Desenvolvendo com Angular CLI

Vanessa Me Tonini
goo.gl/LCnz2X

Instrutora @ Caelum

Frontend Dev

Agile Coach

Voluntária @ Marialab

meu primeiro contato

alura
Conheça nossas
carreiras
LOGIN
MATRICULE-SE
Cursos online de tecnologia
Na Alura a sua carreira está pronta para decolar
MATRICULE-SE JÁ
Cursos de
Mobile
IOS, Android, Phonegap, e mais...
Cursos de
Programação
Java, C#, Ruby, PHP, Python, e mais...
Cursos de
Front-end
HTML, CSS, Angular, e mais...
Cursos de
Infraestrutura
Linux, SQL, Git, Docker, e mais...
Cursos de
Design & UX
Photoshop, Illustrator, Usabilidade, e mais...
Cursos de
Business
Agilidade, Startup, Marketing, SEO, e mais...

alura

CURSOS COMUNIDADE 47.3K xp VANESSA

Curso Angular 2: webapps ainda mais poderosas parte 1

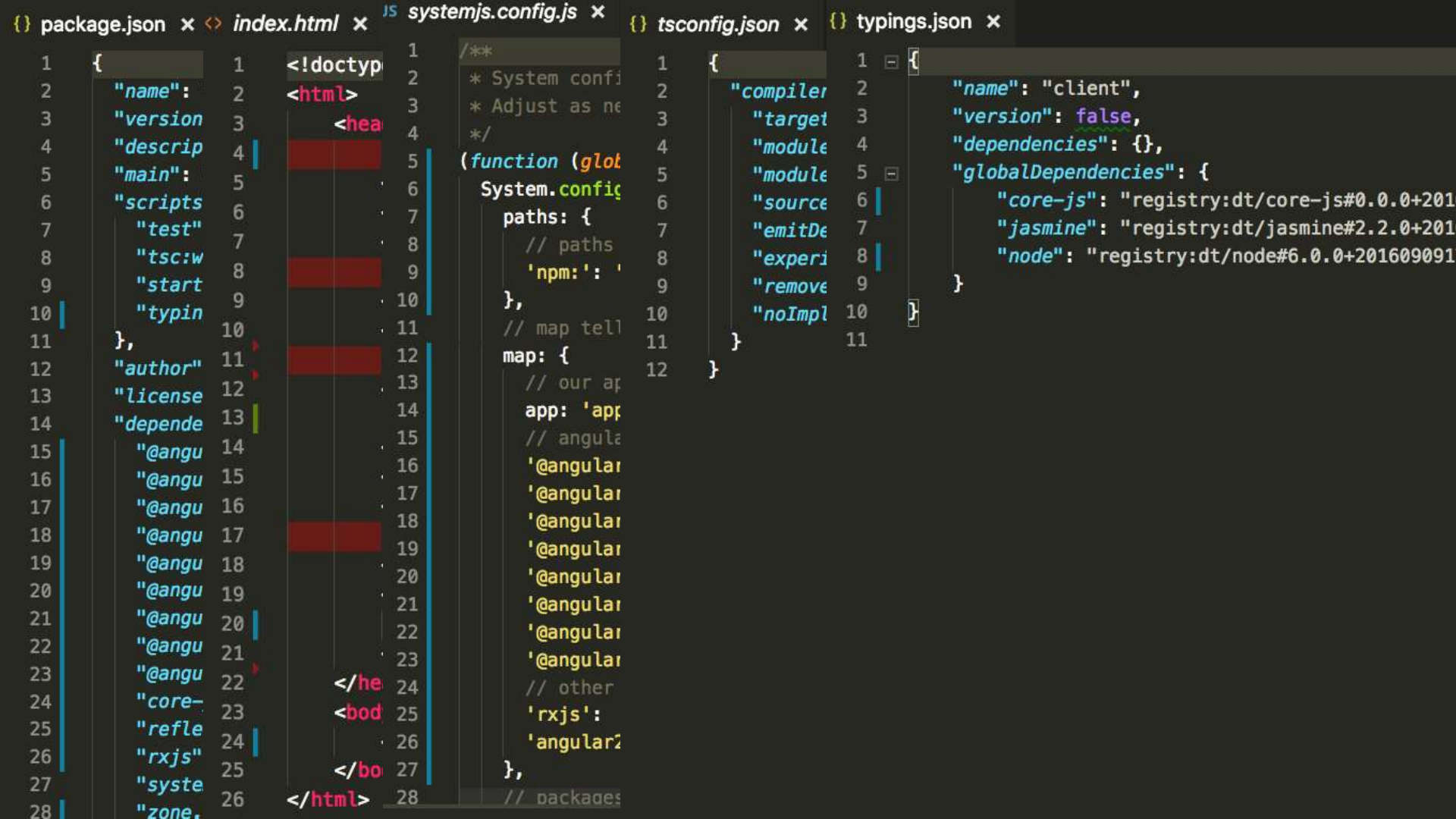
Nota	Nível	Última atualização	Carga horária
9.2	Avançado	11/09/2017	18h

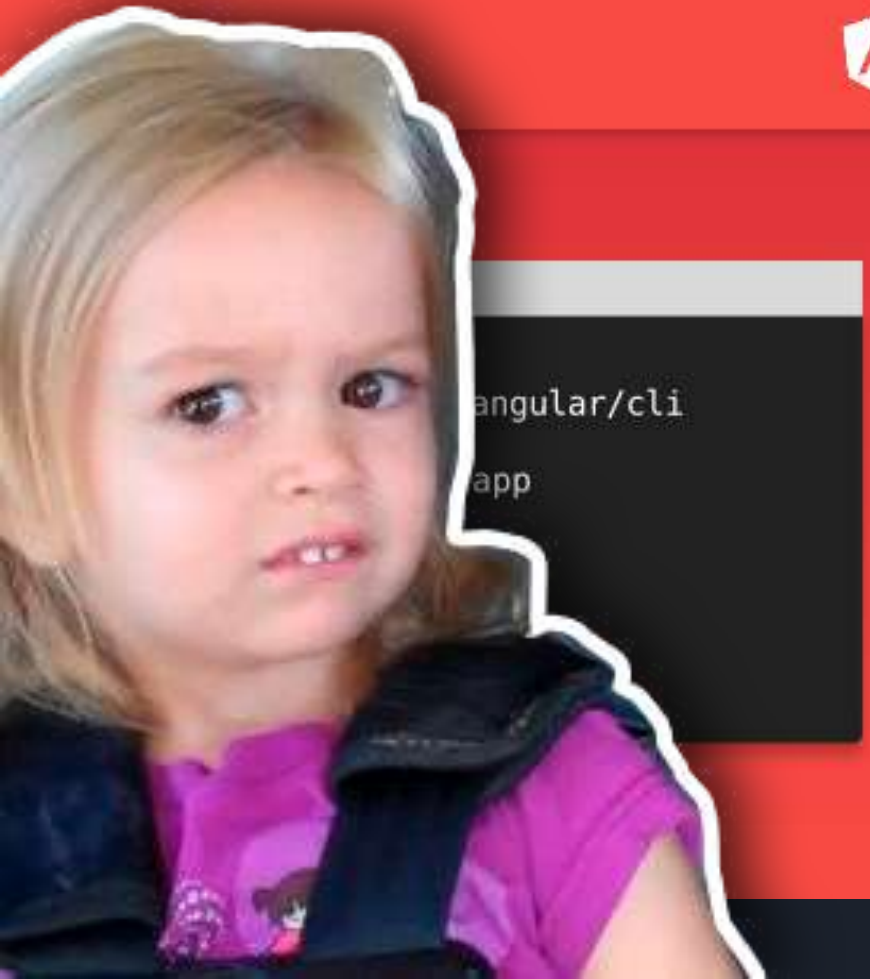
Acessar Curso | Pausar | Certificado | Favoritar

