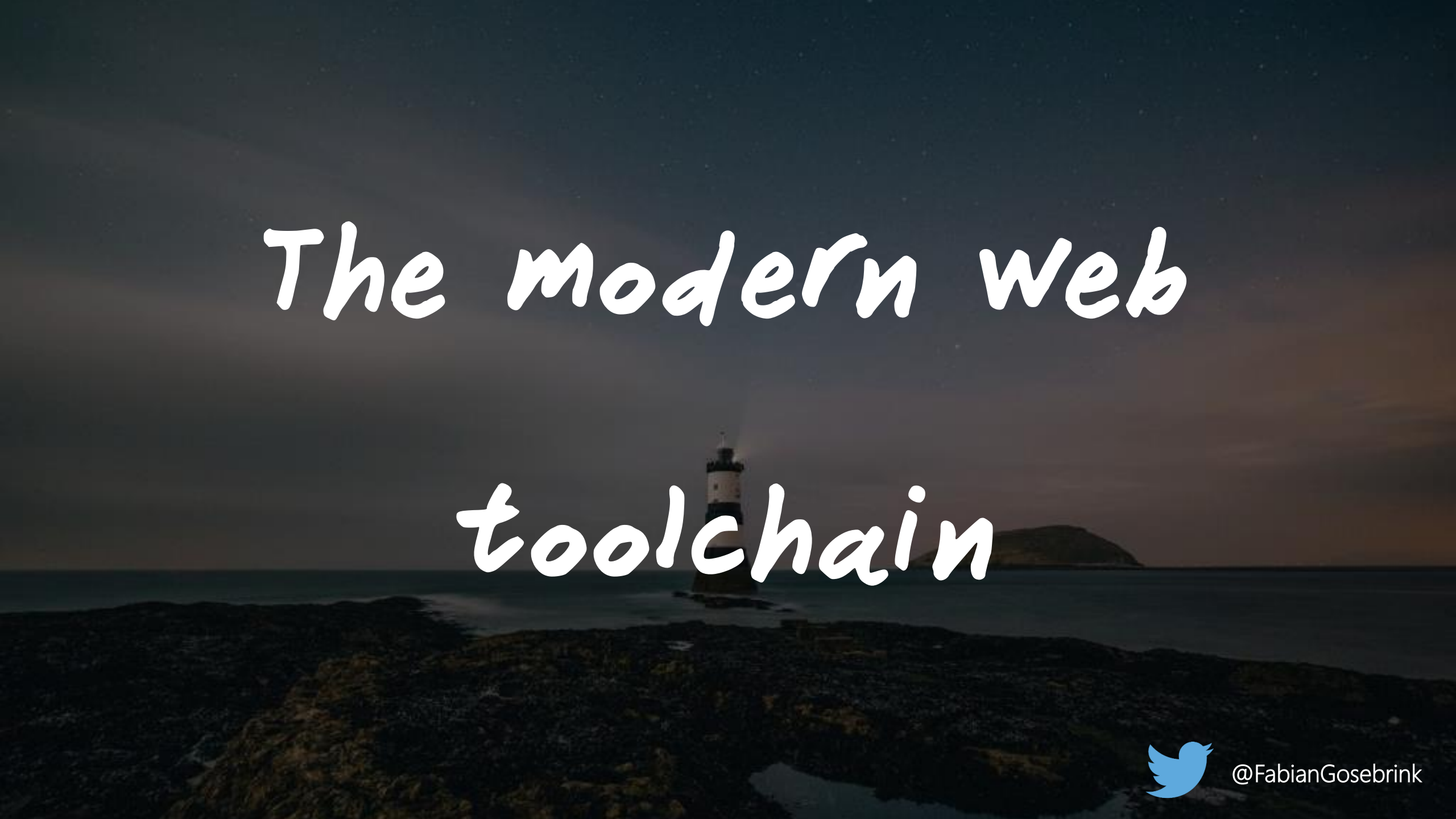
The modern web
toolchain
@FabianGosebrink


Fabian Gosebrink

@FabianGosebrink

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Search article...

Announcing ASP.NET Core WebAPI PacktPub Video Course

I am very proud and really happy to announce that my video course “RESTful Web services with ASP.NET Core” was published on Packt. You can find... »

Fabian Gosebrink on Aspnetcore, Microphone, Recording, Screenrecording | 13 AUG 2017

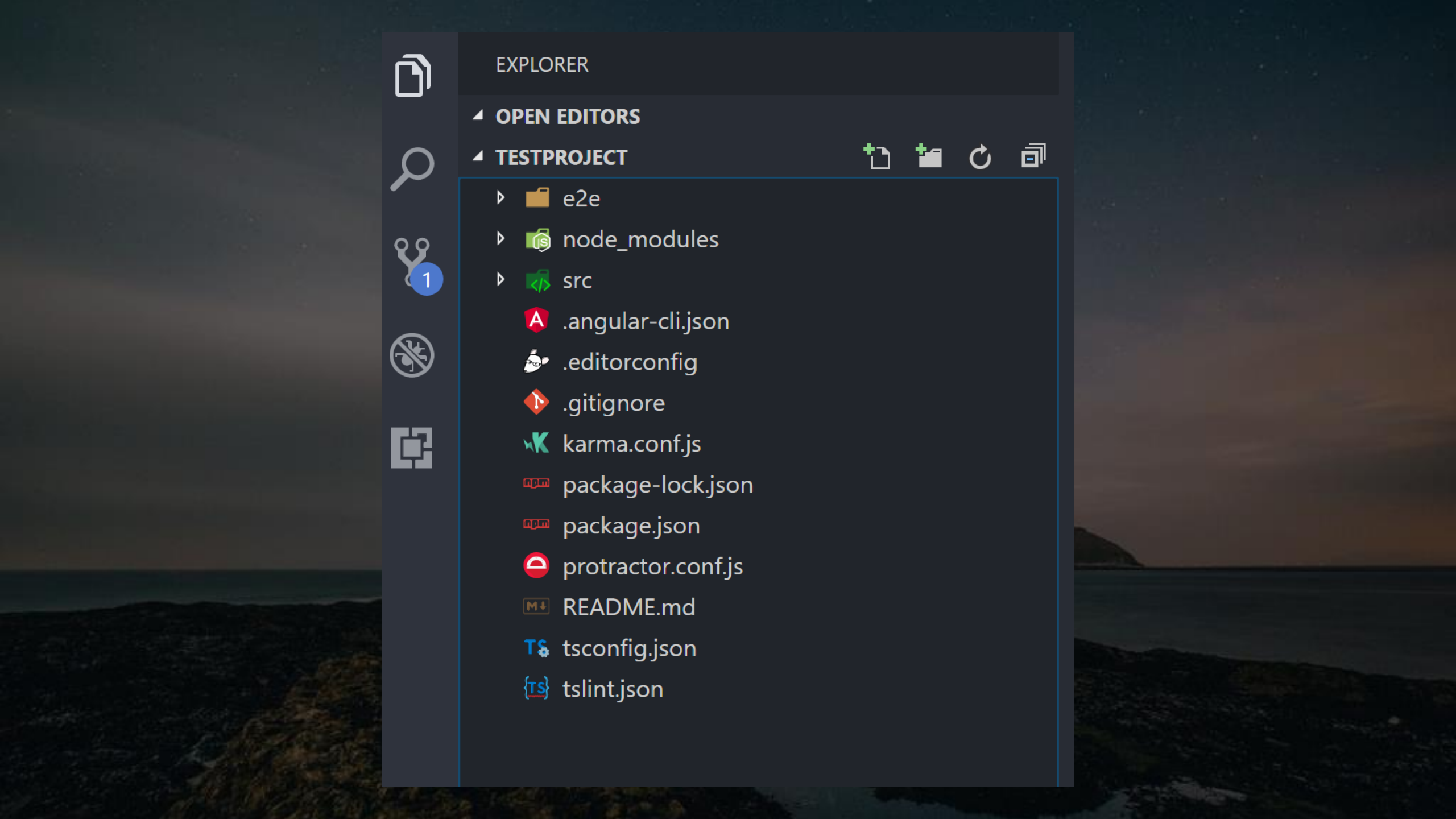
Angular - New HTTP interface with interceptors

