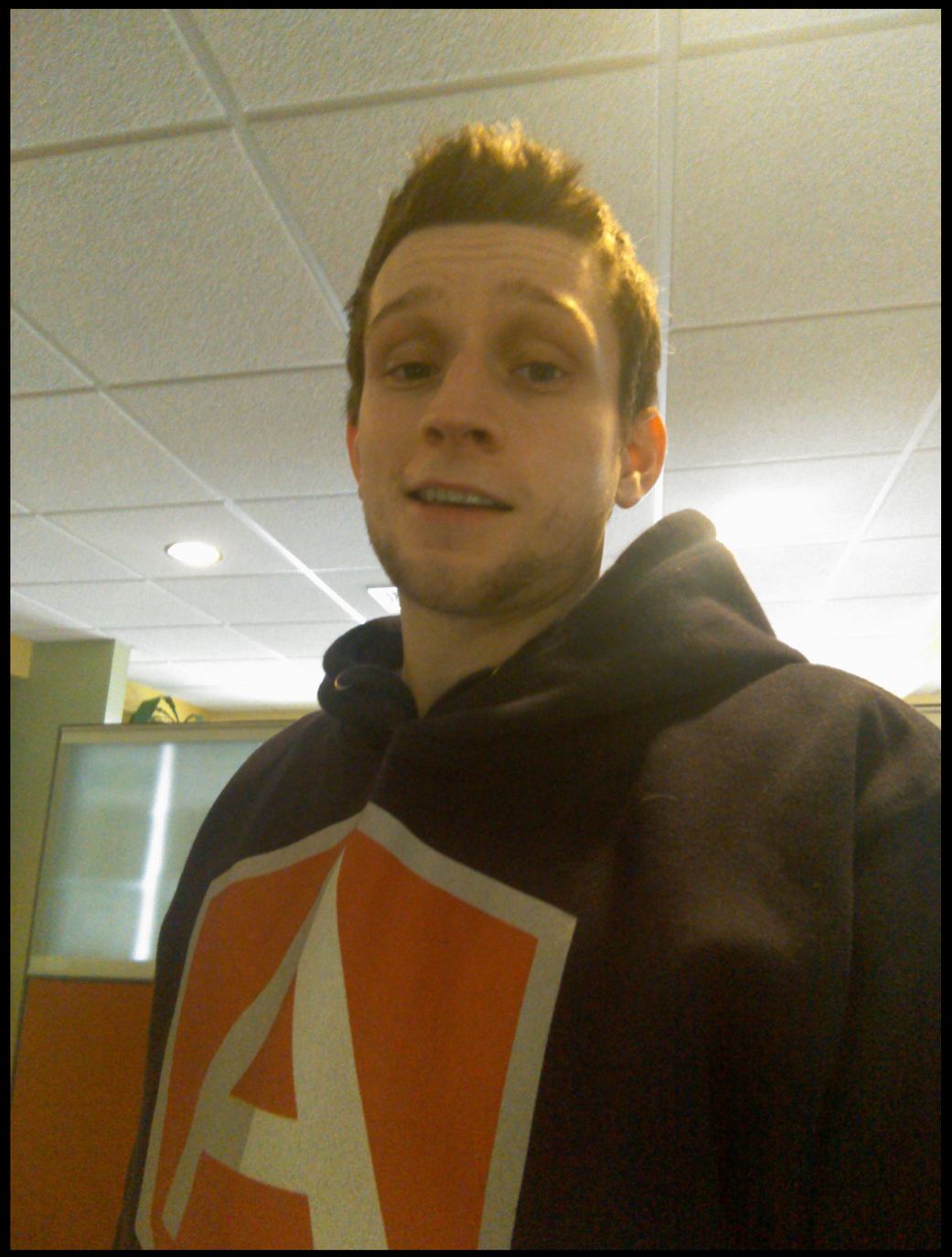
Getting Started With The Angular 2 CLI

by Jim Lynch

July 2016



Jim Lynch

Front-End Engineer
at Altered Image

WebStorm
Ambassador

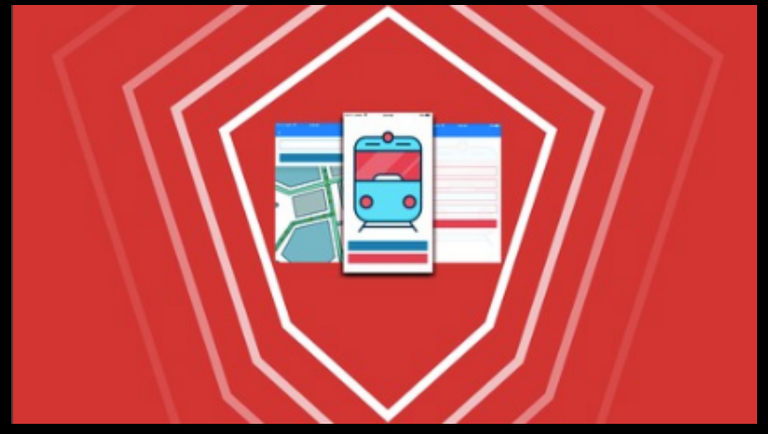
@webWhizJim

Slides available here:
http://www.slideshare.net/JimLynch22/describes-full-of-its

Resources for Learning Angular 2

1. Angular 2 Crash Course with TypeScript - Udemy

Free with the link below!



https://www.udemy.com/angular-2-crash-course/learn/v4/?couponCode=blackhat&pmtag=CELEBRATE40&utm_source=codek.tv

Resources for Learning Angular 2

2. Accelerating Through Angular 2 - CodeSchool.com

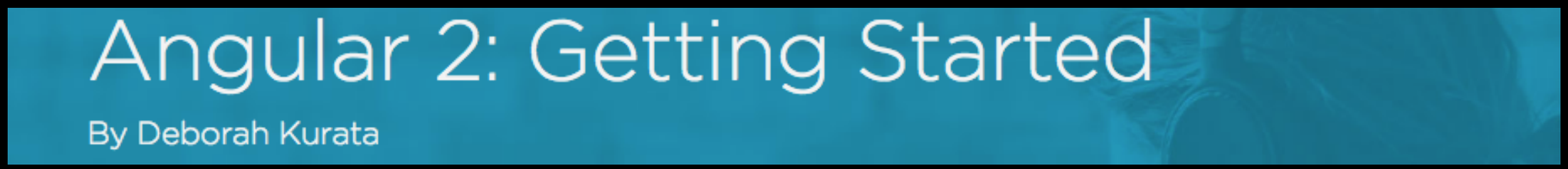
(First level free, then requires pro membership)

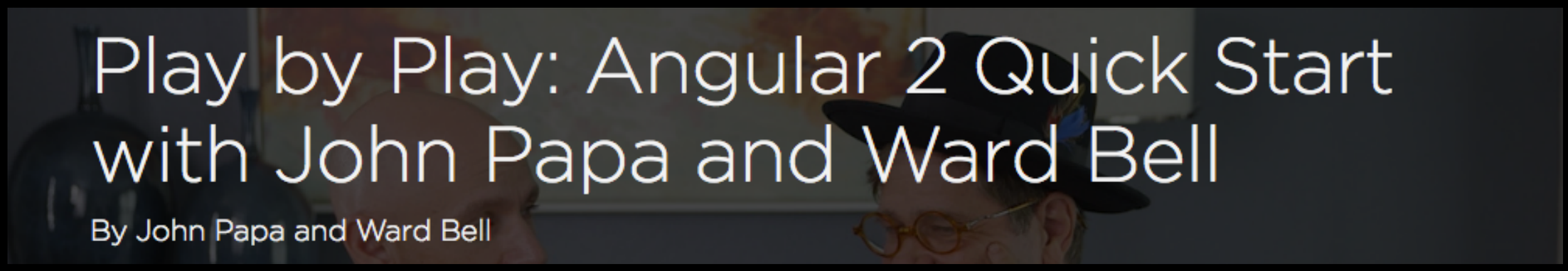
https://www.codeschool.com/courses/accelerating-through-angular-2

Resources for Learning Angular 2

3. Pluralsight Courses

(requires pluralsight membership)