Aulas

Atividades Concluídas

Pré-requisitos:


package.json
index.html
systemjs.config.js
tsconfig.json
typings.json
{
"name":
"version
"descrip
"main":
"scripts
"test"
"tsc:w
"start
"typin
},
"author"
"license
"depende
"@angu
"@angu
"@angu
"@angu
"@angu
"@angu
"@angu
"@angu
"@angu
"core-
"refle
"rxjs"
"syste
"zone.
<!doctyp
<html>
<hea
</he
<bod
</bo
</html>
/**
* System confi
* Adjust as ne
*/
(function (glob
System.config
paths: {
// paths
'npm:': '
},
// map tell
map: {
// our ap
app: 'app
// angula
'@angular
'@angular
'@angular
'@angular
'@angular
'@angular
'@angular
'@angular
// other
'rxjs':
'angular2
},
// packages
{
"compiler
"target
"module
"module
"source
"emitDe
"experi
"remove
"noImpl
}
}
{
"name": "client",
"version": false,
"dependencies": {},
"globalDependencies": {
"core-js": "registry:dt/core-js#0.0.0+201
"jasmine": "registry:dt/jasmine#2.2.0+201
"node": "registry:dt/node#6.0.0+201609091
}
}



ANGULAR CLI

Angular CLI

A command line interface for Angular

GET STARTED

Requisitos
Node e npm

npm install -g @angular/cli

ng

“o comando”

```
ng -v
```

Criando um novo projeto

SEARCH DOCS...

DOCS HOME

CORE DOCUMENTATION

QUICKSTART

CLI QUICKSTART

GUIDE

1. Overview
2. Setup
3. Learning Angular
4. Architecture
5. The Root Module
6. Displaying Data
7. User Input
8. Forms
9. Dependency Injection

Setup a local development environment

The QuickStart live-coding example is an Angular *playground*. It's not where you'd develop a real application. You should develop locally on your own machine ... and that's also how we think you should learn Angular.

Setting up a new project on your machine is quick and easy with the **QuickStart seed**, maintained on github.

> The QuickStart seed live-example is QuickStart *plus* the `app.module.ts` and `main.ts` application files (described below) that facilitate richer application examples.

Make sure you have node and npm installed. Then ...

1. Create a project folder (you can call it `quickstart` and rename it later).
2. Clone or download the **QuickStart seed** into your project folder.
3. Install npm packages.
4. Run `npm start` to launch the sample application.

SEARCH DOCS...

DOCS HOME

CORE DOCUMENTATION

QUICKSTART

GUIDE

API REFERENCE

ADDITIONAL DOCUMENTATION

TUTORIAL

ADVANCED

COOKBOOK

Angular for TypeScript

- **typings.json** provides additional definition files for libraries that the TypeScript compiler doesn't natively recognize.
- **systemjs.config.js** provides information to a module loader about where to find application modules, and registers all the necessary packages. It also contains other packages that will be needed by later documentation examples.

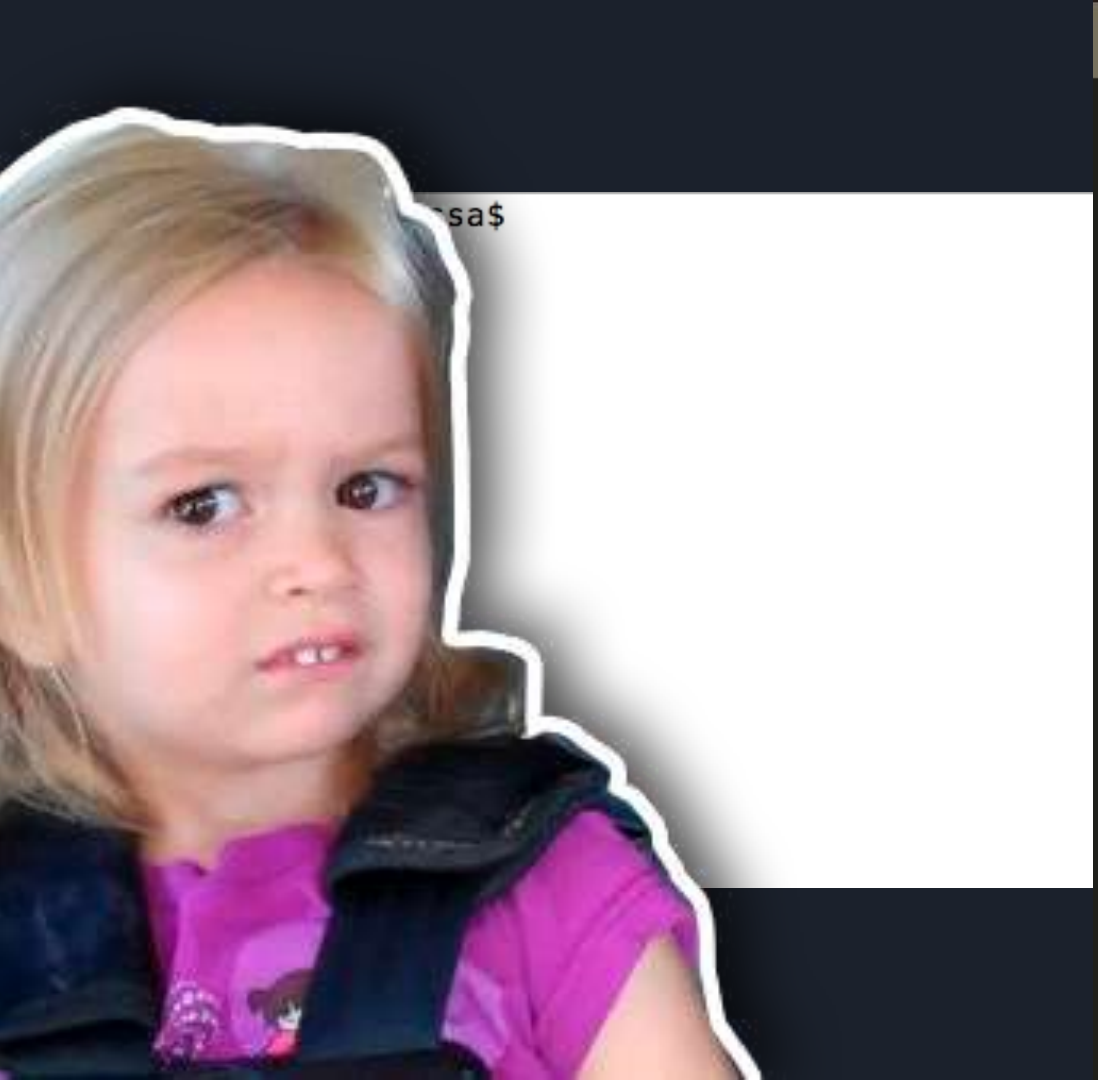
Create each of these files in your project directory. Populate them by pasting in text from the tabs in the example box below.