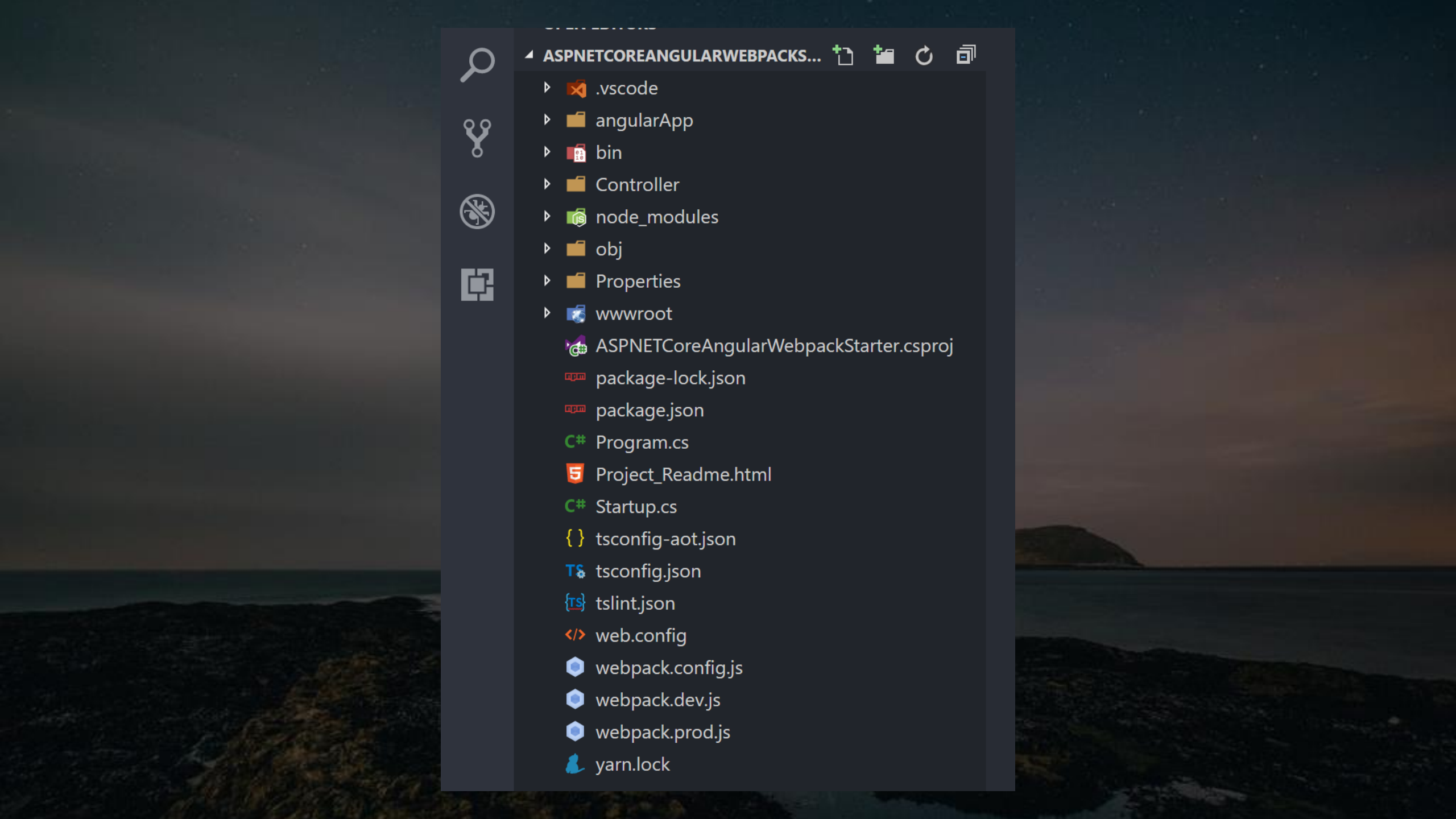
In this blogpost I want to explore the latest HTTP interface from angular which was introduced in Angular 4.3. We all need to get our data... »

Fabian Gosebrink on Angular, Http, Rest | 19 JUL 2017

Lessons learnt from organising a


The modern web
toolchain


EXPLORER
OPEN EDITORS
TESTPROJECT
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
1


ASPNETCOREANGULARWEBPACKS...
.vscode
angularApp
bin
Controller
node_modules
obj
Properties
wwwroot
ASPNETCoreAngularWebpackStarter.csproj
package-lock.json
package.json
Program.cs
Project_Readme.html
Startup.cs
tsconfig-aot.json
tsconfig.json
tslint.json
web.config
webpack.config.js
webpack.dev.js
webpack.prod.js
yarn.lock

HTML


CSS


JS

```
<body data-ng-app="AngularJsDemoApp">

    <root>
        <span class="loader">Loading ...</span>
    </root>

    <!-- inject:js -->
    <script src="node_modules/angular/angular.js"></script>
    <script src="node_modules/angular-animate/angular-animate.js"></script>
    <script src="node_modules/@uirouter/angularjs/release/angular-ui-router.js"></script>
    <script src="node_modules/jquery/dist/jquery.js"></script>
    <script src="node_modules/bootstrap/dist/js/bootstrap.min.js"></script>
    <script src="node_modules/angular-loading-bar/build/loading-bar.js"></script>
    <script src="node_modules/angular-toastr/dist/angular-toastr.tpls.js"></script>

    <script src="app/root.module.js"></script>
    <script src="app/components/components.module.js"></script>
    <script src="app/components/home/home.module.js"></script>
    <script src="app/components/food/food.module.js"></script>
    <script src="app/components/shared/shared.module.js"></script>
    <script src="app/services/services.module.js"></script>

    <script src="app/root.component.js"></script>
    <script src="app/components/home/home/home.component.js"></script>
    <script src="app/components/food/foods/foods.component.js"></script>
    <script src="app/components/food/food-list/food-list.component.js"></script>
    <script src="app/components/food/food-form/food-form.component.js"></script>
    <script src="app/components/food/food-detail/food-detail.component.js"></script>
    <script src="app/components/food/food/food.component.js"></script>
    <script src="app/components/shared/navigation/navigation.component.js"></script>
    <script src="app/components/shared/shell/shell.component.js"></script>

    <script src="app/components/home/home/home.controller.js"></script>
    <script src="app/components/food/food-form/food-form.controller.js"></script>
    <script src="app/components/food/food-list/food-list.controller.js"></script>
    <script src="app/components/food/foods/foods.controller.js"></script>
    <script src="app/components/food/food-detail/food-detail.controller.js"></script>

    <script src="app/services/food.service.js"></script>
    <!-- endinject -->
</body>

</html>
```

```
(function () {
'use strict';

        angular
                .module('components.food')
                .controller('foodDetailController',
                        foodDetailController);

foodDetailController.$inject = ['$stateParams', 'foodService'];

function foodDetailController($stateParams, foodService) {
    var ctrl = this;

    ctrl.$onInit = function () {
        foodService.getSingleFood($stateParams.id)
            .then(function (response) {
                ctrl.food = response.data;
                console.log(ctrl.food);
            });
        };
    }
})();
```

Blog

02 Oct 2017

by Adam Stankiewicz

How to migrate away from Bower?

> If you came here because of “Request to xxx failed with 410” error, it’s enough to upgrade

As you might have noticed, we started recommending Yarn as an alternative to Bower for **new** front-end projects. Main reasons are straightforward and written on its home page:

1. Yarn uses checksums to verify the integrity of every installed package (like npm@5)
2. Yarn uses lockfile to exactly reproduce installed packages each time (like npm@5)
3. Yarn supports most features npm supports, and is able to force flattening of dependencies

So far it just wasn’t obvious how one could use Yarn for **legacy** Bower projects. Indeed, until recently Yarn neither could install Bower packages (i.e. GitHub repositories without `package.json`) nor resolve semver ranges on git tags. I focused on this for a while and the result is pleasing: **Yarn 1.x is able to install most of Bower packages**. But there’s a catch: it cannot resolve Bower dependencies.