Resources for Learning Command Line / BASH

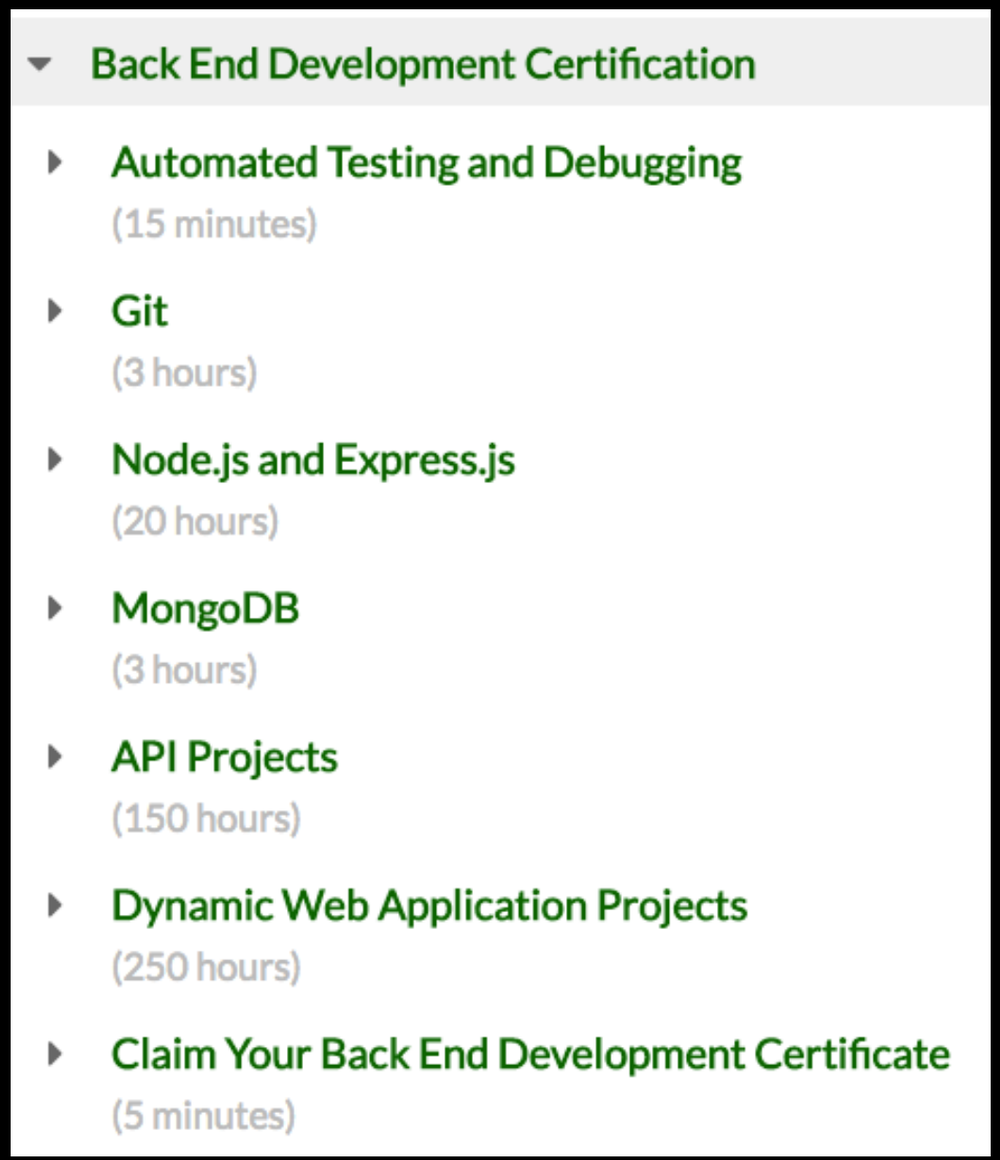
2 Free Code School Courses!

https://www.codeschool.com/

- Shell Productivity Elective Course

- Unix Basics Elective Course

Resources for Learning Command Line / BASH

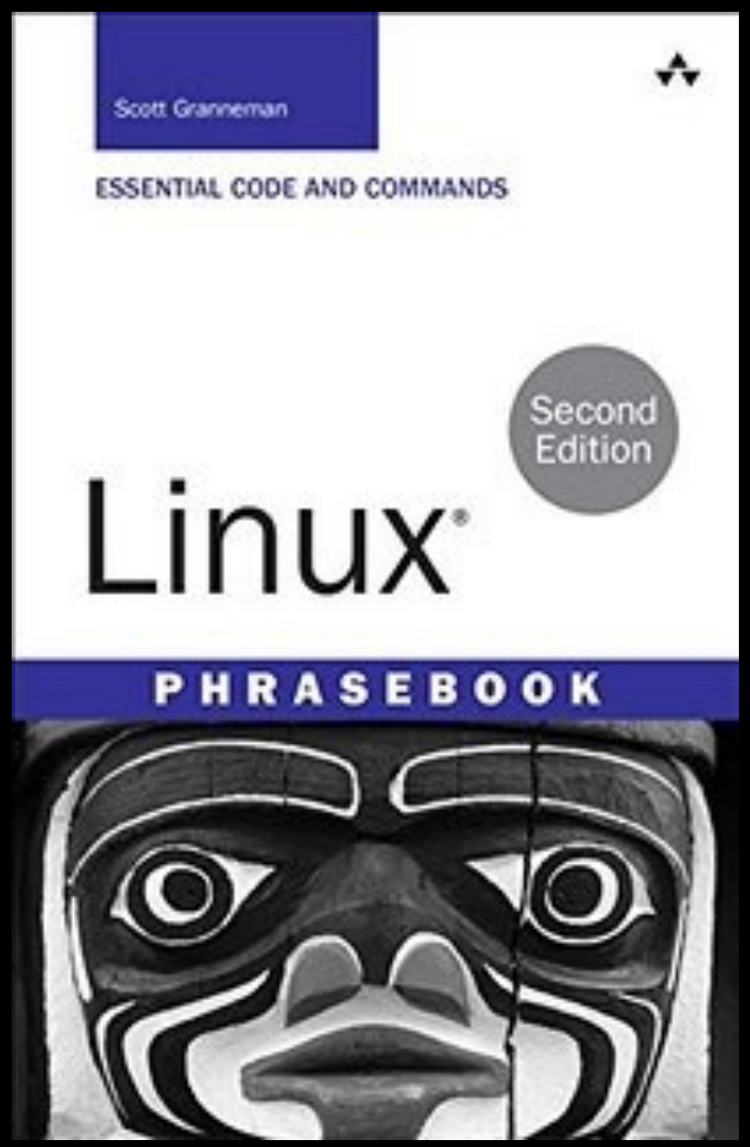


freeCodeCamp(🔥)

Free Code Camp
Backend Challenges

Free!

Resources for Learning Command Line / BASH



- Reference guide of the common Unix / Linux commands.
- Physically small book.
- Humorous yet informative and technical descriptions.

Resources Specifically For Learning Angular 2 CLI

- Angular CLI Reference PDF (https://cli.angular.io/reference.pdf)
- Angular 2 CLI Github Project Page (https://github.com/angular/angular-cli)
- Official Angular CLI Website (https://cli.angular.io/)

The Importance of Having a Pretty Command Line

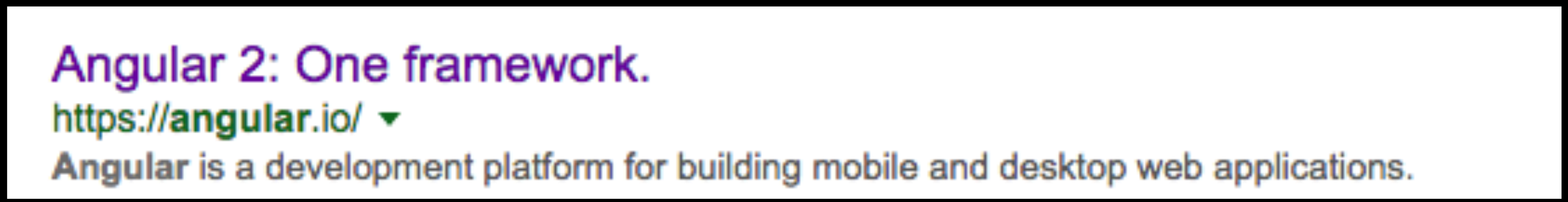
- Your command line is a powerful tool. You should use it often and be comfortable with it.

- Make the background and font color easy on the eyes and increase the font size.

- Edit your ~/.bash_rc or ~/.bash_profile to make your text more colorful and change your BASH prompt.

- Install vim plugins for syntax highlighting.

So, What is Angular 2?



What Is a SPA Framework?

Routing

- Illusion of Pages

- Deep Linking

- Layers of HTML

Components

- Ties HTML to JS

- Data Binding

- Modular Code

Angular 2 Building Blocks

(Eerily similar the building blocks of AngularJS)

- Components
- Directives
- Routes
- Services
- Pipes

- Controllers
- Directives
- Routes
- Services
- Filters

Differences From Angular 1

- No more “ng-“ directives! New syntax for binding directly to events instead.
- Namespaces CSS / Sass
- Simpler concept of Directives, No link functions in ng2!
- Nice router with power and flexibility of UI-Router
- Crazy fast with Shadow DOM under the hood.
- Projects are written in TypeScript (usually).
- Observables to handle streams and cancel requests!
- And best of all, the Angular CLI!

If You Can’t Beat Em’, Join em’.
(Or just copy ‘em)

- Concept of “Shadow DOM” originally from React
- CLI tool ported from from Ember CLI.
- Took Microsoft’s TypeScript and made it mainstream.

The Angular CLI!!

Are you as excited as this guy?

The Main Idea

Use the command line to generate folders and files for you.

…or even generate an entire starter project.

The Initiation Ceremony (Installing angular-cli)

This is where your Angular 2 CLI journey begins!

If You Get This Error:

You might get this error:

Error: EACCES: permission denied, open '/Users/jim/.config/configstore/ember-cli.json'
You don't have access to this file.