package.json | tsconfig.json | typings.json | systemjs.config.js

COPY CODE

```
{
  "name": "angular-quickstart",
  "version": "1.0.0",
  "scripts": {
    "start": "tsc && concurrently \"tsc -w\" \"lite-server\" ",
    "lite": "lite-server",
    "postinstall": "typings install",
    "tsc": "tsc",
    "tsc:w": "tsc -w",
    "typings": "typings"
  },
  "license": "ISC",
  "dependencies": {
    "@angular/common": "~2.0.1",
```

```
ng new nomedoprojeto
```



linesabout

- e2e
- node_modules
- src
- .angular-cli.json
- .editorconfig
- .gitignore
- karma.conf.js
- package-lock.json
- package.json
- protractor.conf.js
- README.md
- tsconfig.json
- tslint.json

ng new, opções:

```
ng new nomedoprojeto --minimal
```

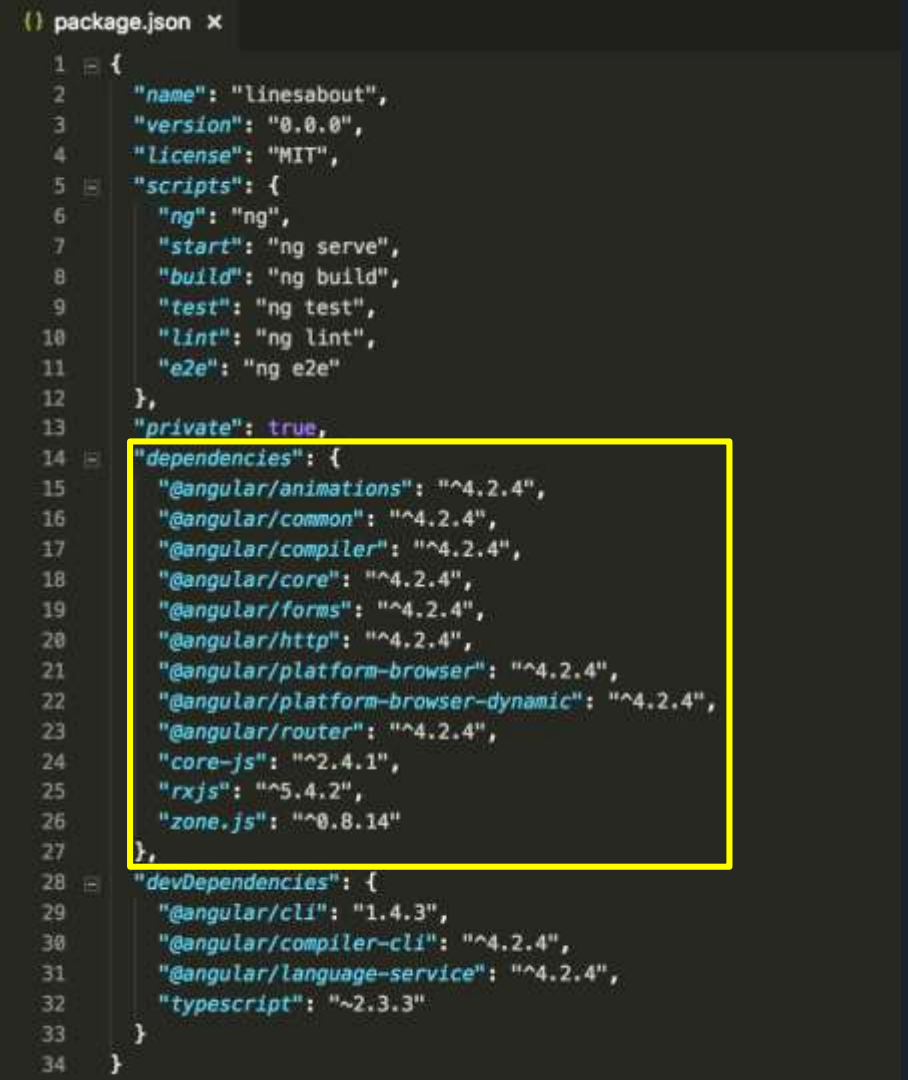
linesabout

- node_modules
- src
- .angular-cli.json
- .gitignore
- package-lock.json
- package.json
- tsconfig.json

package.json

package.json

```
{
  "name": "linesabout",
  "version": "0.0.0",
  "license": "MIT",
  "scripts": {
    "ng": "ng",
    "start": "ng serve",
    "build": "ng build",
    "test": "ng test",
    "lint": "ng lint",
    "e2e": "ng e2e"
  },
  "private": true,
  "dependencies": {
    "@angular/animations": "^4.2.4",
    "@angular/common": "^4.2.4",
    "@angular/compiler": "^4.2.4",
    "@angular/core": "^4.2.4",
    "@angular/forms": "^4.2.4",
    "@angular/http": "^4.2.4",
    "@angular/platform-browser": "^4.2.4",
    "@angular/platform-browser-dynamic": "^4.2.4",
    "@angular/router": "^4.2.4",
    "core-js": "^2.4.1",
    "rxjs": "^5.4.2",
    "zone.js": "^0.8.14"
  },
  "devDependencies": {
    "@angular/cli": "1.4.3",
    "@angular/compiler-cli": "^4.2.4",
    "@angular/language-service": "^4.2.4",
    "typescript": "~2.3.3"
  }
}
```



Dependências com

^

`npm update`

sempre vai deixar elas atualizadas

package.json

```
{
  "name": "linesabout",
  "version": "0.0.0",
  "license": "MIT",
  "scripts": {
    "ng": "ng",
    "start": "ng serve",
    "build": "ng build",
    "test": "ng test",
    "lint": "ng lint",
    "e2e": "ng e2e"
  },
  "private": true,
  "dependencies": {
    "@angular/animations": "^4.2.4",
    "@angular/common": "^4.2.4",
    "@angular/compiler": "^4.2.4",
    "@angular/core": "^4.2.4",
    "@angular/forms": "^4.2.4",
    "@angular/http": "^4.2.4",
    "@angular/platform-browser": "^4.2.4",
    "@angular/platform-browser-dynamic": "^4.2.4",
    "@angular/router": "^4.2.4",
    "core-js": "^2.4.1",
    "rxjs": "^5.4.2",
    "zone.js": "^0.8.14"
  },
  "devDependencies": {
    "@angular/cli": "1.4.3",
    "@angular/compiler-cli": "^4.2.4",
    "@angular/language-service": "^4.2.4",
    "typescript": "~2.3.3"
  }
}
```

.angular-cli.json

.angular-cli.json

```
{
  "$schema": "./node_modules/@angular/cli/lib/config/schema.json",
  "project": {
    "name": "linesabout"
  },
  "apps": [
    {
      "root": "src",
      "outDir": "dist",
      "assets": [
        "assets",
        "favicon.ico"
      ],
      "index": "index.html",
      "main": "main.ts",
      "polyfills": "polyfills.ts",
      "test": "test.ts",
      "tsconfig": "tsconfig.app.json",
      "testTsconfig": "tsconfig.spec.json",
      "prefix": "app",
      "styles": [
        "styles.css"
      ],
      "scripts": [],
      "environmentSource": "environments/environment.ts",
      "environments": {
        "dev": "environments/environment.ts",
        "prod": "environments/environment.prod.ts"
      }
    }
  ],
  "e2e": {
    "protractor": {
      "config": "./protractor.conf.js"
    }
  },
  "lint": [
    {
```

.angular-cli.json

```
{
  "$schema": "./node_modules/@angular/cli/lib/config/schema.json",
  "project": {
    "name": "linesabout"
  },
  "apps": [
    {
      "root": "src",
      "outDir": "dist",
      "assets": [
        "assets",
        "favicon.ico"
      ],
      "index": "index.html",
      "main": "main.ts",
      "polyfills": "polyfills.ts",
      "test": "test.ts",
      "tsconfig": "tsconfig.app.json",
      "testTsconfig": "tsconfig.spec.json",
      "prefix": "app",
      "styles": [
        "styles.css"
      ],
      "scripts": [],
      "environmentSource": "environments/environment.ts",
      "environments": {
        "dev": "environments/environment.ts",
        "prod": "environments/environment.prod.ts"
      }
    }
  ],
  "e2e": {
    "protractor": {
      "config": "./protractor.conf.js"
    }
  },
  "lint": [
    {
```

.angular-cli.json
{
"$schema": "./node_modules/@angular/cli/lib/config/schema.json",
"project": {
"name": "linesabout"
},
"apps": [
{
"root": "src",
"outDir": "dist",
"assets": [
"assets",
"favicon.ico"
],
"index": "index.html",
"main": "main.ts",
"polyfills": "polyfills.ts",
"test": "test.ts",
"tsconfig": "tsconfig.app.json",
"testTsconfig": "tsconfig.spec.json",
"prefix": "app",
"styles": [
"styles.css"
],
"scripts": [],
"environmentSource": "environments/environment.ts",
"environments": {
"dev": "environments/environment.ts",
"prod": "environments/environment.prod.ts"
}
}
],
"e2e": {
"protractor": {
"config": "./protractor.conf.js"
}
},
"lint": [
{