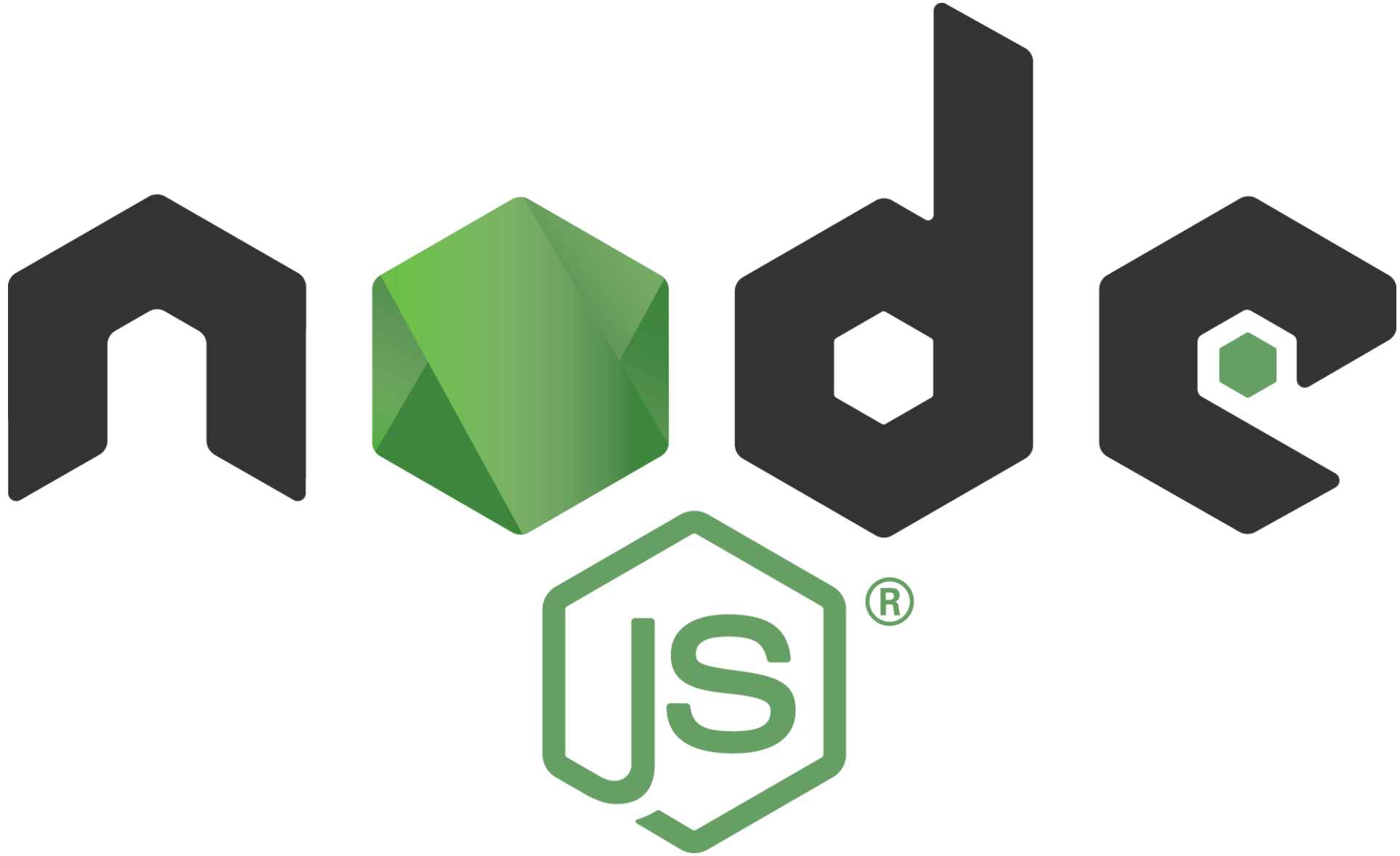
But this is probably for the best as a) Yarn is meant as npm’s replacement b) one must admit npm’s CommonJS module ecosystem is better integrated than Bower’s globals/AMD modules c) Module authors currently suffer from supporting two module ecosystems (and dist files in repositories).

Admitting this doesn’t change the fact that it’s difficult to migrate a project that uses globals/AMD components to CommonJS all at once. Ideally you’d be able to install such project with Yarn as-is, and only then gradually replace AMD modules with CommonJS/ES6 equivalents. Solution: **bower-away**.

How it works?

Yarn is not only unable to resolve dependencies of Bower components (i.e. dependencies defined in


npm


node
JS

Press F11 to exit full screen

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, npm, is the largest ecosystem of open source libraries in the world.

Important DOS security vulnerability, Release coming Tuesday October 24th

Download for Windows (x64)

6.11.4 LTS
Recommended For Most Users

Other Downloads | Changelog | API Docs

8.7.0 Current
Latest Features

Other Downloads | Changelog | API Docs

Or have a look at the LTS schedule.

Sign up for Node.js Everywhere, the official Node.js Weekly Newsletter.

