSwyLjAwMjA0IDEuNjA4MDMzLDIuNjQ3M zMgMS44MzMwNTYsMS44NDI3NiAzLjY2NDEyNywzLjY4OTUgNS41MTUwNTMsNS41MTOzOSAwLjYw NTEZNiwwLjU5Njc1IDEuNDU0NDg4LDEuNjM3ODIgMi40MjY3MjEsMS4zODgwOCAwLjg3NDcyMiw tMC4yMjQ4IDEuNTk2MzQxLC0xLjIxODg3IDIuMjA2MTA5LC0xLjgyODQyIGwgNC42MzI4MzEsLT QuNjMyODMgMTQuNTYwMzIzLC0xNC41NjAzMiBjIDIuNjc3MTE3LC0yLjY3NzExNyA1LjUzMTgxN ywtNS4zMjMxMjYgNC40NjQ5NDcsLTkuNDg2Mjc2IC0wLjczODM5LC0yLjg4MTYyIC0zLjMzMjk5

```
LC00LjgyNDU0MSAtNS4zNDczOTEsLTYuODM4OTQgTCA1OC4xMDgwNjQsNzIuOTkwMTkgNDQuNDM
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NjIzIDcuNDA1NDY4LC01Ljq4NTI0IDYuNTA4MjQ0LC05LjEzOTI1IC0wLjY5OTExNiwtMi41MzU
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LTMuNTgwNzQxIDQuMjA4OTcsLTQuNjMyODM1IEwgNDMuNzY4MzUyLDg4LjY1MzU3IGMgMS4wNzE
1MDcsLTEuMDcxNTA4IDMuMzq4NTq0LC0yLjY1MTUyNCAzLjczMTQxNCwtNC4xOTE2MDkqMC4yMT
Y0MTksLTAuOTczMTE1IC0wLjkyOTY1NSwtMS44Mjc3NjIgLTEuNTI1NTI1LC0yLjQyNjcyMSAtM
S44MzM0OTqsLTEuODQzMjA1IC0zLjY3NDcxNywtMy42Nzq5MDkqLTUuNTE1MDUzLC01LjUxNTI3
NCAtMC42NDI4NjEsLTAuNjQxNTqxIC0xLjU5MzY5NCwtMS45NjAzMjqqLTIuNjQ3MzMyLC0xLjU
yNTIxNyBtIDU0LjcxMjQwNiwzLjYzMzgxNiBjIC0xLjY0ODE4LDAuNDM4MzU0IC0yLjU2OTI0LD
IuOTg1OTcgLTEuMDUzNjQsNC4xNTYwOTEgMS41NTM3NywxLjE5OTI0MSA2LjE4NzY5NywwLjM1M
zQxOCA4LjExMjMwNywwLjM1MzYzOSAwLjkxNTA5MSwwIDIuMjk4MTAxLCOwLjIwOTgwMSAyLjg2
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DgwOCAtNS4wMTA3NCwtMS4wMzQ1NTYgLTExLjIwMTc0LC0wLjA3NTg5IC0xNi4zMjQ5OSwtMC4w
NzU4OSAtMi43MTk2OTEsMCAtNi4xOTE4OTEsLTAuNTc2ODMxIC04LjgyMzU1OCwwLjEyMzEwMSB
tIDMzLjk3MzIwOCwwLjAxNjc3IGMqLTQuMTA4LDAuNTQ2NDUzIC0zLjIyMzU3LDYuMzE4NTE5ID
AuODgyNDQsNS43ODcyODggMy43MDk1NywtMC40ODAyNyAyLjY2MywtNi4yNTg3MzQgLTAuODgyN
DQsLTUuNzg3Mjg4IG0gMjAuMDc1NTksOS4wMTk0NTkgYyAtMS45Nzk5OCwwLjQxODk0MSAtNC4x
NDU1LDAuNTcyOTI3IC01Ljk1NjQ5LDEuNTUxOTk5IC01Ljg0ODg0LDMuMTYyMjM3IC00LjQxMjI
yLDEwLjY3NDI2MiAtNC40MTIyMiwxNi4yMDMyMTYgMCwyLjY2ODA3IC0wLjg4Nzk2LDcuMjIyOC