.angular-cli.json
{
"$schema": "./node_modules/@angular/cli/lib/config/schema.json",
"project": {
"name": "linesabout"
},
"apps": [
{
"root": "src",
"outDir": "dist",
"assets": [
"assets",
"favicon.ico"
],
"index": "index.html",
"main": "main.ts",
"polyfills": "polyfills.ts",
"test": "test.ts",
"tsconfig": "tsconfig.app.json",
"testTsconfig": "tsconfig.spec.json",
"prefix": "app",
"styles": [
"styles.css"
],
"scripts": [],
"environmentSource": "environments/environment.ts",
"environments": {
"dev": "environments/environment.ts",
"prod": "environments/environment.prod.ts"
}
}
],
"e2e": {
"protractor": {
"config": "./protractor.conf.js"
}
},
"lint": [
{

.angular-cli.json
{
"$schema": "./node_modules/@angular/cli/lib/config/schema.json",
"project": {
"name": "linesabout"
},
"apps": [
{
"root": "src",
"outDir": "dist",
"assets": [
"assets",
"favicon.ico"
],
"index": "index.html",
"main": "main.ts",
"polyfills": "polyfills.ts",
"test": "test.ts",
"tsconfig": "tsconfig.app.json",
"testTsconfig": "tsconfig.spec.json",
"prefix": "app",
"styles": [
"styles.css"
],
"scripts": [],
"environmentSource": "environments/environment.ts",
"environments": {
"dev": "environments/environment.ts",
"prod": "environments/environment.prod.ts"
}
}
],
"e2e": {
"protractor": {
"config": "./protractor.conf.js"
}
},
"lint": [
{

.angular-cli.json

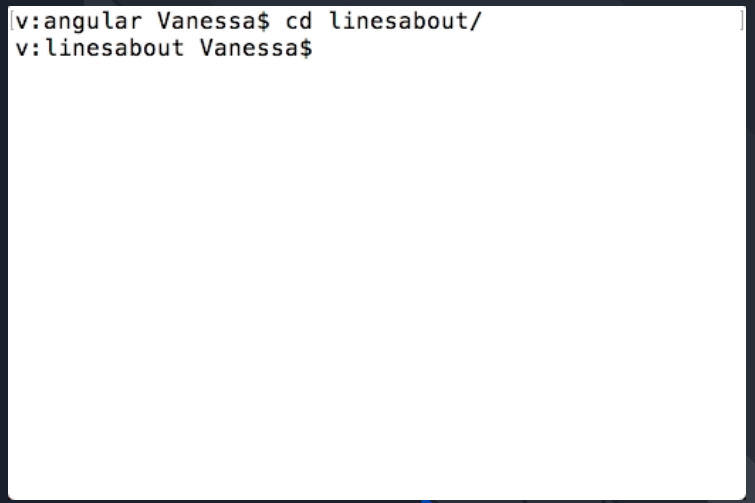
```
{
  "$schema": "./node_modules/@angular/cli/lib/config/schema.json",
  "project": {
    "name": "linesabout"
  },
  "apps": [
    {
      "root": "src",
      "outDir": "dist",
      "assets": [
        "assets",
        "favicon.ico"
      ],
      "index": "index.html",
      "main": "main.ts",
      "polyfills": "polyfills.ts",
      "test": "test.ts",
      "tsconfig": "tsconfig.app.json",
      "testTsconfig": "tsconfig.spec.json",
      "prefix": "app",
      "styles": [
        "styles.css"
      ],
      "scripts": [],
      "environmentSource": "environments/environment.ts",
      "environments": {
        "dev": "environments/environment.ts",
        "prod": "environments/environment.prod.ts"
      }
    }
  ],
  "e2e": {
    "protractor": {
      "config": "./protractor.conf.js"
    }
  },
  "lint": [
    {
```

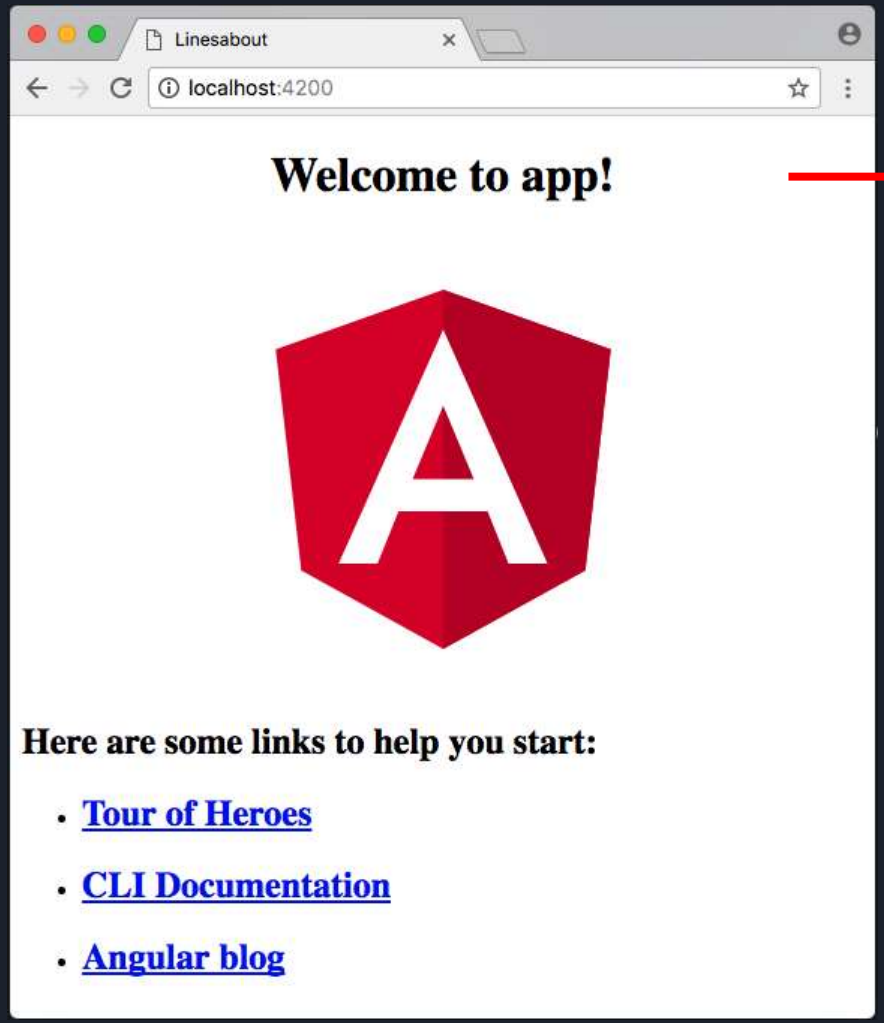
.angular-cli.json

```
{
  "$schema": "./node_modules/@angular/cli/lib/config/schema.json",
  "project": {
    "name": "linesabout"
  },
  "apps": [
    {
      "root": "src",
      "outDir": "dist",
      "assets": [
        "assets",
        "favicon.ico"
      ],
      "index": "index.html",
      "main": "main.ts",
      "polyfills": "polyfills.ts",
      "test": "test.ts",
      "tsconfig": "tsconfig.app.json",
      "testTsconfig": "tsconfig.spec.json",
      "prefix": "app",
      "styles": [
        "styles.css"
      ],
      "scripts": [],
      "environmentSource": "environments/environment.ts",
      "environments": {
        "dev": "environments/environment.ts",
        "prod": "environments/environment.prod.ts"
      }
    }
  ],
  "e2e": {
    "protractor": {
      "config": "./protractor.conf.js"
    }
  },
  "lint": [
    {
```