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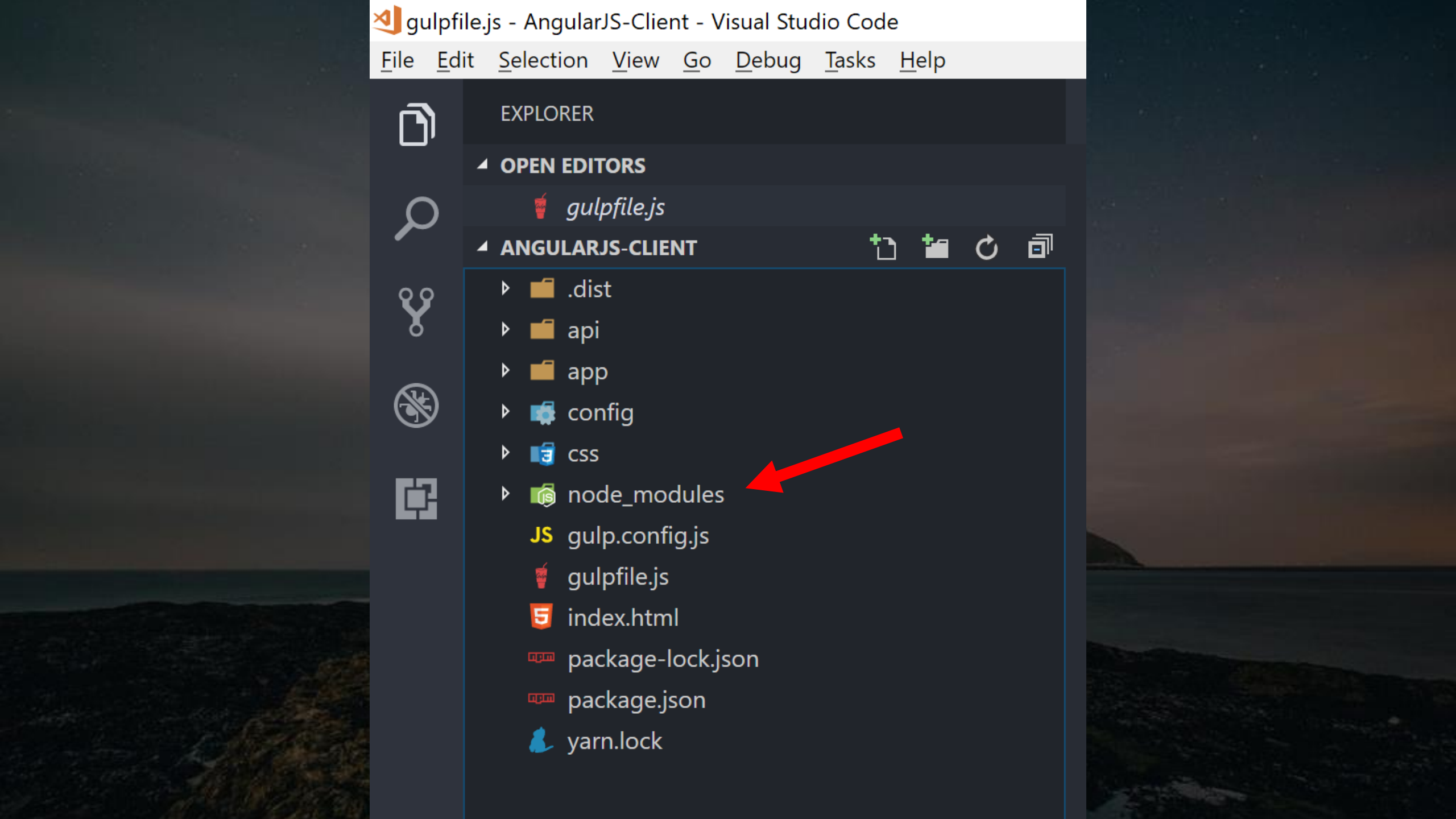
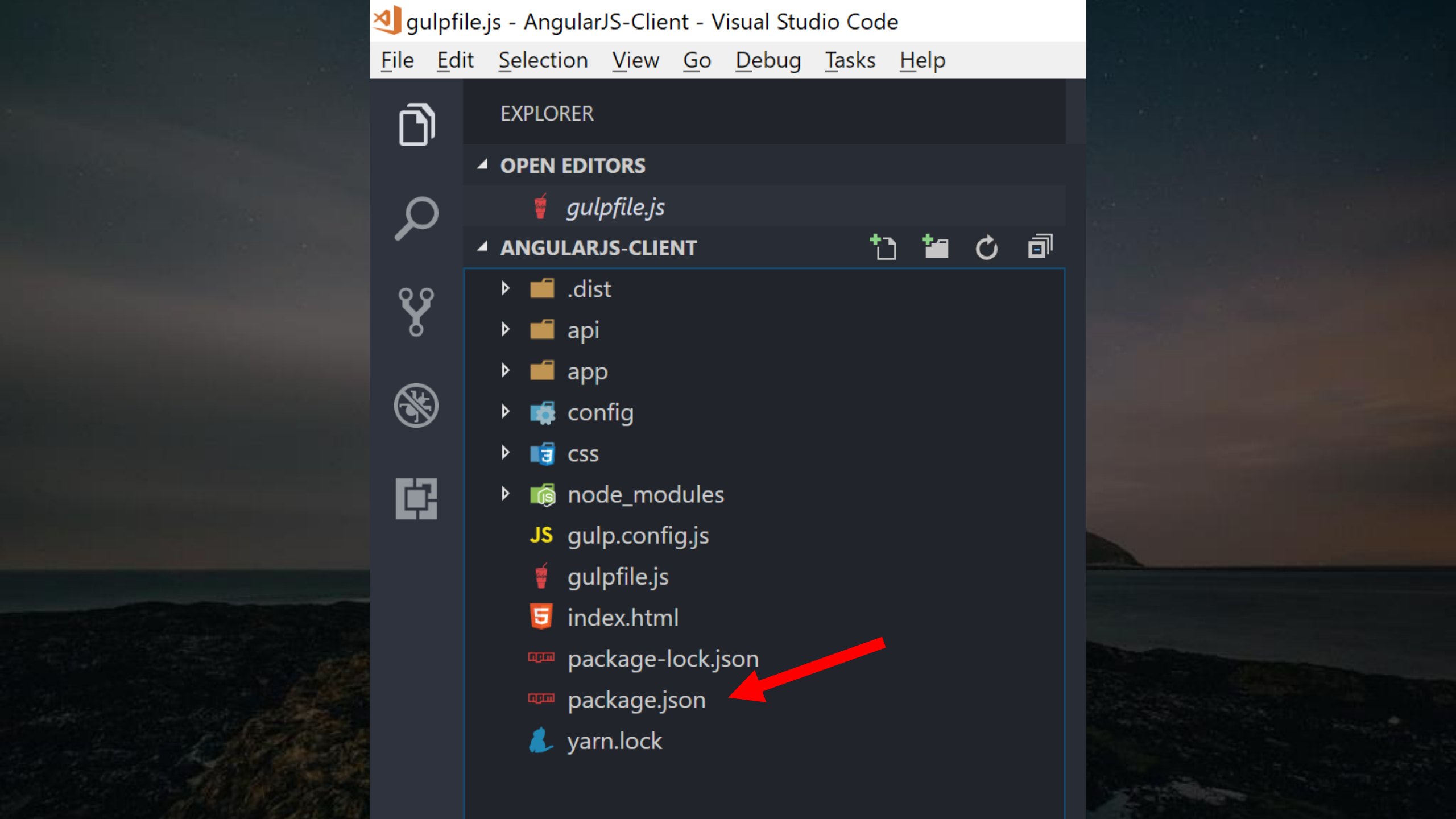
Node.js Project Licensing Information.