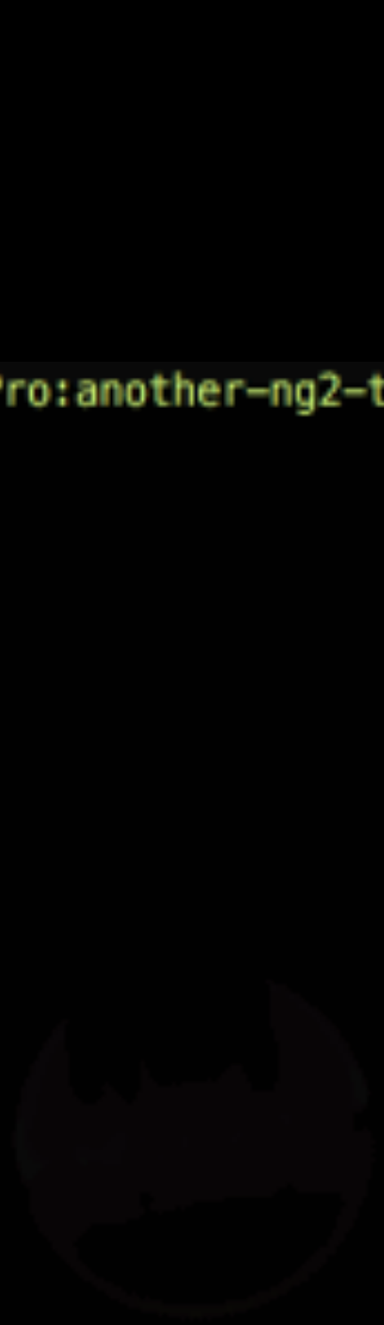
```
Jamess-MBP:more-ng-2-tests jim$ ng --version
(node:1148) fs: re-evaluating native module sources is not supported. If you are using the graceful-fs module, please update it to a more recent version.
/usr/local/lib/node_modules/angular-cli/node_modules/configstore/index.js:54
                                throw err;
                                ^

Error: EACCES: permission denied, open '/Users/jim/.config/configstore/ember-cli.json'
You don't have access to this file.

    at Error (native)
    at Object.fs.openSync (fs.js:634:18)
    at Object.fs.readFileSync (fs.js:502:33)
    at Object.create.all.get (/usr/local/lib/node_modules/angular-cli/node_modules/configstore/index.js:35:26)
    at Object.Configstore (/usr/local/lib/node_modules/angular-cli/node_modules/configstore/index.js:28:44)
    at clientId (/usr/local/lib/node_modules/angular-cli/node_modules/ember-cli/lib/cli/index.js:22:21)
    at module.exports (/usr/local/lib/node_modules/angular-cli/node_modules/ember-cli/lib/cli/index.js:65:19)
    at module.exports (/usr/local/lib/node_modules/angular-cli/lib/cli/index.js:106:10)
    at /usr/local/lib/node_modules/angular-cli/bin/ng:31:5
    at /usr/local/lib/node_modules/angular-cli/node_modules/resolve/lib/async.js:46:14
Jamess-MBP:more-ng-2-tests jim$ _
```

Give your current user ownership of ember-cli.json

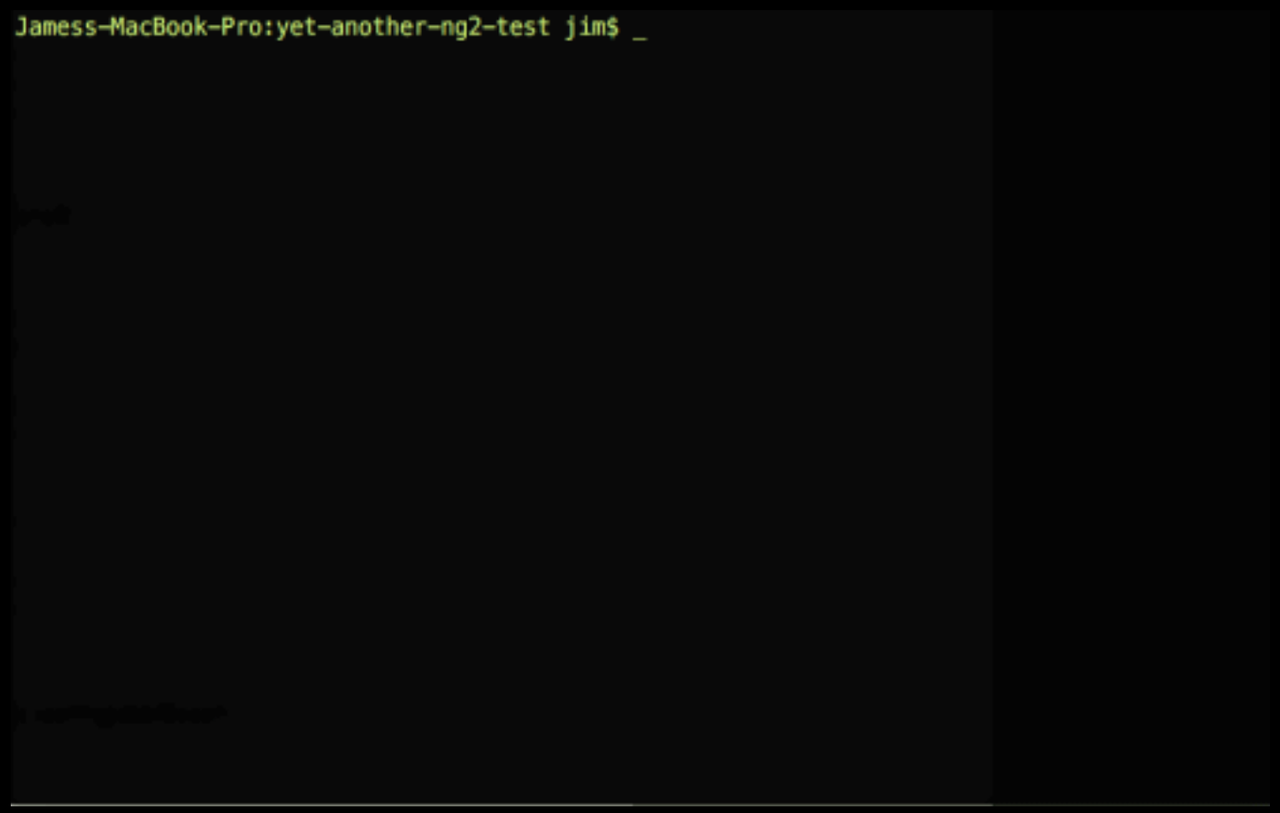
```
sudo chown jim /Users/jim/.config/configstore/ember-cli.json
```

ng new

```
Jamess-MacBook-Pro:another-ng2-test jim$ _
```

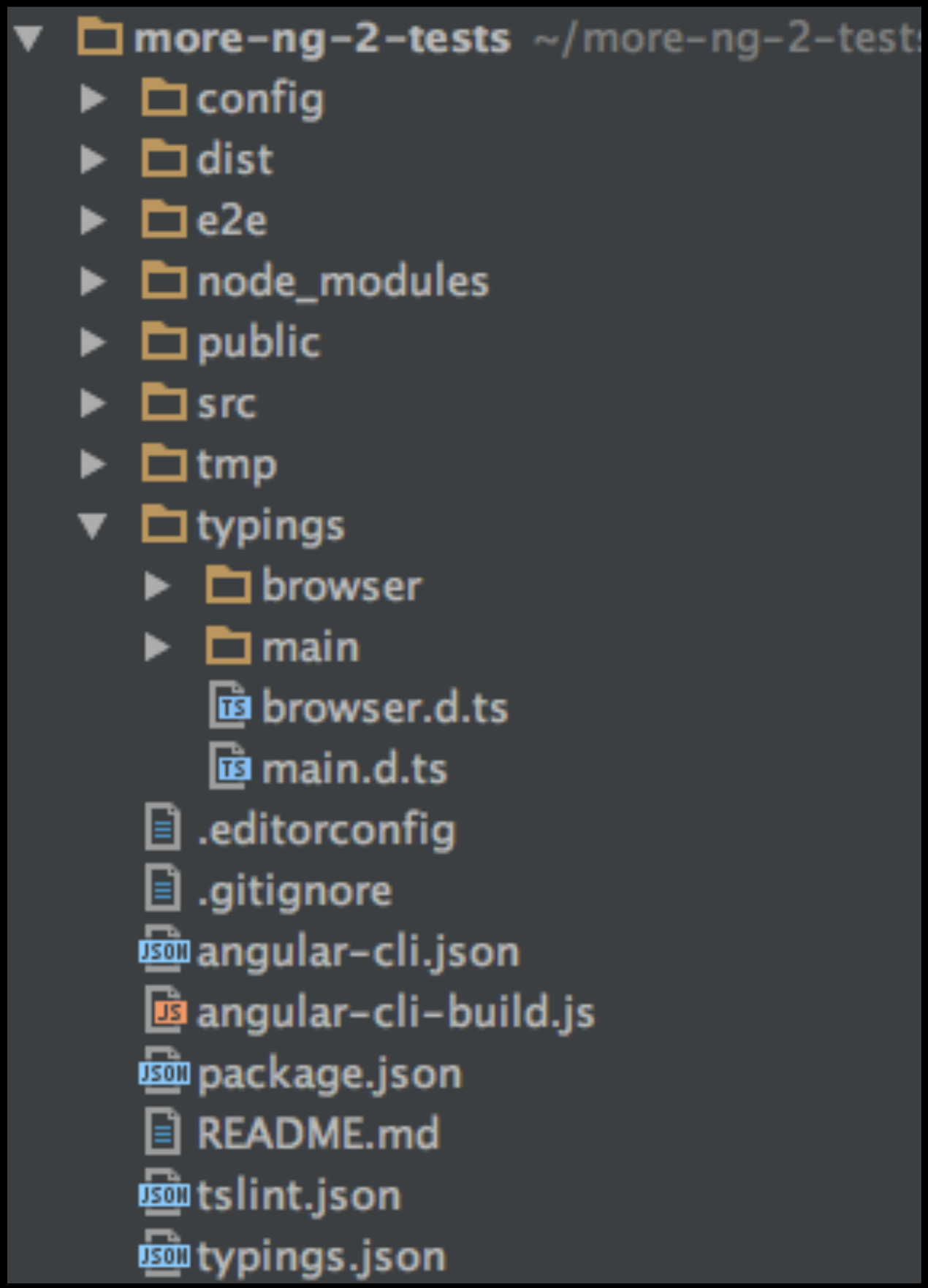


ng install



What Just Happened?

An entire starter project was scaffolded!