Abrindo a aplicação local

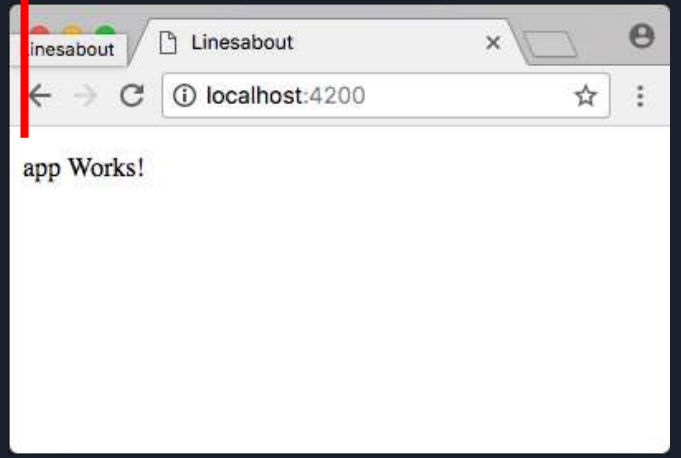
```
ng serve --open
```

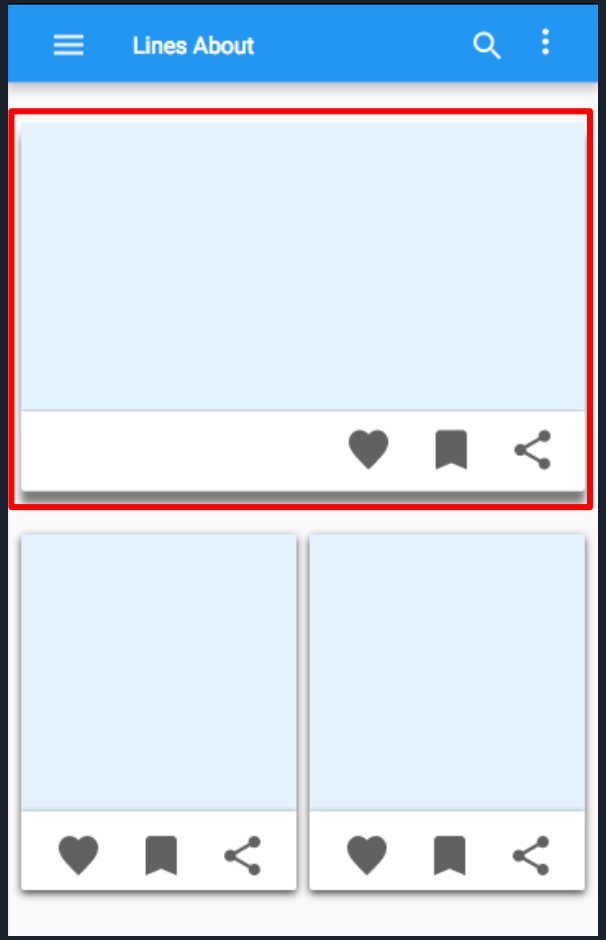


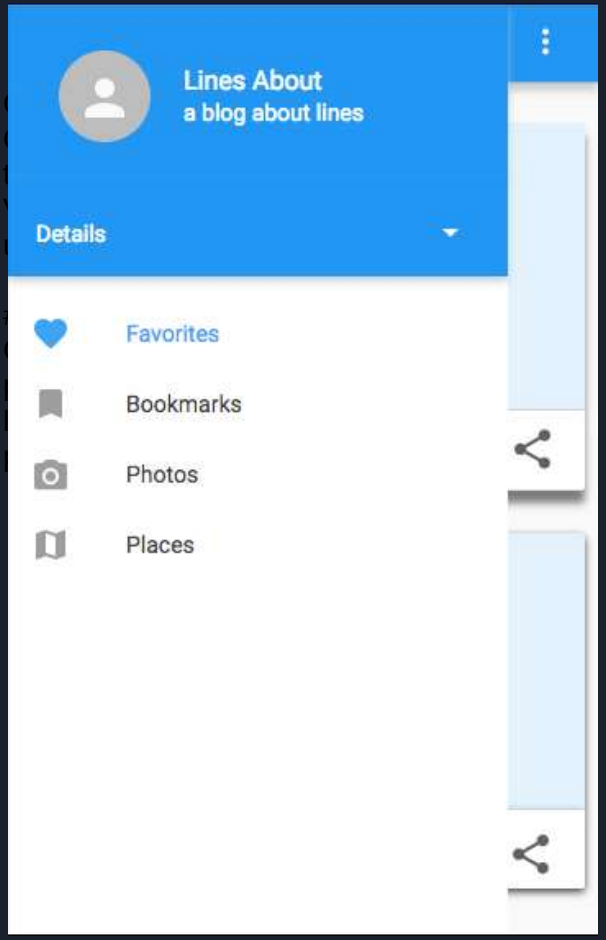


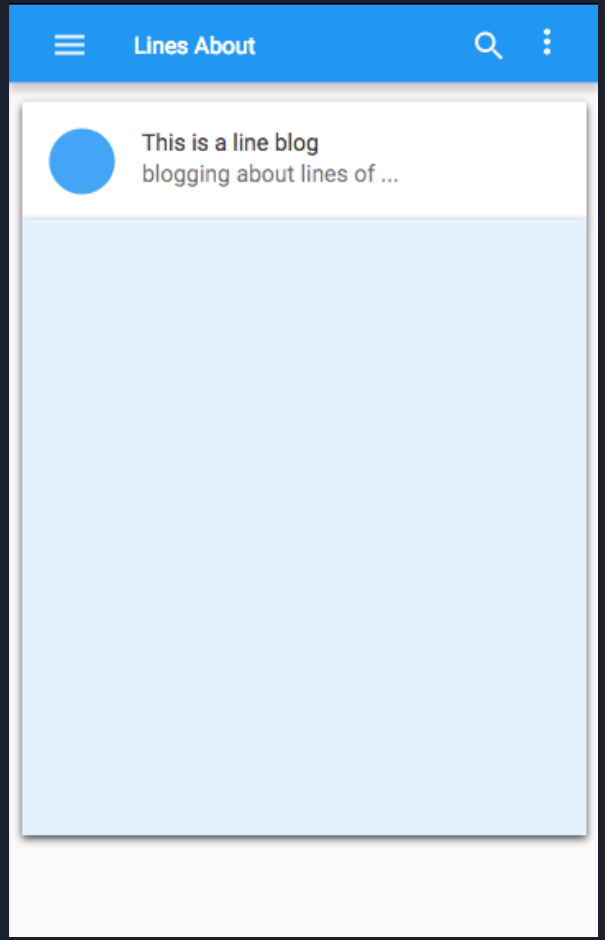

```
ng new linesabout
```

```
ng new linesabout --minimal
```