> npm install rimraf -g


> npm install rimraf


gulpfile.js - AngularJS-Client - Visual Studio Code
File Edit Selection View Go Debug Tasks Help
EXPLORER
OPEN EDITORS
gulpfile.js
ANGULARJS-CLIENT
.dist
api
app
config
css
node_modules
gulp.config.js
gulpfile.js
index.html
package-lock.json
package.json
yarn.lock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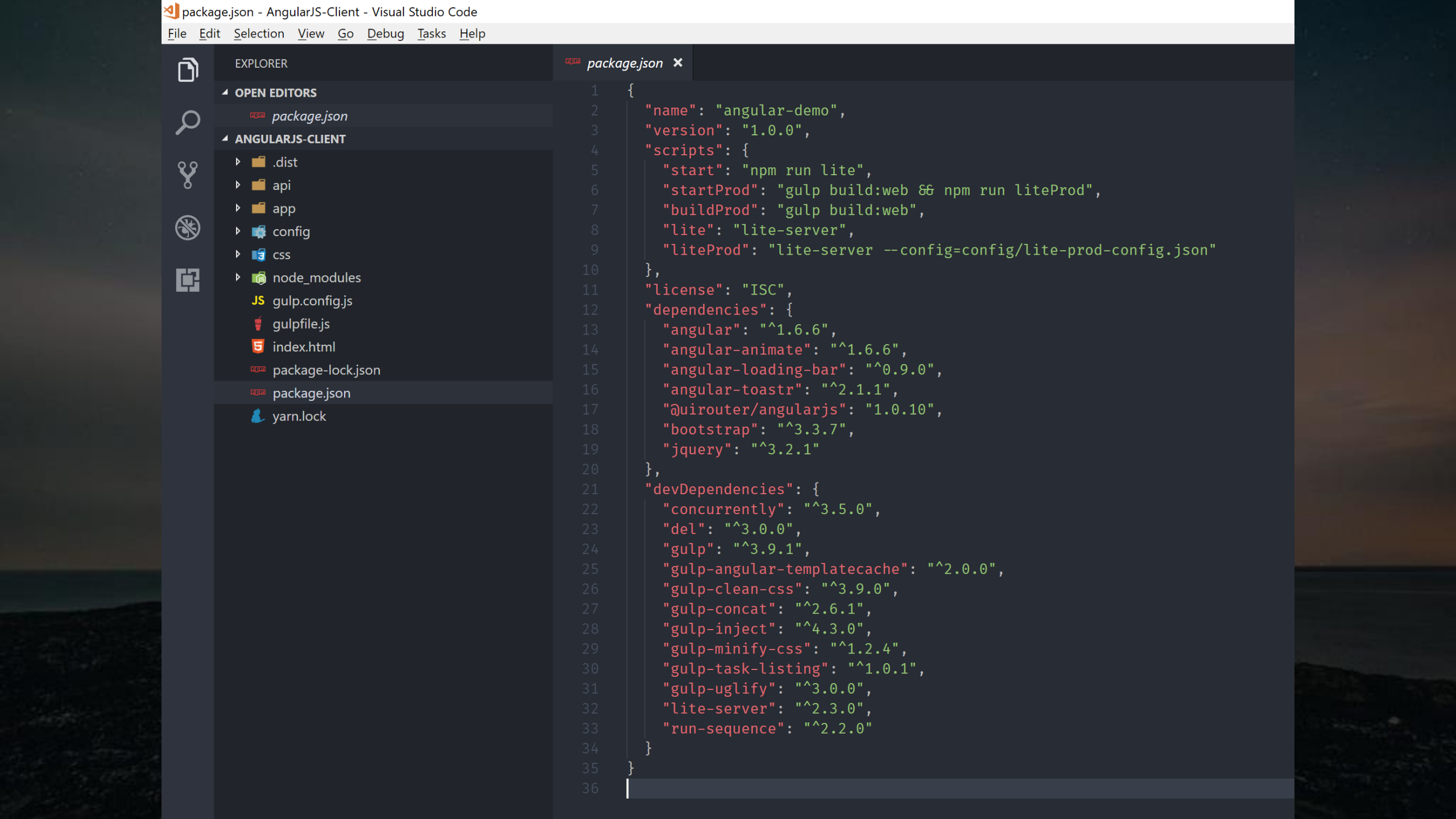
package.json - AngularJS-Client - Visual Studio Code
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package.json
ANGULARJS-CLIENT
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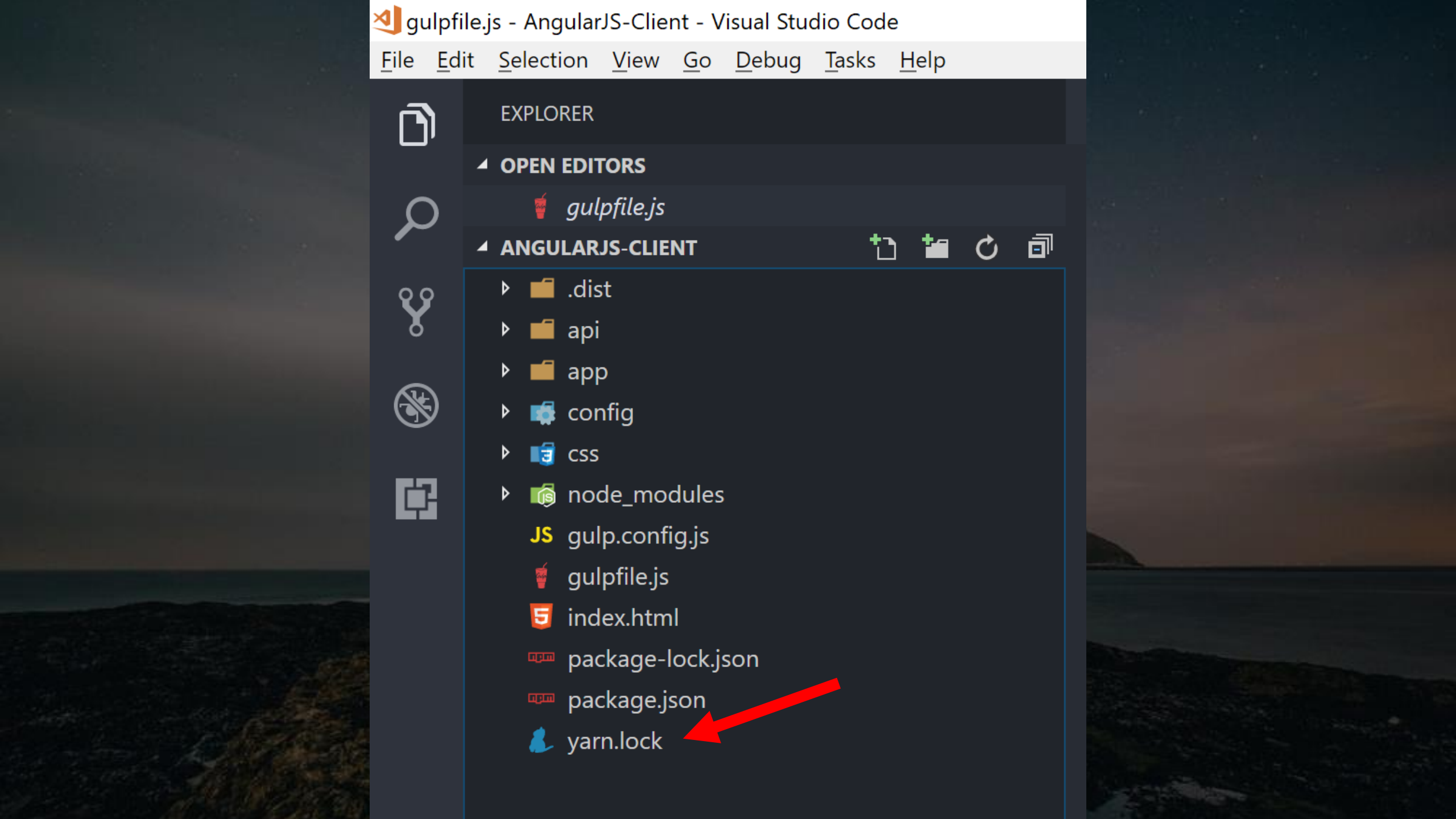
app
config
css
node_modules
gulp.config.js
gulpfile.js
index.html
package-lock.json
package.json
yarn.lock
package.json
{
"name": "angular-demo",
"version": "1.0.0",
"scripts": {
"start": "npm run lite",
"startProd": "gulp build:web && npm run liteProd",
"buildProd": "gulp build:web",
"lite": "lite-server",
"liteProd": "lite-server --config=config/lite-prod-config.json"
},
"license": "ISC",
"dependencies": {
"angular": "^1.6.6",
"angular-animate": "^1.6.6",
"angular-loading-bar": "^0.9.0",
"angular-toastr": "^2.1.1",
"@uirouter/angularjs": "1.0.10",
"bootstrap": "^3.3.7",
"jquery": "^3.2.1"
},
"devDependencies": {
"concurrently": "^3.5.0",
"del": "^3.0.0",
"gulp": "^3.9.1",
"gulp-angular-templatecache": "^2.0.0",
"gulp-clean-css": "^3.9.0",
"gulp-concat": "^2.6.1",
"gulp-inject": "^4.3.0",
"gulp-minify-css": "^1.2.4",
"gulp-task-listing": "^1.0.1",
"gulp-uglify": "^3.0.0",
"lite-server": "^2.3.0",
"run-sequence": "^2.2.0"
}
}