All these files and folders were generated by ng new!

A Closer Look

a What Was Created

Config

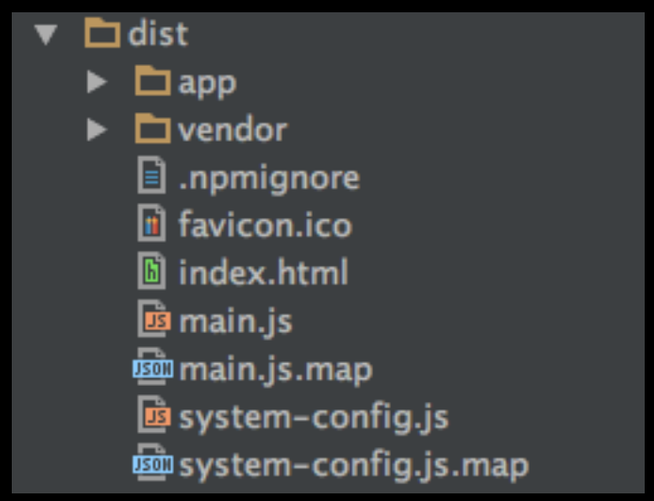
Environment files for setting *production* boolean environment variable.

Configuration files for automated test runners.

Dist

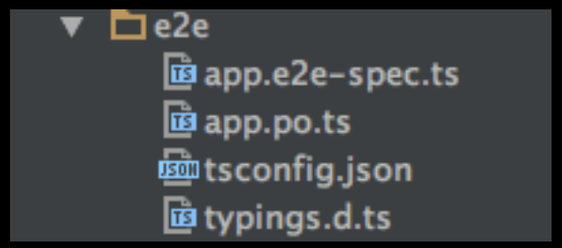
Folder that gets written to by build task

Contains final, minified files that get hosted to be the final, live product.



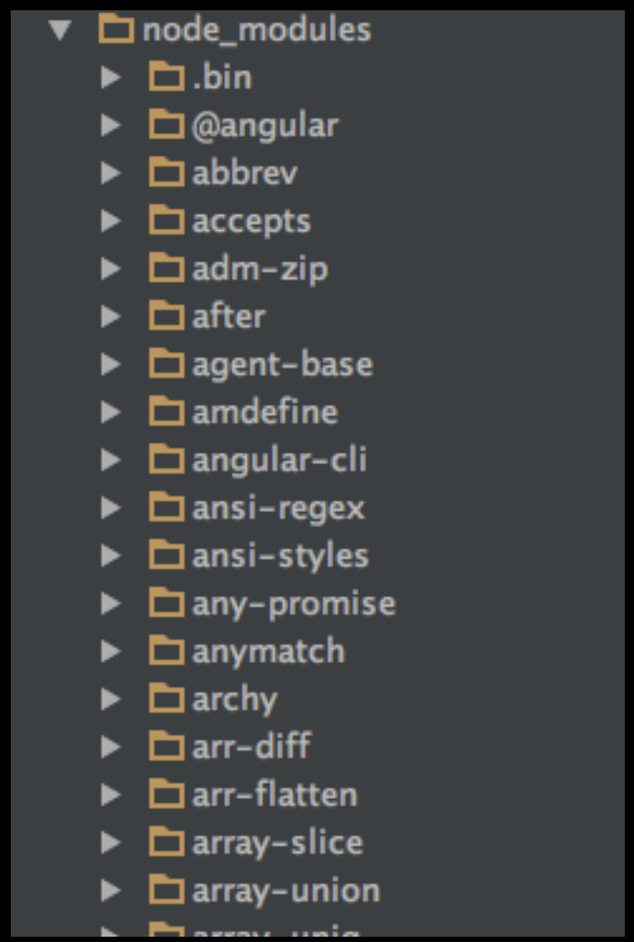
e2e

Contains files for e2e and integration tests run by Protractor.



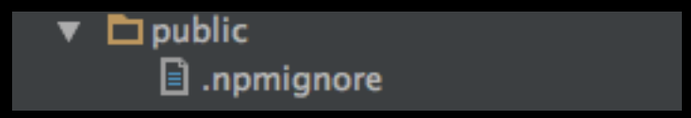
node_modules

Contains all the nam libraries that are dependencies for your application.



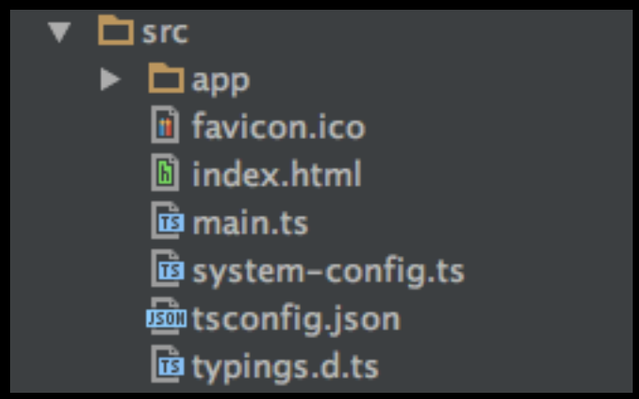
public

Contains the .gitignore file.



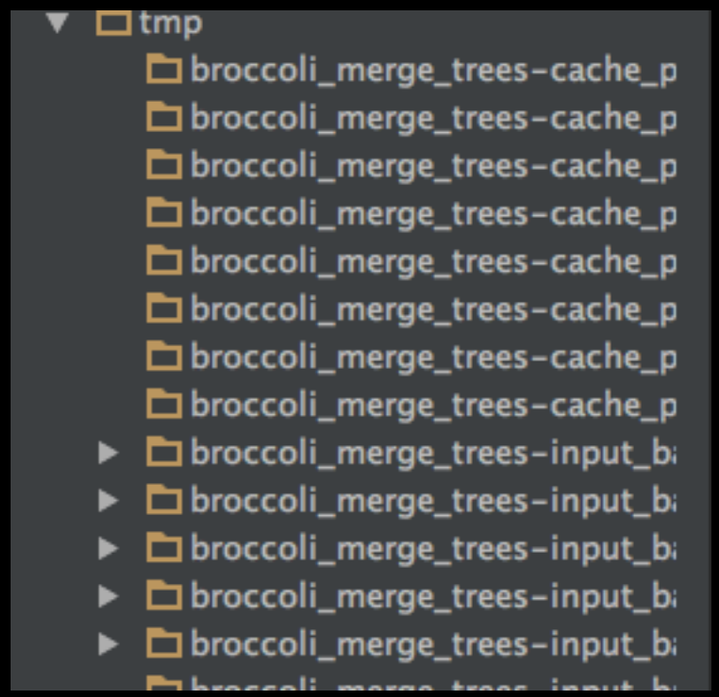
src

Contains all of your source code!



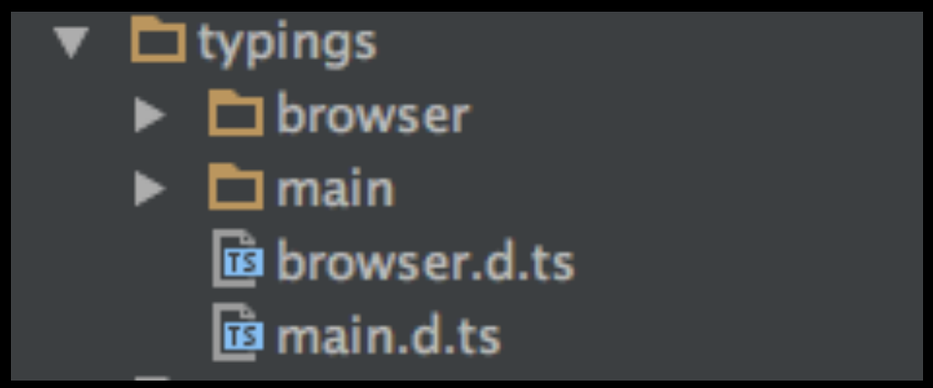
tmp

Contains temporary files that Angular CLI generates and uses to runs its tasks.



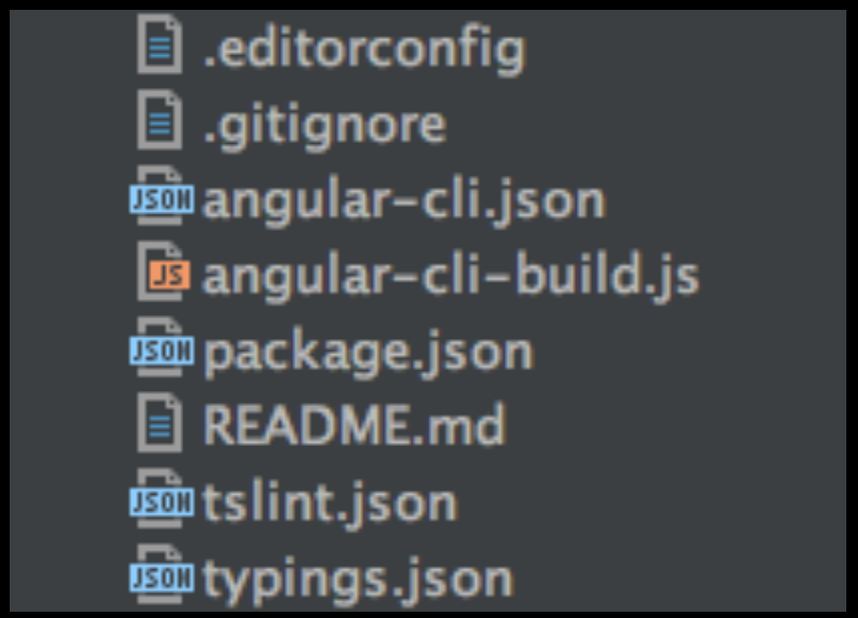
typings

Contains some TypeScript definition files.