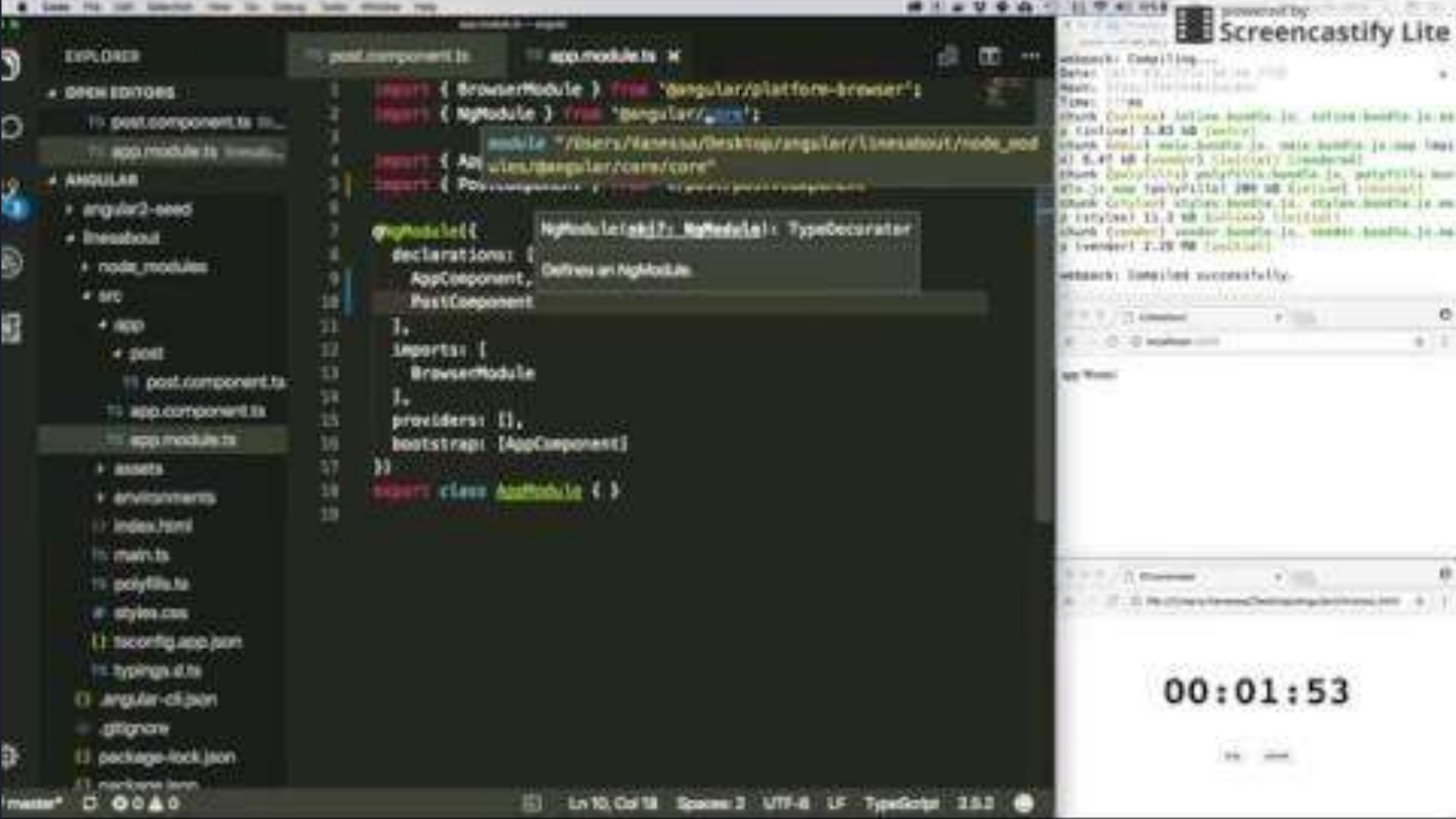



Lines About


Lines About
a blog about lines
Details
Favorites
Bookmarks
Photos
Places

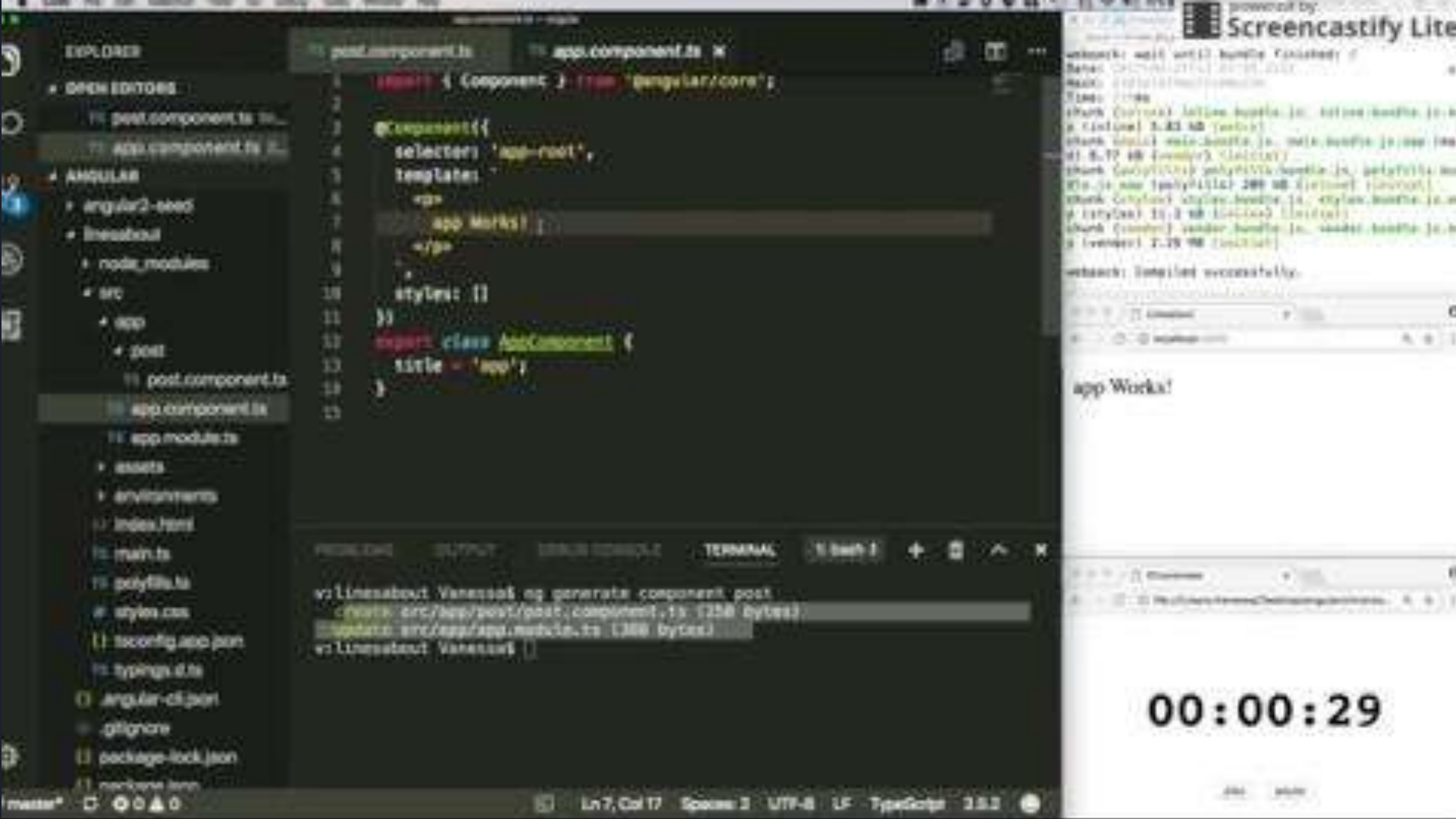

Lines About
This is a line blog
blogging about lines of ...

componentes


powered by
Screencastify Lite
EXPLORER
post.component.ts
app.module.ts
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';
import { AppComponent } from './app.component';
import { PostComponent } from './post/post.component';
@NgModule({
declarations: [
AppComponent,
PostComponent
],
imports: [
BrowserModule
],
providers: [],
bootstrap: [AppComponent]
})
export class AppModule { }
NgModule(obj?: NgModule): TypeDecorator
Defines an NgModule.
00:01:53

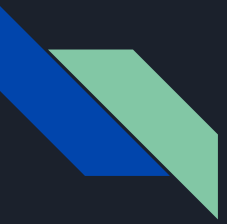
Gerando coisas

`ng generate`

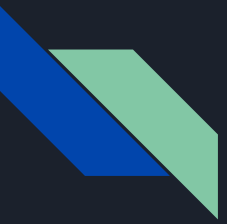

Screencastify Lite
EXPLORER
OPEN EDITORS
post.component.ts
app.component.ts
ANGULAR
angular2-seed
linesabout
node_modules
src
app
post
post.component.ts
app.component.ts
app.module.ts
assets
environments
index.html
main.ts
polyfills.ts
styles.css
tsconfig.app.json
typings.d.ts
angular-cli.json
.gitignore
package-lock.json
import { Component } from '@angular/core';
@Component({
selector: 'app-root',
template: `

app Works!