yarn


> yarn add ...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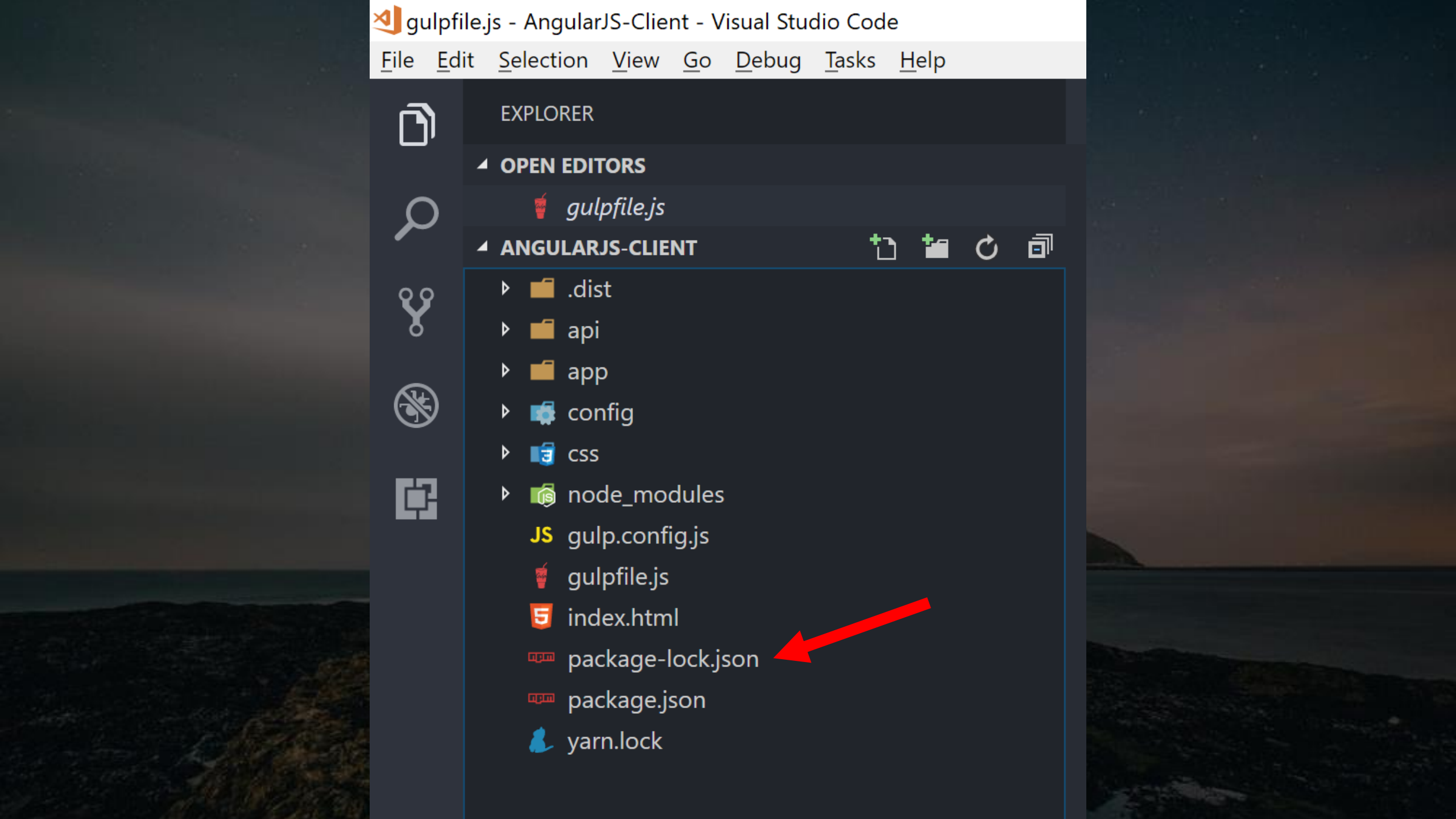
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index.html
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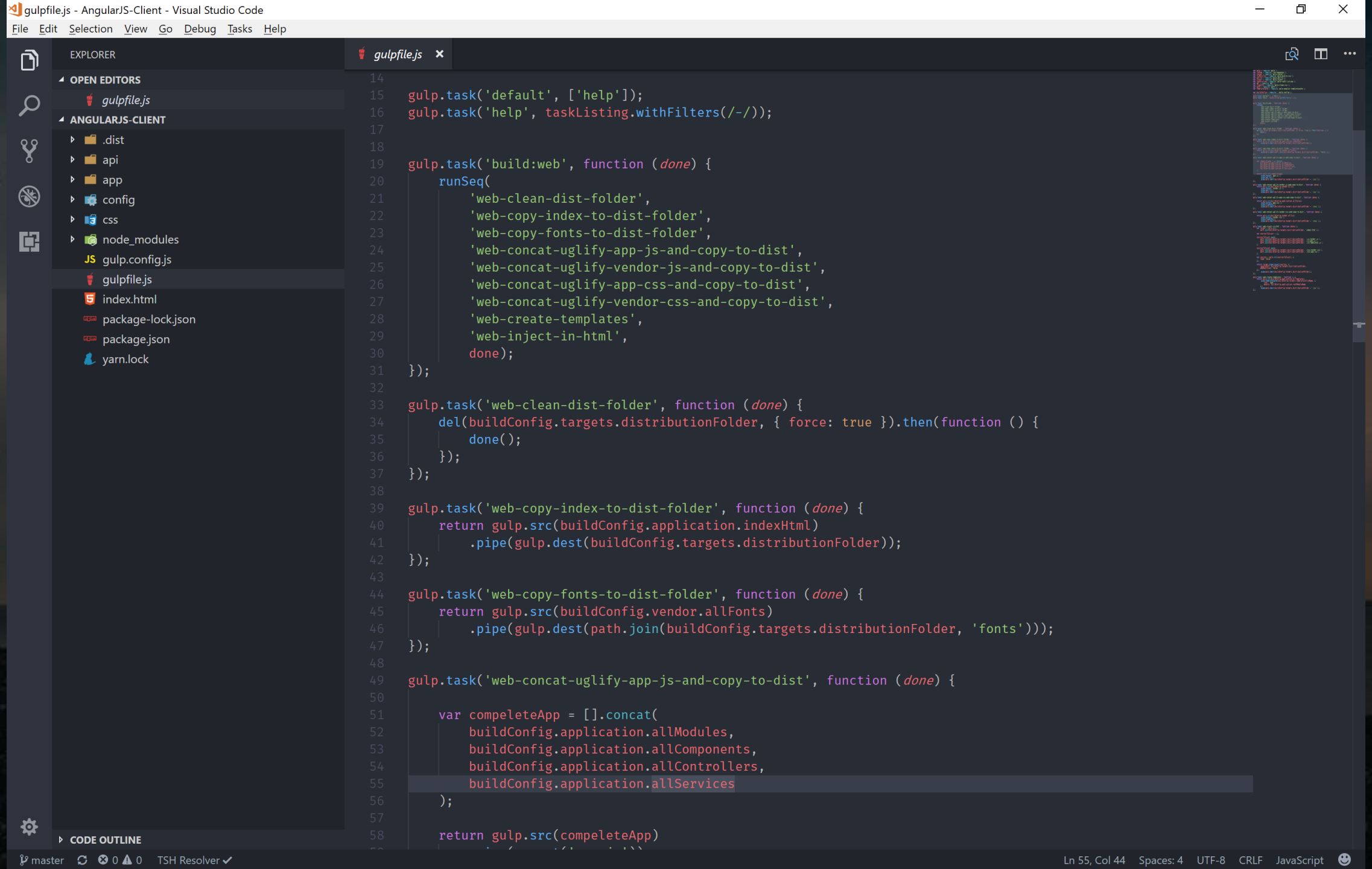
yarn.lock