Other files

Other configuration files.



Workflow Commands

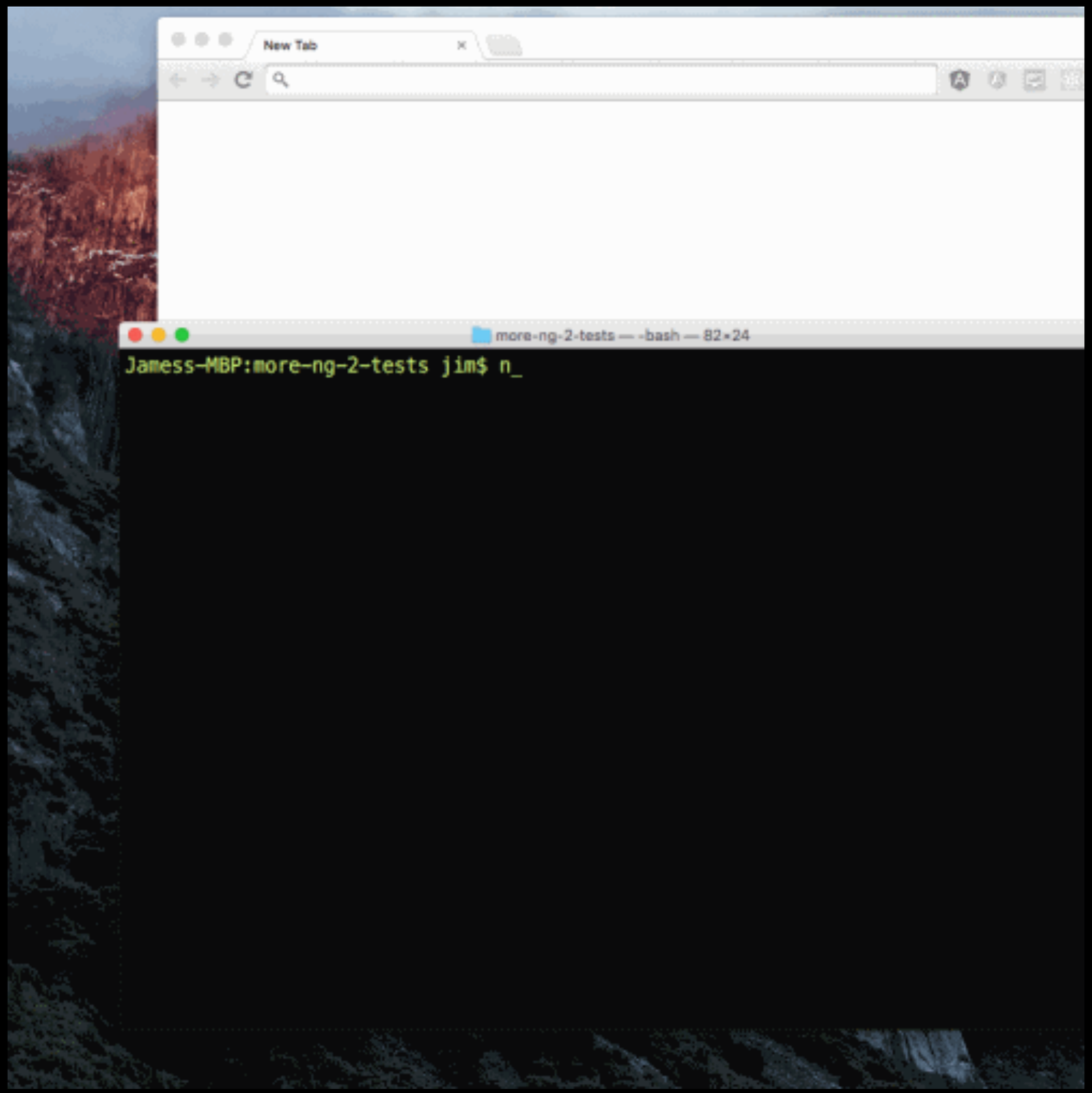
- ng serve

- ng test

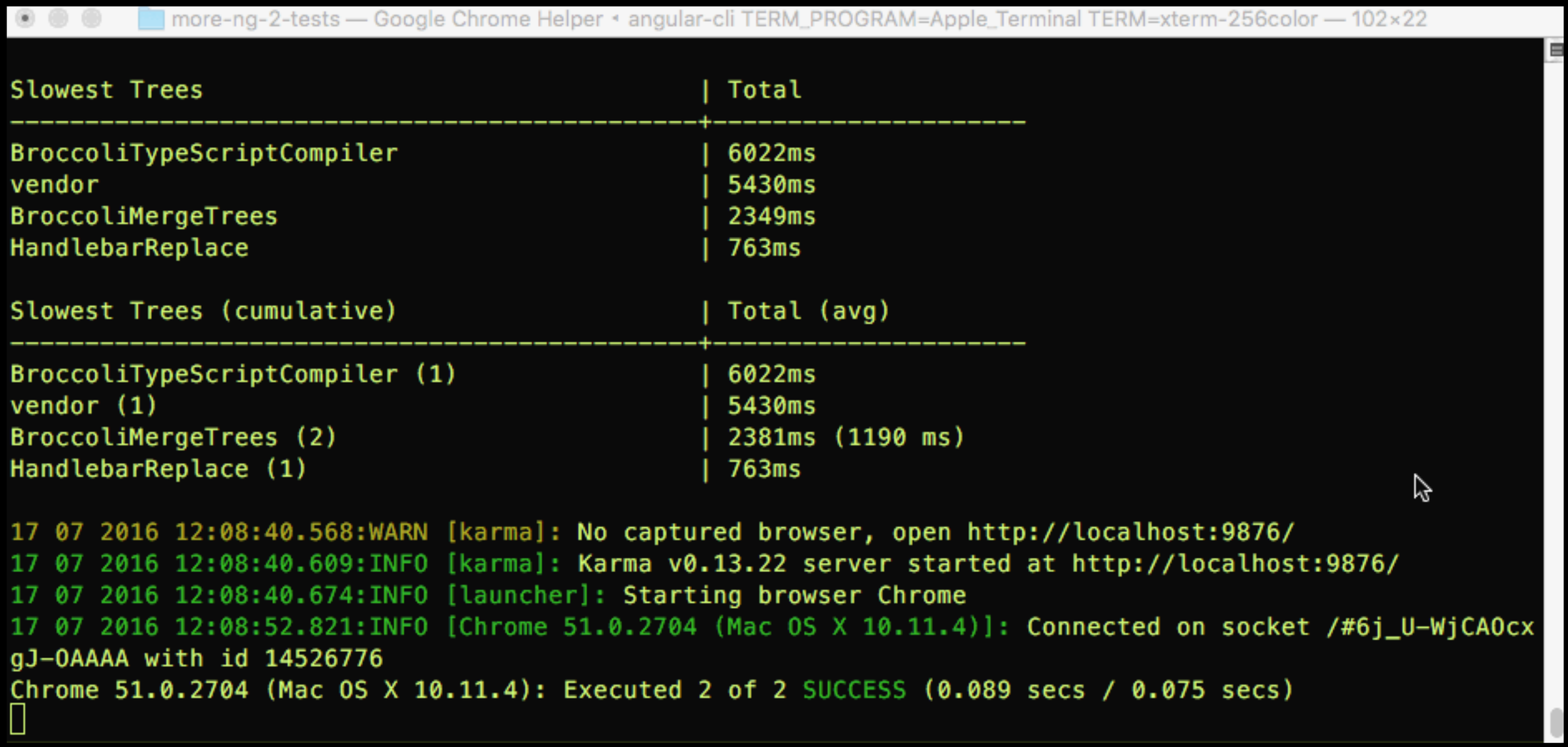
- ng e2e

- ng build

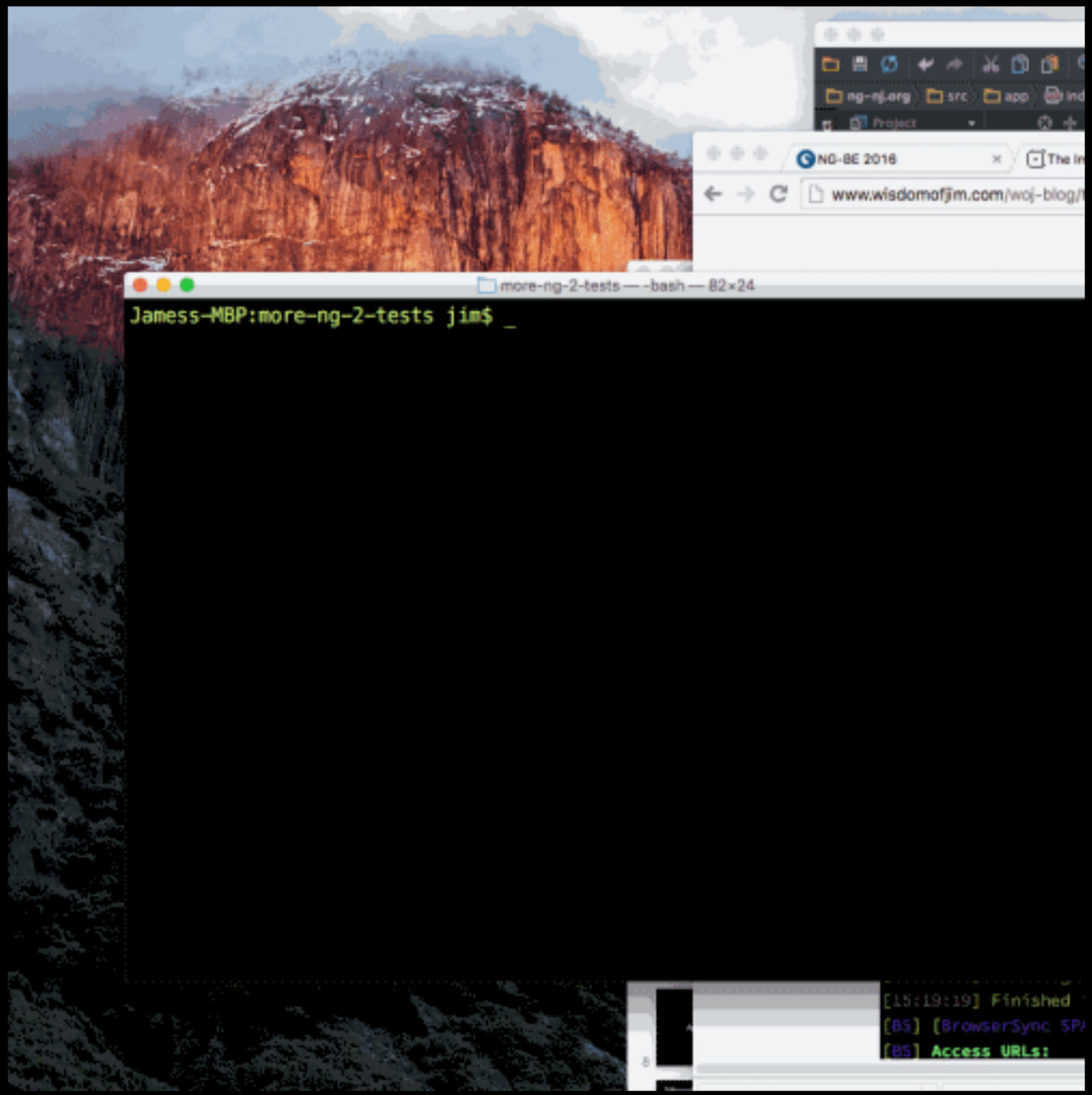
ng serve


New Tab
more-ng-2-tests — -bash — 82×24
Jamess-MBP:more-ng-2-tests jim$ n_

ng test


more-ng-2-tests — Google Chrome Helper ◂ angular-cli TERM_PROGRAM=Apple_Terminal TERM=xterm-256color — 102×22
Slowest Trees | Total
BroccoliTypeScriptCompiler | 6022ms
vendor | 5430ms
BroccoliMergeTrees | 2349ms
HandlebarReplace | 763ms
Slowest Trees (cumulative) | Total (avg)
BroccoliTypeScriptCompiler (1) | 6022ms
vendor (1) | 5430ms
BroccoliMergeTrees (2) | 2381ms (1190 ms)
HandlebarReplace (1) | 763ms
17 07 2016 12:08:40.568:WARN [karma]: No captured browser, open http://localhost:9876/