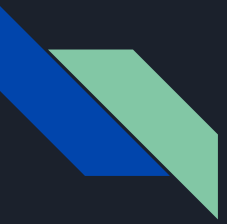
`,
styles: []
})
export class AppComponent {
title = 'app';
}
TERMINAL
v:linesabout Vanessa$ ng generate component post
create src/app/post/post.component.ts (258 bytes)
update src/app/app.module.ts (388 bytes)
v:linesabout Vanessa$
app Works!
00:00:29
master*
Ln 7, Col 17
Spaces: 2
UTF-8
LF
TypeScript
2.0.3



```
ng generate component
```



```
ng generate component nomecomponente
```



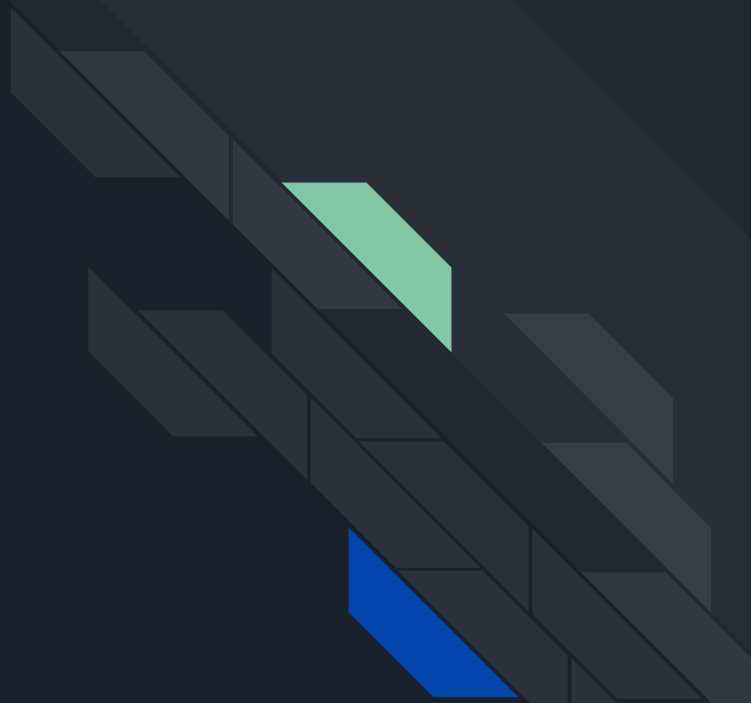
```
$ ng generate component post
  create src/app/post/post.component.ts (250 bytes)
  update src/app/app.module.ts (388 bytes)
```

```
ng g c nomecomponente
```

```
$ ng g c postlist

   create src/app/postlist/postlist.component.css (0 bytes)
   create src/app/postlist/postlist.component.html (27 bytes)
   create src/app/postlist/postlist.component.spec.ts (642 bytes)
   create src/app/postlist/postlist.component.ts (277 bytes)
   update src/app/app.module.ts (478 bytes)
```

O que mais posso gerar?

class
component
directive
enum
guard
interface
module
pipe
service

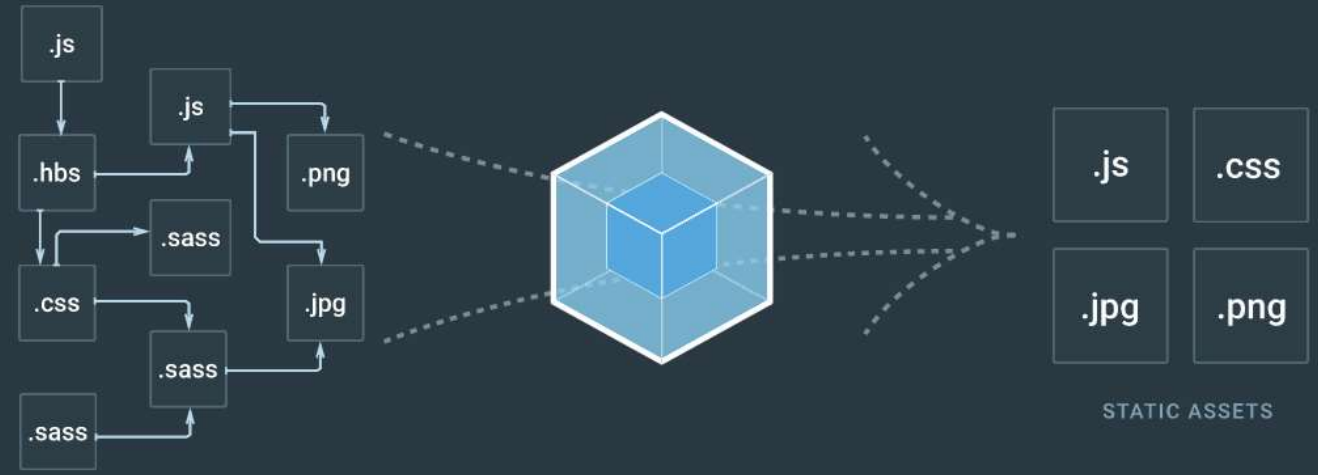


App pronta?

Hora de empacotar

webpack CONCEPTS GUIDES DOCUMENTATION DONATE BLOG SUPPORT

bundle your assets



webpack.config.js

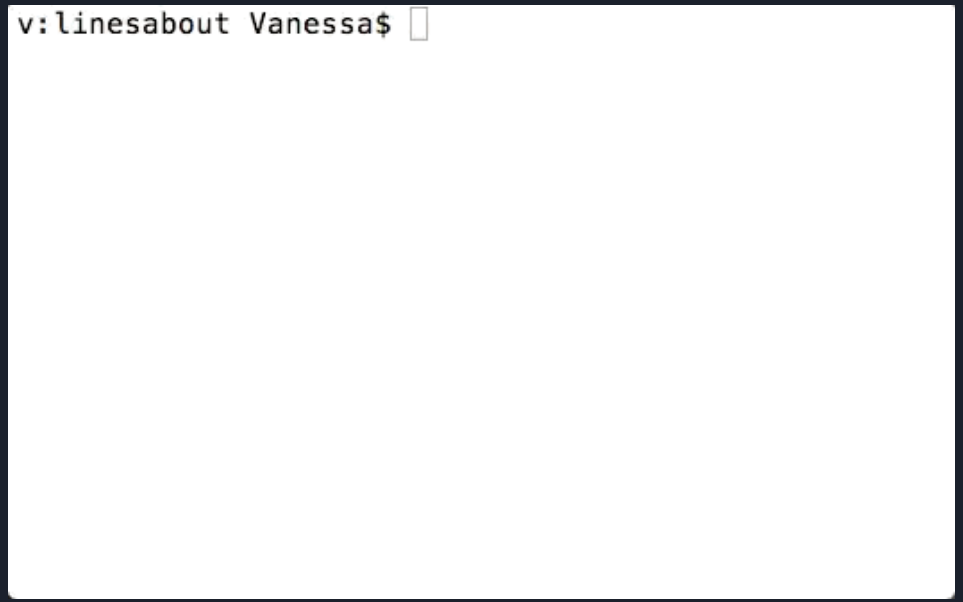
```
var webpack = require('webpack');
var path = require('path');
var webpackMerge = require('webpack-merge');
var HtmlWebpackPlugin = require('html-webpack-plugin');

// Webpack Config
var webpackConfig = {
  entry: {
    'main': './src/main.browser.ts',
  },

  output: {
    publicPath: '',
    path: path.resolve(__dirname, './dist'),
  },

  plugins: [
    new webpack.ContextReplacementPlugin(
      // The (\\|\/) piece accounts for path separators in *nix and Windows
      /angular(\\|\/)core(\\|\/)@angular/,
      path.resolve(__dirname, '../src'),
      {
        // your Angular Async Route paths relative to this root directory
      }
    ),

    new HtmlWebpackPlugin({
      template: 'src/index.html'
    }),

  ],
```