GRUNT


Gulp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ANGULARJS-CLIENT
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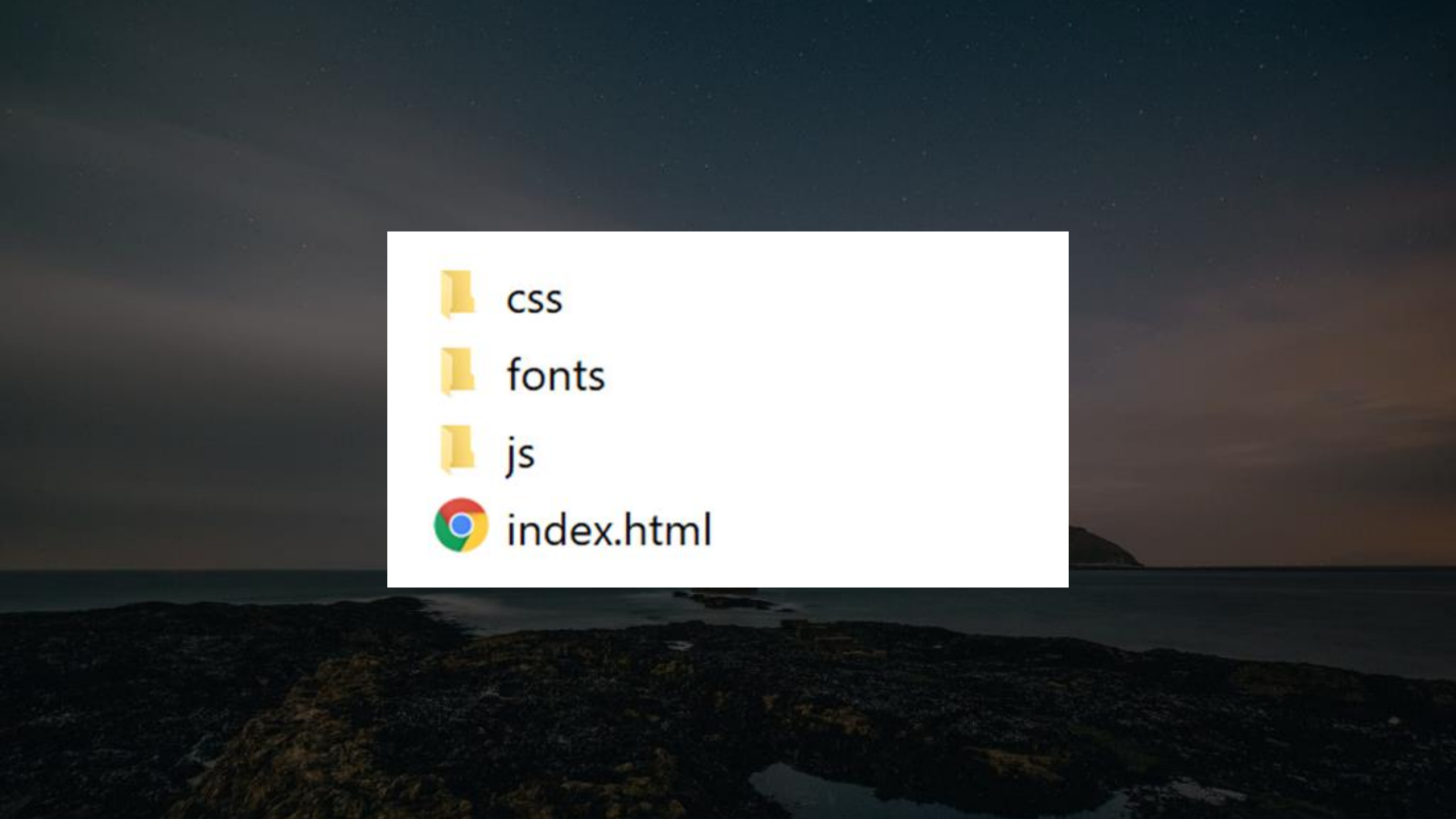
app
config
css
node_modules
gulp.config.js
gulpfile.js
index.html
package-lock.json
package.json
yarn.lock
CODE OUTLINE
gulpfile.js
gulp.task('default', ['help']);
gulp.task('help', taskListing.withFilters(/-/));
gulp.task('build:web', function (done) {
runSeq(
'web-clean-dist-folder',
'web-copy-index-to-dist-folder',
'web-copy-fonts-to-dist-folder',
'web-concat-uglify-app-js-and-copy-to-dist',
'web-concat-uglify-vendor-js-and-copy-to-dist',
'web-concat-uglify-app-css-and-copy-to-dist',
'web-concat-uglify-vendor-css-and-copy-to-dist',
'web-create-templates',
'web-inject-in-html',
done);
});
gulp.task('web-clean-dist-folder', function (done) {
del(buildConfig.targets.distributionFolder, { force: true }).then(function () {
done();
});
});
gulp.task('web-copy-index-to-dist-folder', function (done) {
return gulp.src(buildConfig.application.indexHtml)
.pipe(gulp.dest(buildConfig.targets.distributionFolder));
});
gulp.task('web-copy-fonts-to-dist-folder', function (done) {
return gulp.src(buildConfig.vendor.allFonts)
.pipe(gulp.dest(path.join(buildConfig.targets.distributionFolder, 'fonts')));
});
gulp.task('web-concat-uglify-app-js-and-copy-to-dist', function (done) {
var compeleteApp = [].concat(
buildConfig.application.allModules,
buildConfig.application.allComponents,
buildConfig.application.allControllers,
buildConfig.application.allServices
);
return gulp.src(compeleteApp)
master
0 0
TSH Resolver
Ln 55, Col 44
Spaces: 4
UTF-8
CRLF
JavaScript

```
<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="">
    <meta name="author" content="FabianGosebrink">

    <!-- inject:css -->
    <link rel="stylesheet" href="css/vendor.css">
    <link rel="stylesheet" href="css/app.css">
    <!-- endinject -->

    <title>AngularJS Demo Application</title>

    <!-- Custom styles for this template -->
    <!--<link href="starter-template.css" rel="stylesheet">-->
    <!-- HTML5 shim and Respond.js IE8 support of HTML5 elements and media queries -->
    <!--[if lt IE 9]>
      <script src="https://oss.maxcdn.com/libs/html5shiv/3.7.0/html5shiv.js"></script>
      <script src="https://oss.maxcdn.com/libs/respond.js/1.4.2/respond.min.js"></script>
    <![endif]-->
</head>

<body data-ng-app="AngularJsDemoApp">

    <root>
        <span class="loader">Loading ... </span>
    </root>

    <!-- inject:js -->
    <script src="js/vendor.js"></script>
    <script src="js/app.js"></script>
    <script src="js/templates.js"></script>
    <!-- endinject -->
</body>

</html>
```