AwLjEzMzAzLDkuNjgyODQgMC4zMTgxMiwwLjc2NjQgMS4xMTQ5NywwLjg4MzU0IDEuODUyNDcsM
C45MDI5NiAzLjc0MDY4LDAuMDk3NyAyLjY0NzMzLC00LjY5MDq1IDIuNjQ3MzMsLTcuMjc2NjQq
MCwtNi4yNDkwMiAtMi4xNjIyMSwtMTYuNTQyMjkxIDYuODM4OTQsLTE2LjU0NTqyMSAxLjAwMjQ
2LC00LjQxZS00IDIuMTEzMDEsLTAuMTI4ODM2IDMuMDg4NTUsMC4xMzk4NjggMS42NzEzNSwwLj
Q2MDYzNiAzLjQ1OTQsMS42ODMyNjIgNC4wMzY1MiwzLjM4OTkwOCAwLjQ0MDc4LDEuMzAzMzcgM
C4xNTUwOSwzLjA0OTcyNiAwLjE1NTA5LDQuNDEyMjI1IHYgOS40ODYyNyBjIDAsMi43NzE3NSAt
MC43MDU3Myw2LjgyNzAzIDMuMzA4MjgsNi4zNzM2NyAxLjQ50DYxLC0wLjE2OTIxIDEuNTQzMTg
sLTEuMzqwNTgqMS41NDUxNiwtMi42MjMyOSB2IC03LjcyMTM4IGMqMCwtNS41MjY5NyAxLjU0MD
k3LC0xMy4zOTkwMjkgLTQuNDEyMjIsLTE2LjQ5MzMxOSAtMS4zODg5NiwtMC43MjE4MzkgLTIuN
zA1MzUsLTAuNzY5OTMyIC00LjE5MTYxLC0xLjAzNzUzMyAtMS41ODUwOSwtMC4yODUyNSAtMi45
OTEOOCwtMC43OTIOMzUqLTQuNjMyODMsLTAuNDQOOTczIGOqMzAuMDAzMDksMCBjICOyLjExNDk
5LDAuNDQ3NjIgLTQuMjYzOTYsMC42NjQ5MjIgLTYuMTc3MSwxLjc2NDg4OCAtNS42MDc5MywzLj
IyNDQ1IC00LjE5MTYxLDEwLjgwMzA5NyAtNC4xOTE2MSwxNi4yMTA5MzcgdiA3LjUwMDc3IGMgN
i42ZS00LDEuNDMzNzUgMC4wMTgzLDIuNzQ5MDQgMS43NjUxMSwyLjg10DI0IDQuMTQzMDcsMC4y
NTkqMy4wODqzMywtNC4zNjY1NSAzLjA4ODMzLC03LjI3MDQ2IDAsLTYuMTUwNjMqLTIuMjk0NTc
sLTE2LjU0MjI5MSA2LjYxODMzLC0xNi41NDU4MjEgMS4wMDI0NiwtNC40MWUtNCAyLjExMzAxLC
OwLjEyODgzNiAzLjA4ODU1LDAuMTM5ODY4IDYuNjAwNjgsMS44MTgyNzYgNC40MTIyMiwxMS43N
jIwOTMgNC40MTIyMiwxNy4wNjc3OTMgMCwyLjkxNDkzIC0wLjg3NDcyLDcuMDcwMzYgMy4zMDgw
Niw2LjU5NDI4IDEuNDg5MzUsLTAuMTY5NDMgMS4zMjQ3NywtMS40Mzg4MyAxLjMyNDc3LC0yLjY
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EslTE2LjIwODUxMSAtMS41MDQxMiwtMC44NDIyOTMgLTMuMDAyNzMsLTAuODUzOTg1IC00LjYzM
jgzLC0xLjE3NzQwMSAtMS40ODcxMywtMC4yOTQ5NTcgLTIuODgwNTEsLTAuNjkzNjAxIC00LjQx
```

```
MjIyLC0wLjM2OTMwMyBtIDMwLjQ0NDMyLC0wLjAxMTY5IGMgLTMuMjA5MDEsMC41NzcxMTggLTY
uNjkyNDYsMS4wMTQxNDkgLTguOTcyNDcsMy42NTY0MDYgLTEuMTExODgsMS4yODg10DkgLTEuNT