17 07 2016 12:08:40.609:INFO [karma]: Karma v0.13.22 server started at http://localhost:9876/
17 07 2016 12:08:40.674:INFO [launcher]: Starting browser Chrome
17 07 2016 12:08:52.821:INFO [Chrome 51.0.2704 (Mac OS X 10.11.4)]: Connected on socket /#6j_U-WjCAOcx
gJ-OAAAA with id 14526776
Chrome 51.0.2704 (Mac OS X 10.11.4): Executed 2 of 2 SUCCESS (0.089 secs / 0.075 secs)

ng e2e


ng-nj.org
src
app
Project
NG-BE 2016
www.wisdomofjim.com/woj-blog/
more-ng-2-tests — -bash — 82×24
Jamess-MBP:more-ng-2-tests jim$ _
[15:19:19] Finished
[BS] [BrowserSync SP
[BS] Access URLs:

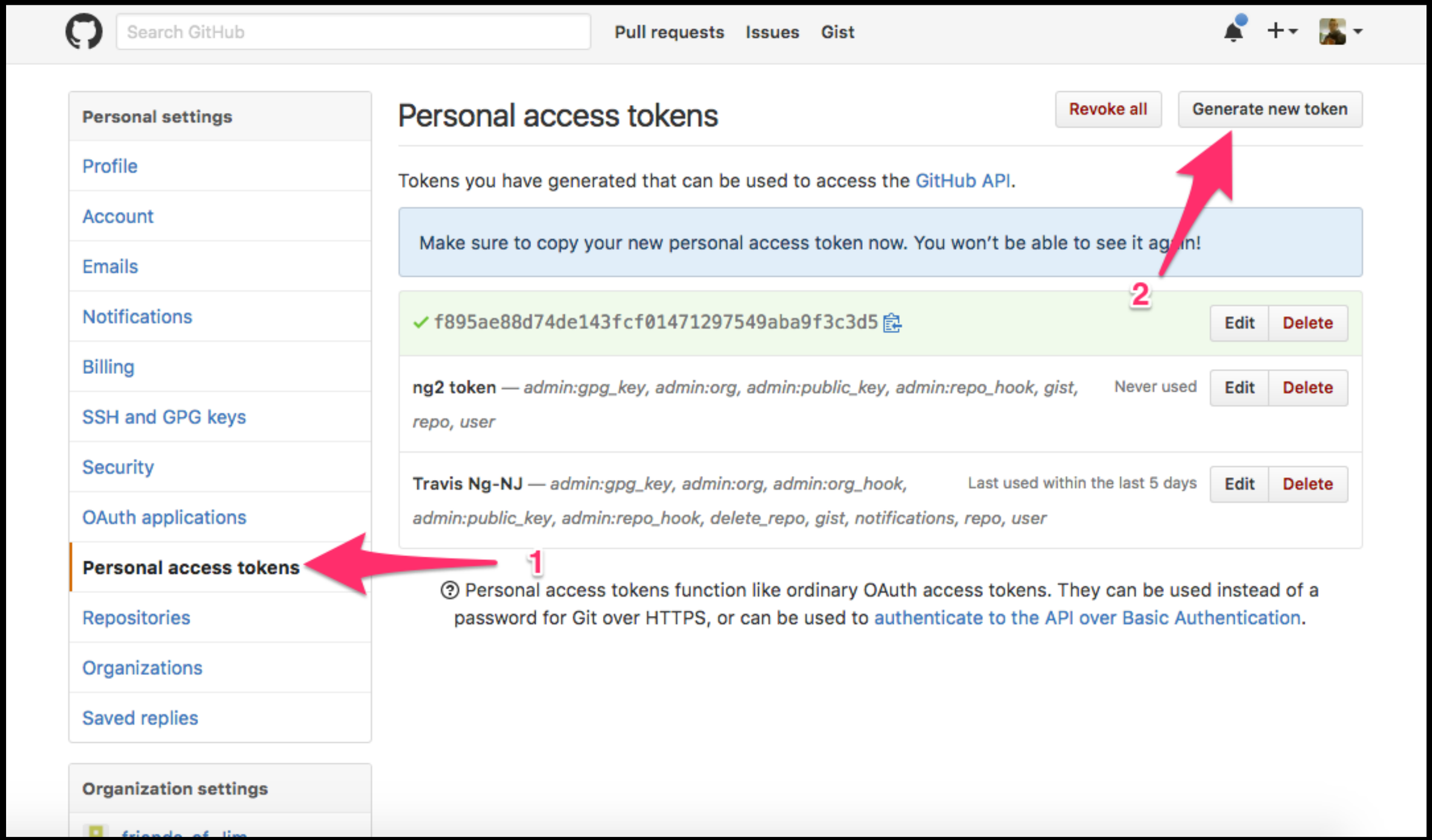
ng build

```
Jamess-MacBook-Pro:Angular-2-Screencast-Example jim$
```

ng deploy gh:pages

Creating a Github Token

It's easy!



ng Generate!

- Scaffold individual components, routes, directives, services, or pipes!