webpack.config.js

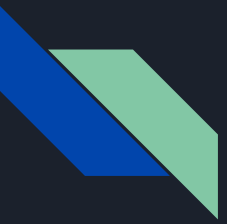
```
var webpack = require('webpack');
var path = require('path');
var webpa
var Html

// Webpa
var webpa
  entry:
    'mai
  },

  output
    publ
    path
  },

  plugin
    new
      //
      /a
      pa
      {

      }
    ),

    new
      te
    }),

  ],
```

ng build

ng build

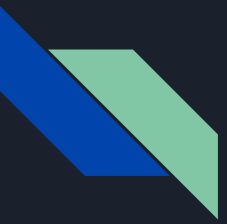


```
ng build --base-href “”
```



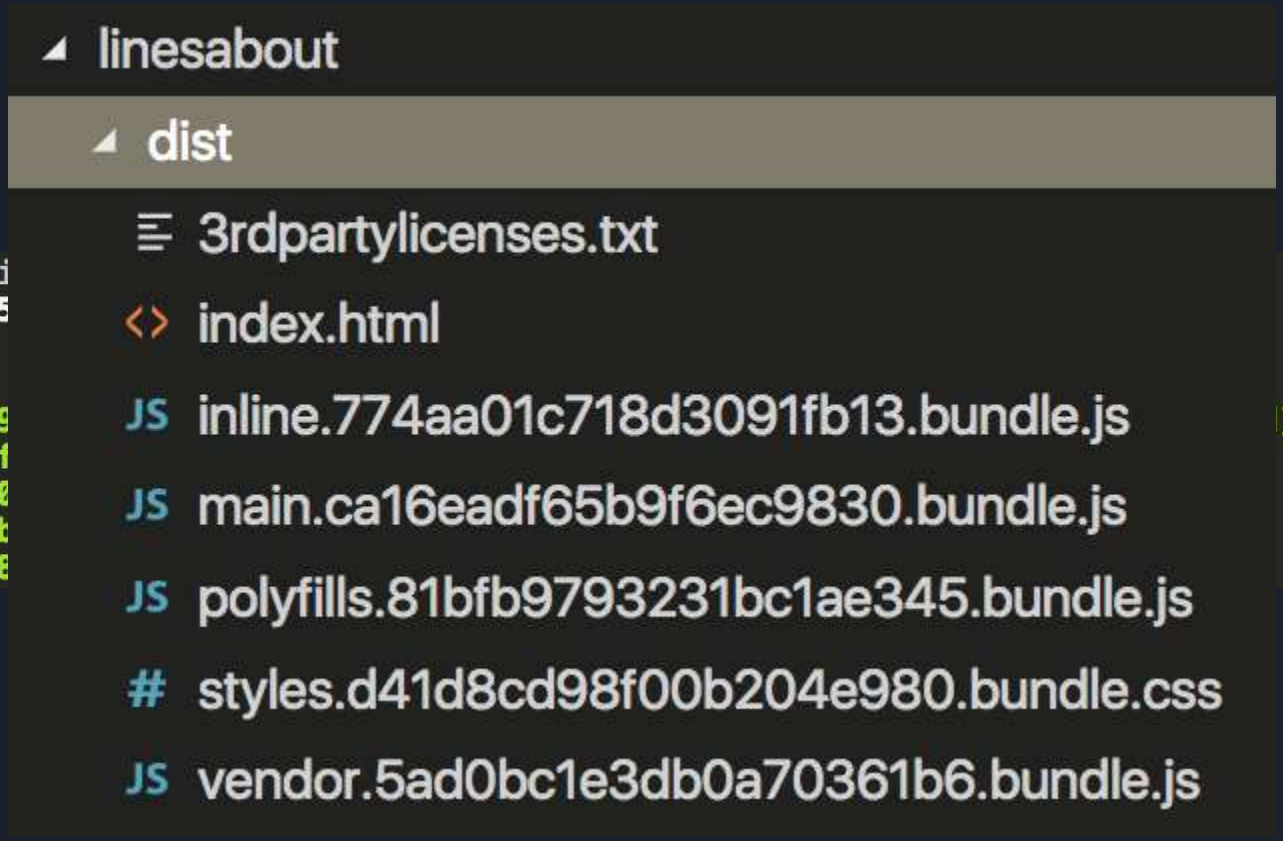
```
v:linesabout Vanessa$ ng build --base-href ""
Date: 2017-09-27T15:12:52.946Z
Hash: 5401c461a7d5380d6eba
Time: 7297ms
chunk {inline} inline.bundle.js, inline.bundle.js.map (inline) 5.83 kB [entry] [rendered]
chunk {main} main.bundle.js, main.bundle.js.map (main) 14.1 kB {vendor} [initial] [rendered]
chunk {polyfills} polyfills.bundle.js, polyfills.bundle.js.map (polyfills) 209 kB {inline} [initial] [rende
red]
chunk {styles} styles.bundle.js, styles.bundle.js.map (styles) 11.3 kB {inline} [initial] [rendered]
chunk {vendor} vendor.bundle.js, vendor.bundle.js.map (vendor) 1.95 MB [initial] [rendered]
```

```
ng build --base-href “” --prod
```



```
v:linesabout Vanessa$ ng build --base-href "" --prod
Date: 2017-09-27T15:31:02.750Z
Hash: 24ac8acc72bc6e88525d
Time: 8223ms
chunk {0} polyfills.81bfb9793231bc1ae345.bundle.js (polyfills) 64.1 kB {4} [initial] [rendered]
chunk {1} main.ca16eadf65b9f6ec9830.bundle.js (main) 2.63 kB {3} [initial] [rendered]
chunk {2} styles.d41d8cd98f00b204e980.bundle.css (styles) 0 bytes {4} [initial] [rendered]
chunk {3} vendor.5ad0bc1e3db0a70361b6.bundle.js (vendor) 216 kB [initial] [rendered]
chunk {4} inline.774aa01c718d3091fb13.bundle.js (inline) 1.45 kB [entry] [rendered]
```

```
v:linesabout Vanessa$ ng bui
Date: 2017-09-27T15:31:02.75
Hash: 24ac8acc72bc6e88525d
Time: 8223ms
chunk {0} polyfills.81bfb979
chunk {1} main.ca16eadf65b9f
chunk {2} styles.d41d8cd98f0
chunk {3} vendor.5ad0bc1e3db
chunk {4} inline.774aa01c718
```



```
v:linesabout V
Date: 2017-09-
Hash: 24ac8acc
Time: 8223ms
chunk {0} poly
chunk {1} mair
chunk {2} styl
chunk {3} venc
chunk {4} inli
```

```
dle.js ]
dle.js
undle.js
undle.css
undle.js
```

Cli is alive!

Nos últimos meses

- Junho: `--minimal`
  named bundles
  3rd party: lincenças unidas

- Agosto: `--build-optimizer`
  Angular Universal (server rendering app)
  Initial Support for early betas of v5

Nos últimos meses

- Setembro:
  Schematics.
  Permite gerar seu próprios templates do seu projeto ou da sua empresa usando os comando da CLI

Cli next()

E nos próximos

- Ahead of Time (AOT) por padrão - Melhorar o tempo de compilação
- `Ng update` - ajudar deixar seu projeto sempre atualizado, em conjunto com Material components, e os recursos de i18n

E nos próximos

- Library Support - De Angular App para outras Angular Apps
- Build Optimizer por padrão - consolidar as otimizações e build ser o mais otimizado possível
- Services Workers por padrão - PWAs com Angular

Stephen Fluin Follow
Sep 20 · 6 min read

The Past, Present, and Future of the Angular CLI

The Angular CLI is a command-line interface for building Angular applications, and over the last year it has become one of the most essential tools in an Angular developer's toolbox.

Obrigada!

vanessametonini
@
twitter
github
gmail