gxMTIsMi44MDM5NjYgLTIuMDA0MjUsNC40MDM2MTYgLTEuMjkzLDQuODg3NjMzIC0xLjQzNTc0L
DEzLjM1MTqyMyAyLjM4MjM4LDE3LjE5ODqzMyAzLjA3ODQsMy4xMDE1NyA4Ljq2MTA2LDMuNzY5
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3NTAzOCwtMS4xNjEwNyA1LjcxMzgzLC0yLjUzODEzIDUuNTE1MjgsLTguNDU2NjggNS41MTUyOC
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MjUqbSAtODIuMDE2OTqsMC43ODYwMzcqYyAtMS40MzU5NiwwLjq3ODAzMiAtMC43MTIxMyw1LjE
zNjkyNyAtMC43MTIxMyw2LjYxMjE1MiB2IDEzLjAxNjA0NiBjIDAsMi4wNDI2NCAtMC4zMjA5OS
w0LjM4NzUxIDAuMDUwMyw2LjM5Njg0IDAuMjk4NywxLjYxNTk3IDIuNjA1NjMsMi4wMTE3NSAzL
jg5NjY1LDEuMjg1MDYgMS42NDgxOCwtMC45Mjc2NyAwLjkwNjQ5LC00Ljk2NjQgMC45MDY0OSwt
Ni41Nzq4NCBWIDk1LjQ5MjUxIGMqMCwtMS45Mjq1ODEqMC40NTkwOSwtNC41MzM1NTUqLTAuMDk
10CwtNi4zODQ3MDIqLTAuMzYzMTIsLTEuMjEyNDc4IC0zLjEyMTIsLTEuMjMzODc4IC00LjA0NT
U2LC0wLjY2ODY3MiBtIDk5LjI5NTY3LDAgYyAtMC43NzY5OSwwLjUyNjgxOSAtMC4yNTg1NiwxL
jY5NTYxNiAtMC4xMzM5MSwyLjQyMDU0NCAwLjQyMDkyLDIuNDQ1NDcyIDEuMjM10DYsNC44OTYw
MTkqMS45MDkzOSw3LjI4MDE2MiAxLjAzMTEzLDMuNjQ5MTI4IDEuODUwMDQsNy4zNzUyNDqqMi4
4NzYxLDExLjAzMDU0OCAwLjUzNzE5LDEuOTE0NDYgMS4xMjQ0NSw0LjMxNjA0IDIuNzk4NjcsNS
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jM0NTczLC00LjR1LTQgMi41MzcwMiwtMC4xNDAzMSAzLjc1MDM4LC0wLjc3OTIgMi4xMjY2OSwt
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```

Agora podemos ficar navegando entre essas rotas, rode novamente(ng serve) e teste, ficará assim.



## 4. Considerações Finais

Bom aqui nós conseguimos criar um app com rotas.

No próximo artigo irei adicionar o Bootstrap para dar um "show" no front-end, adicionar nossa service para acessar a nossa Api REST(criarei em um outro post)

Fiquem ligados!

É triste mas voltarei em breve com a Parte 2, fico a disposição a perguntas e dúvidas, abraços

## Referências

Documentação Oficial Angular

**Link sobre Rotas** 

O que é REST?

**Criando Artefatos**