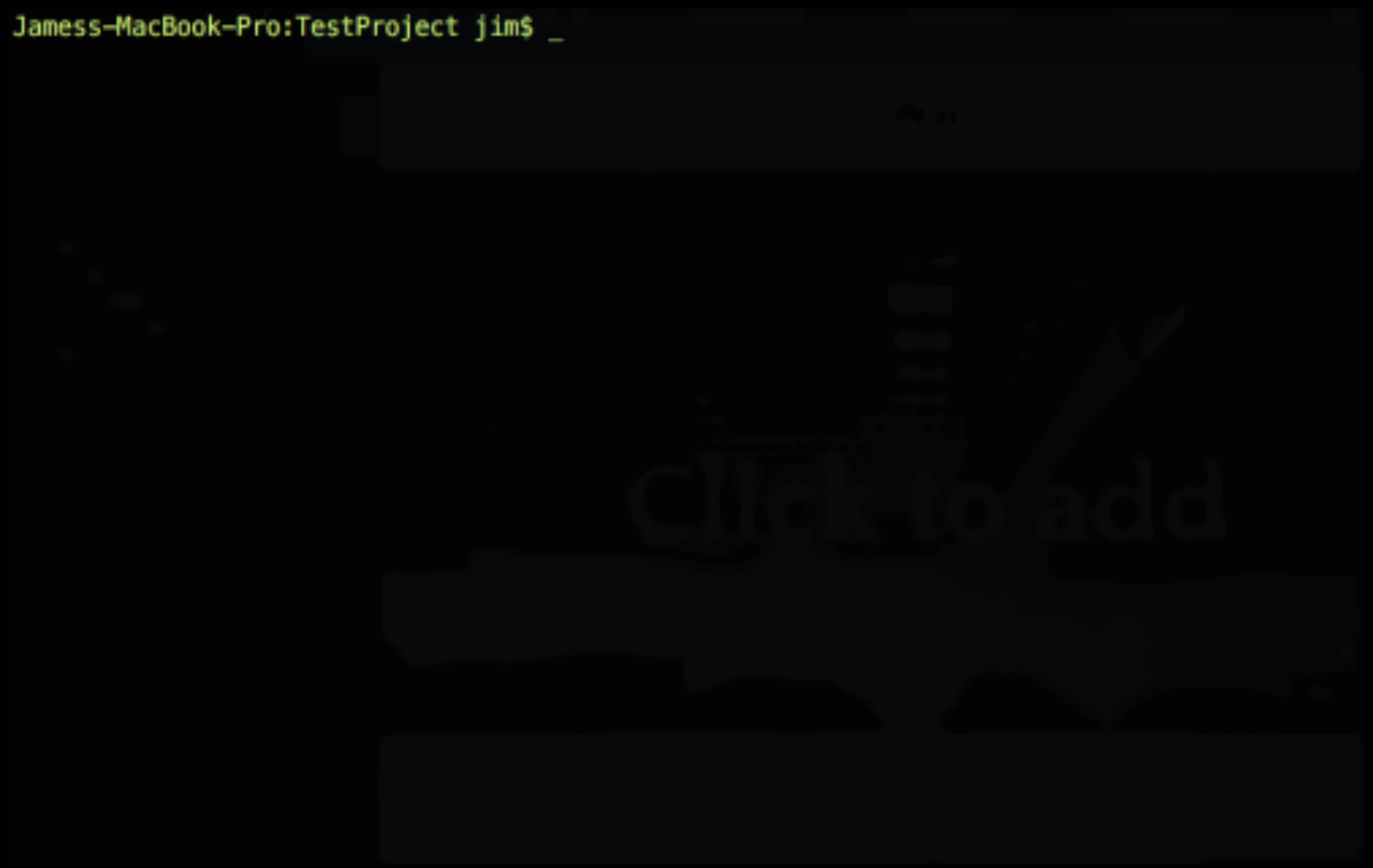
- Alias for the generate command is just the letter g.

- The generated component has its own directory, unless the --flat options is specified.

ng g component

```
Jamess-MacBook-Pro:more-ng-2-tests jim$ _
```

ng g service



ng g pipe

```
Jamess-MacBook-Pro:more-ng-2-tests jim$
```

ng g directive

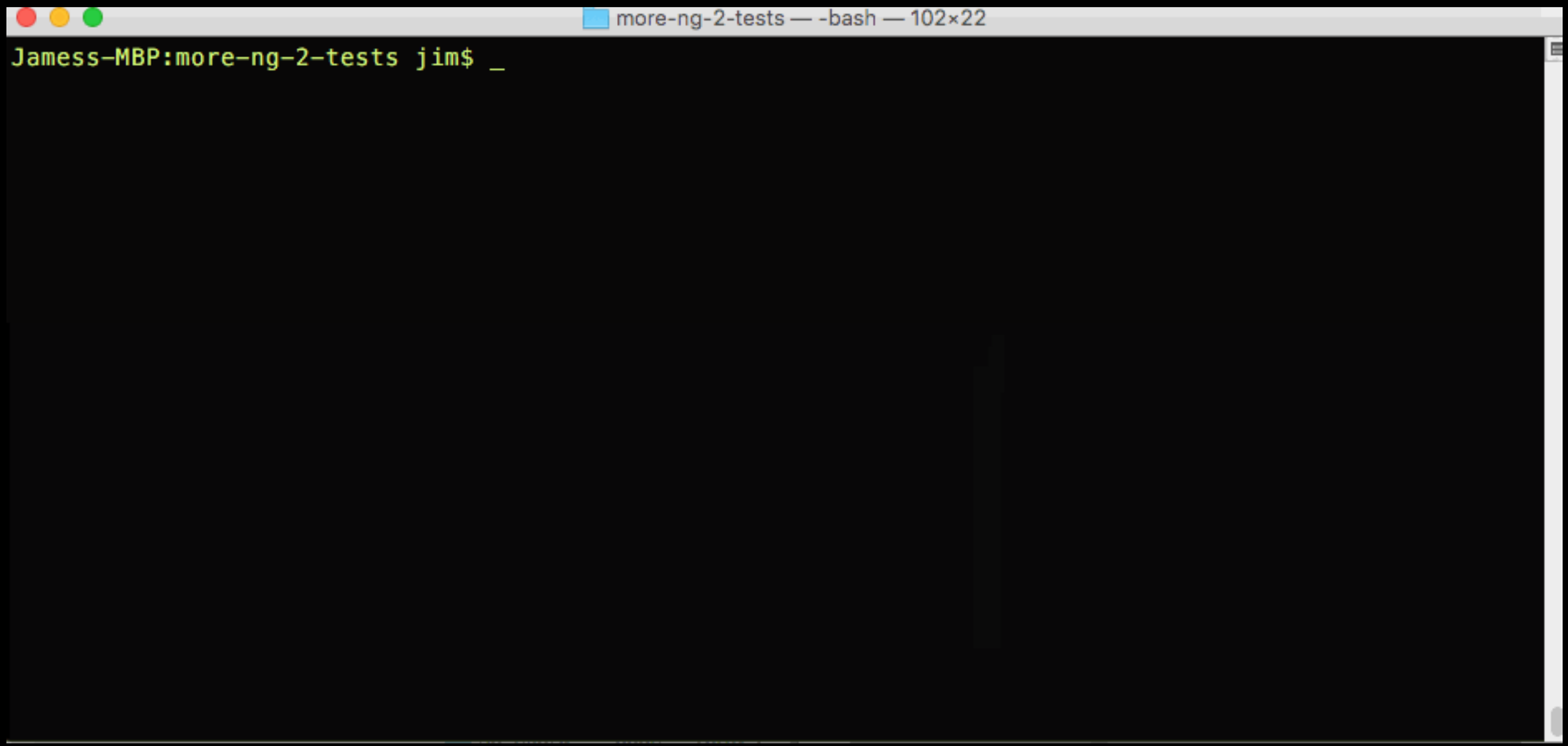
```
James-MacBook-Pro:TestProject jim$ _
```

click to add

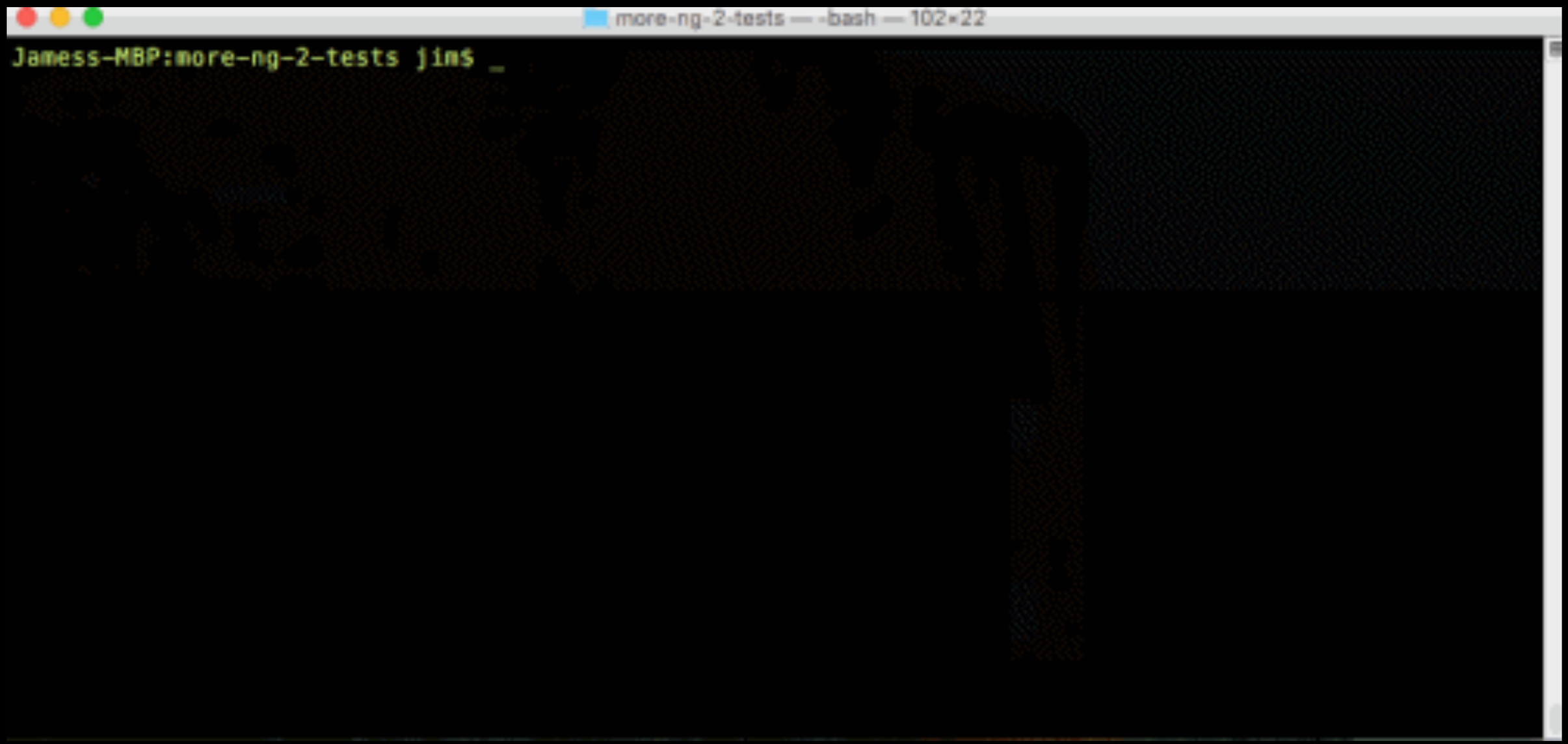
ng g route

CLI Bonus Commands!

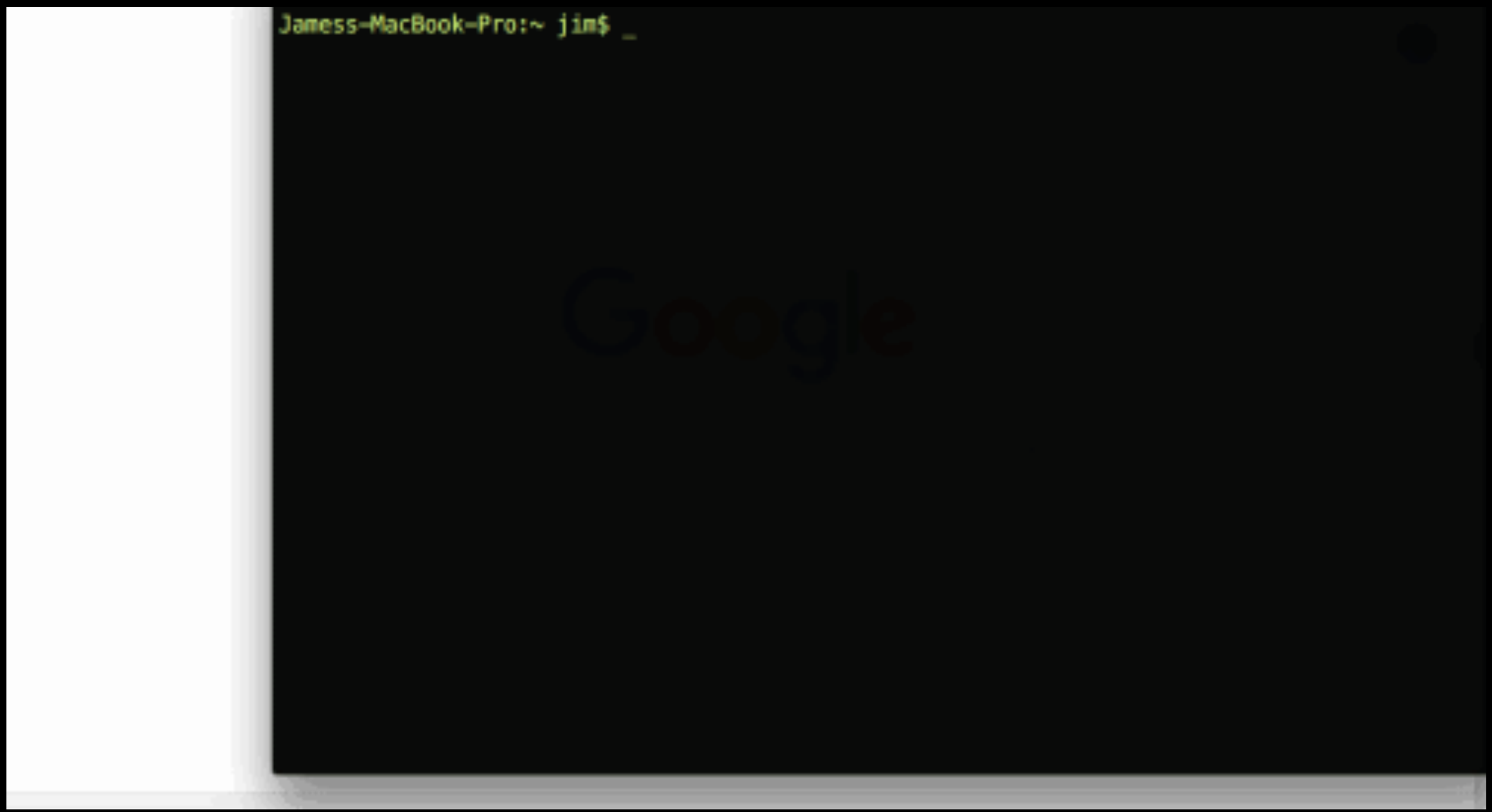
ng-lint



ng help



ng doc <keyword>



ng version

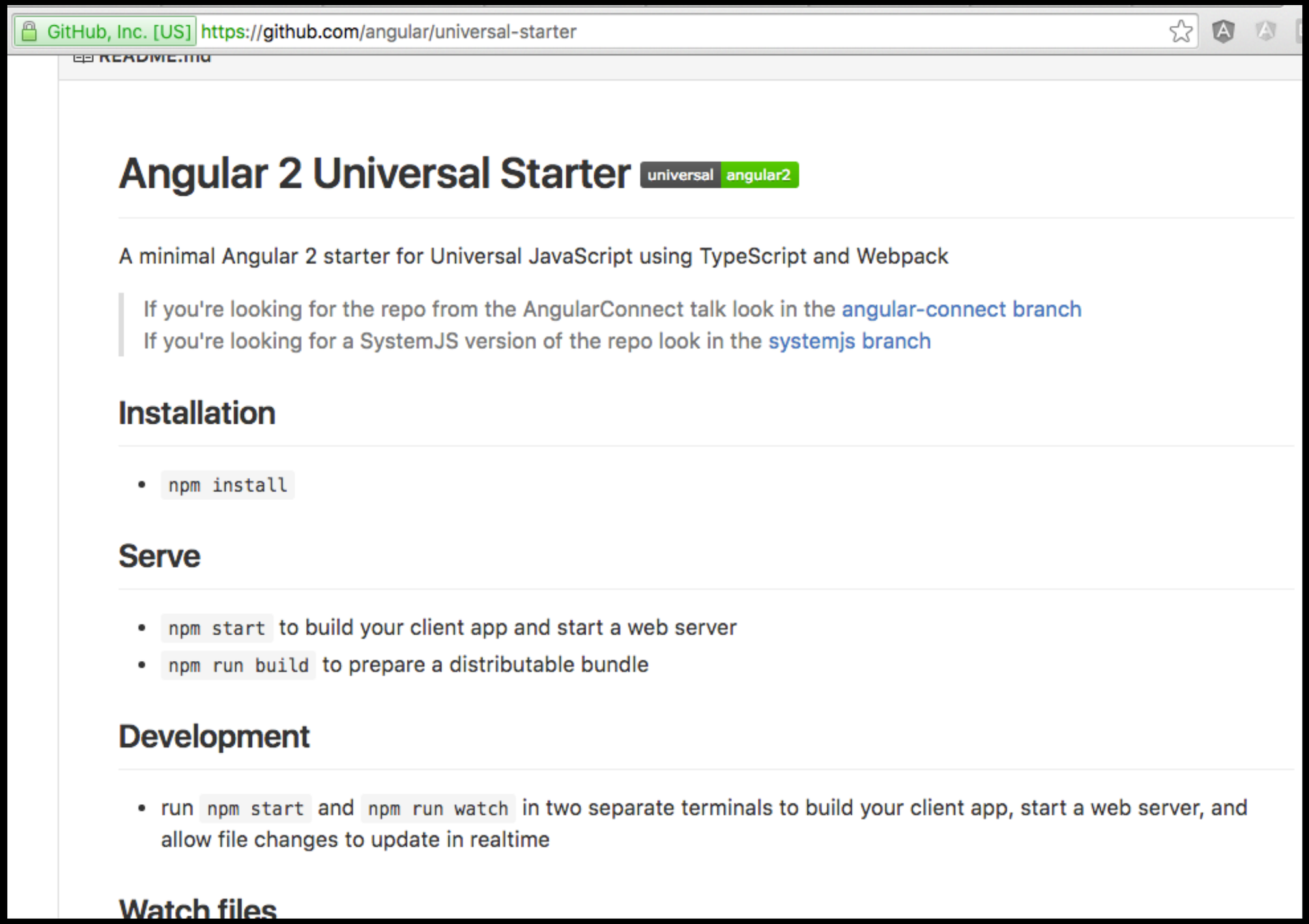
Things You Might Consider Adding to An Angular 2 Project

- CucumberJS / Acceptance tests
- Redux or any other Flux Store
- Angular Universal / App Shell
- Ionic / Angular for Native Apps

Other Generators

Do Exist!

Angular Universal Starter



FountainJS

GitHub, Inc. [US] https://github.com/FountainJS/generator-fountain-webapp

Fountain Webapp Generator

build passing codecov 100% slack 6/41 backers 1 sponsors 0

> This Yeoman generator allows you to start any Webapp with the best Developer Experience out of the box!
>
> No matter what framework or module management you want to use, we got you covered with a cutting edge working configuration.
>
> We use Gulp 4 as a task manager but we'll ask you questions about:
>
> - Framework: React, Angular 2, Angular 1
> - Modules management: Webpack, SystemJS, none
> - JS preprocessor: Babel, TypeScript, none
> - CSS preprocessor: Sass, Stylus, Less, none

This generator is the entry point of the Yeoman Fountain generators for webapps. It can be considered as the v2 of generator-gulp-angular.

Questions?

twitter.com/webWhizJim

github.com/JimTheMan

jim@ng-nj.com

www.wisdomofjim.com

Slides available here:

http://www.slideshare.net/JimLynch22/describes-full-of-its

Thanks!