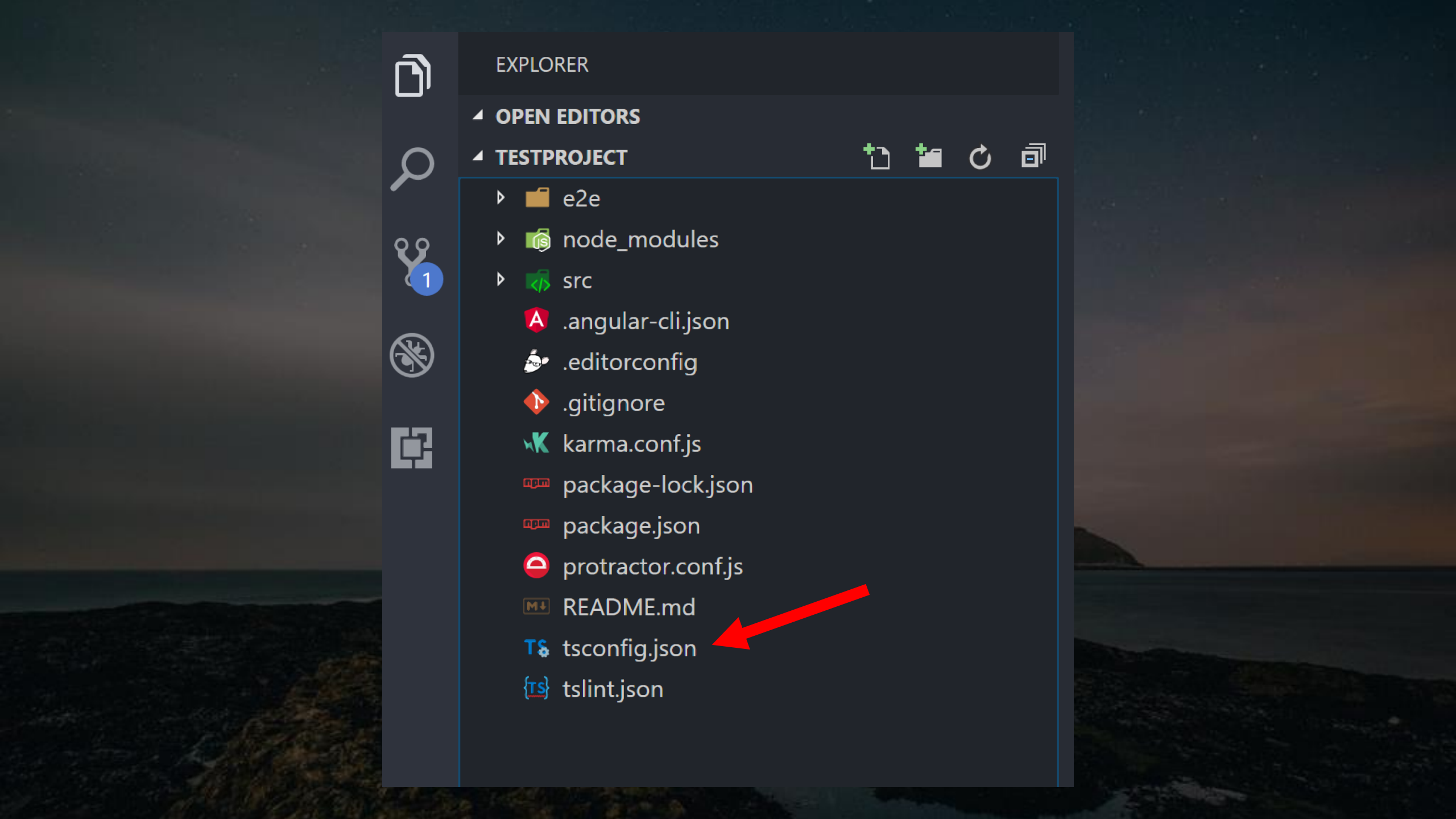

css
fonts
js
index.html


TS


TS
ES6
ES5


> npm install typescript


> tsc myTypescriptFile.ts

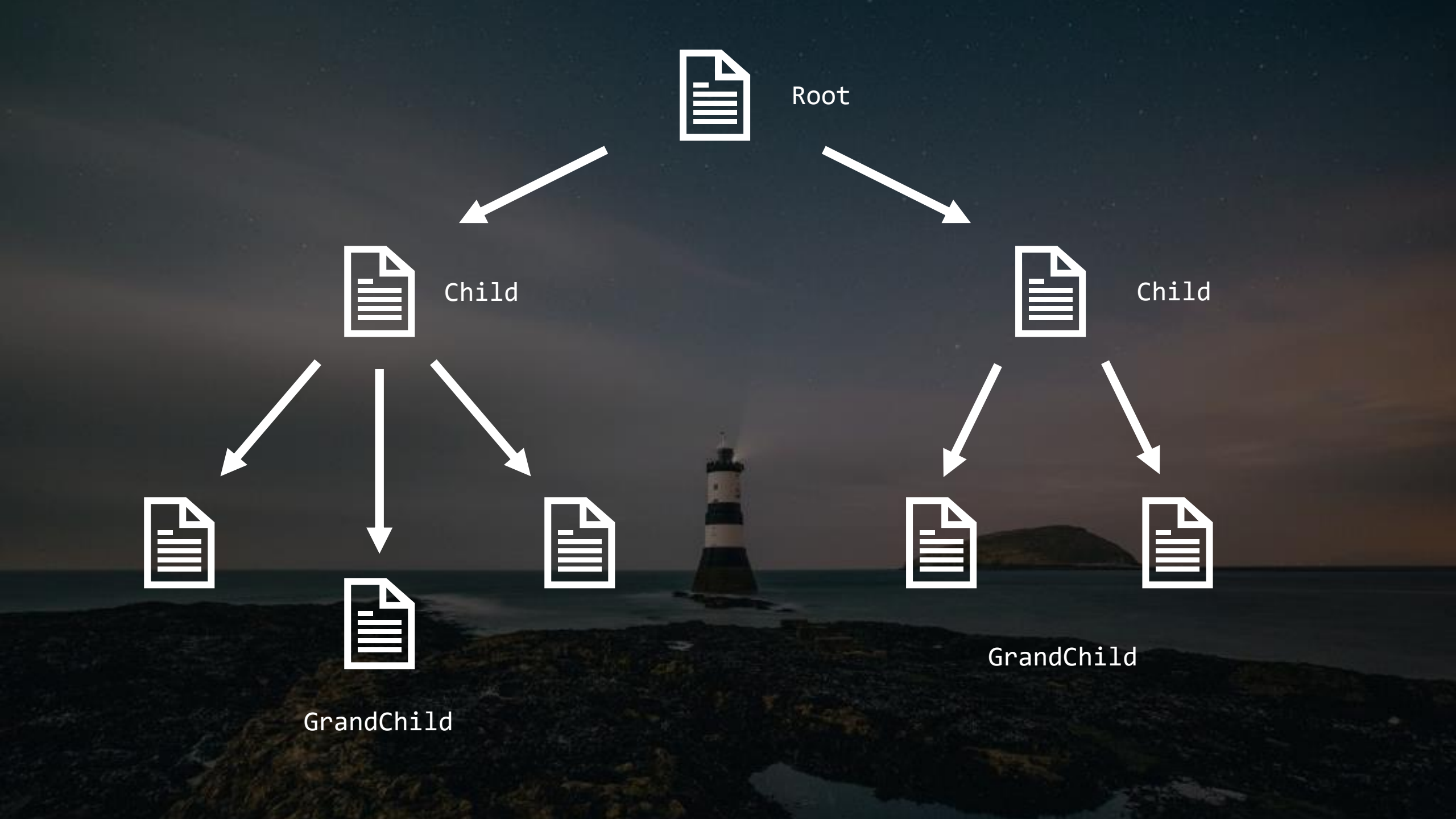

EXPLORER
OPEN EDITORS
TESTPROJECT
e2e
node_modules
src
.angular-cli.json
.editorconfig
.gitignore
karma.conf.js
package-lock.json
package.json
protractor.conf.js
README.md
tsconfig.json
tslint.json
1

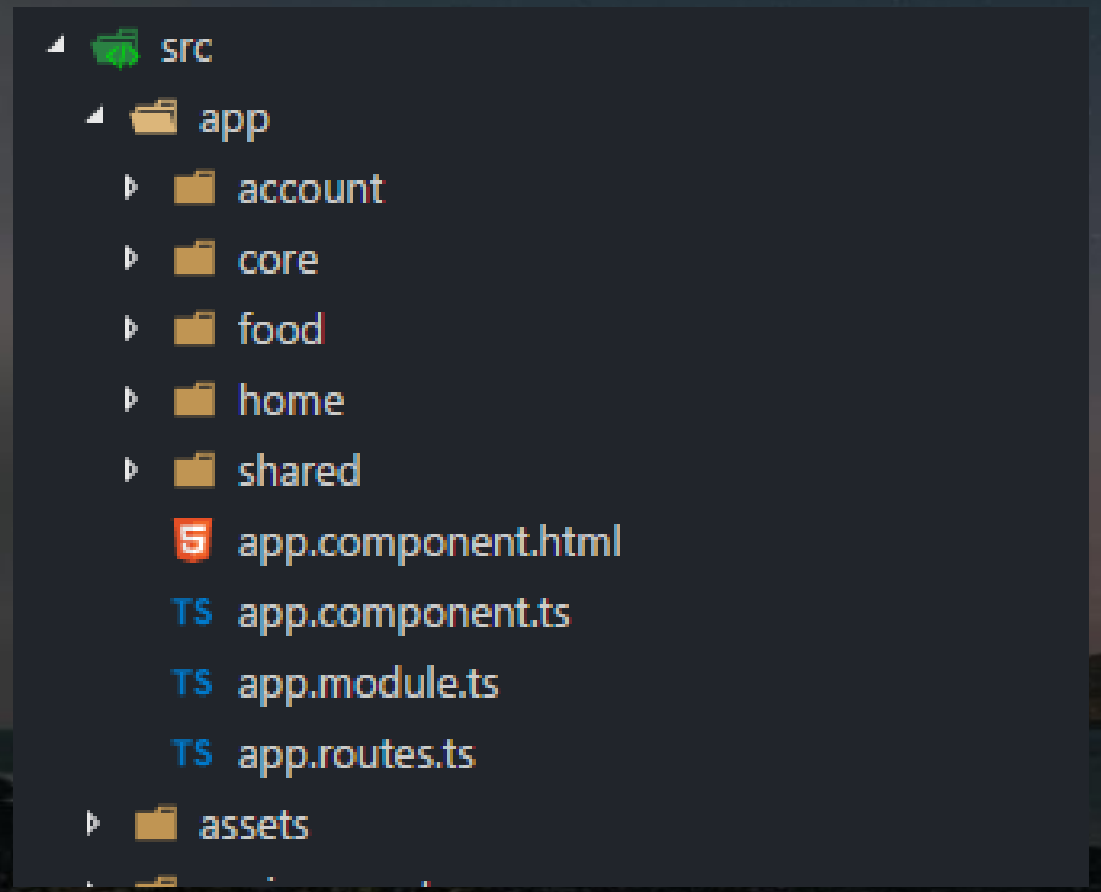
```
{
    "compileOnSave": false,
    "compilerOptions": {
    "outDir": "./dist/out-tsc",
    "baseUrl": "src",
    "sourceMap": true,
    "declaration": false,
    "moduleResolution": "node",
    "emitDecoratorMetadata": true,
    "experimentalDecorators": true,
    "target": "es5",
    "typeRoots": [
       "node_modules/@types"
    ],
    "lib": [
       "es2016",
       "dom"
       ]
    }
}
```

Syntax

```
import name from "module-name";
import * as name from "module-name";
import { member } from "module-name";
import { member as alias } from "module-name";
import { member1 , member2 } from "module-name";
import { member1 , member2 as alias2 , [...] } from "module-name";
import defaultMember, { member [ , [...] ] } from "module-name";
import defaultMember, * as alias from "module-name";
import defaultMember from "module-name";
import "module-name";
```

```
import '../assets/toggleHamburger.js';

import { enableProdMode } from '@angular/core';
import { platformBrowserDynamic } from '@angular/platform-browser-dynamic';

import { AppModule } from './app/app.module';
import { environment } from './environments/environment';


platformBrowserDynamic().bootstrapModule(AppModule);
```


Root
Child
Child
GrandChild
GrandChild


src
app
account
core
food
home
shared
app.component.html
app.component.ts
app.module.ts
app.routes.ts
assets

Das **import Statement** wird verwendet um Funktionen, Objekte und Primitives zu importieren die von einem externen Modul, einem anderen Script, etc. exportiert wurden.

> **Hinweis:** Zur Zeit wird dieses Feature nicht von jedem Browser nativ unterstützt. Viele Transpiler implementieren es, wie beispielsweise der Traceur Compiler, Babel, Rollup oder Webpack.

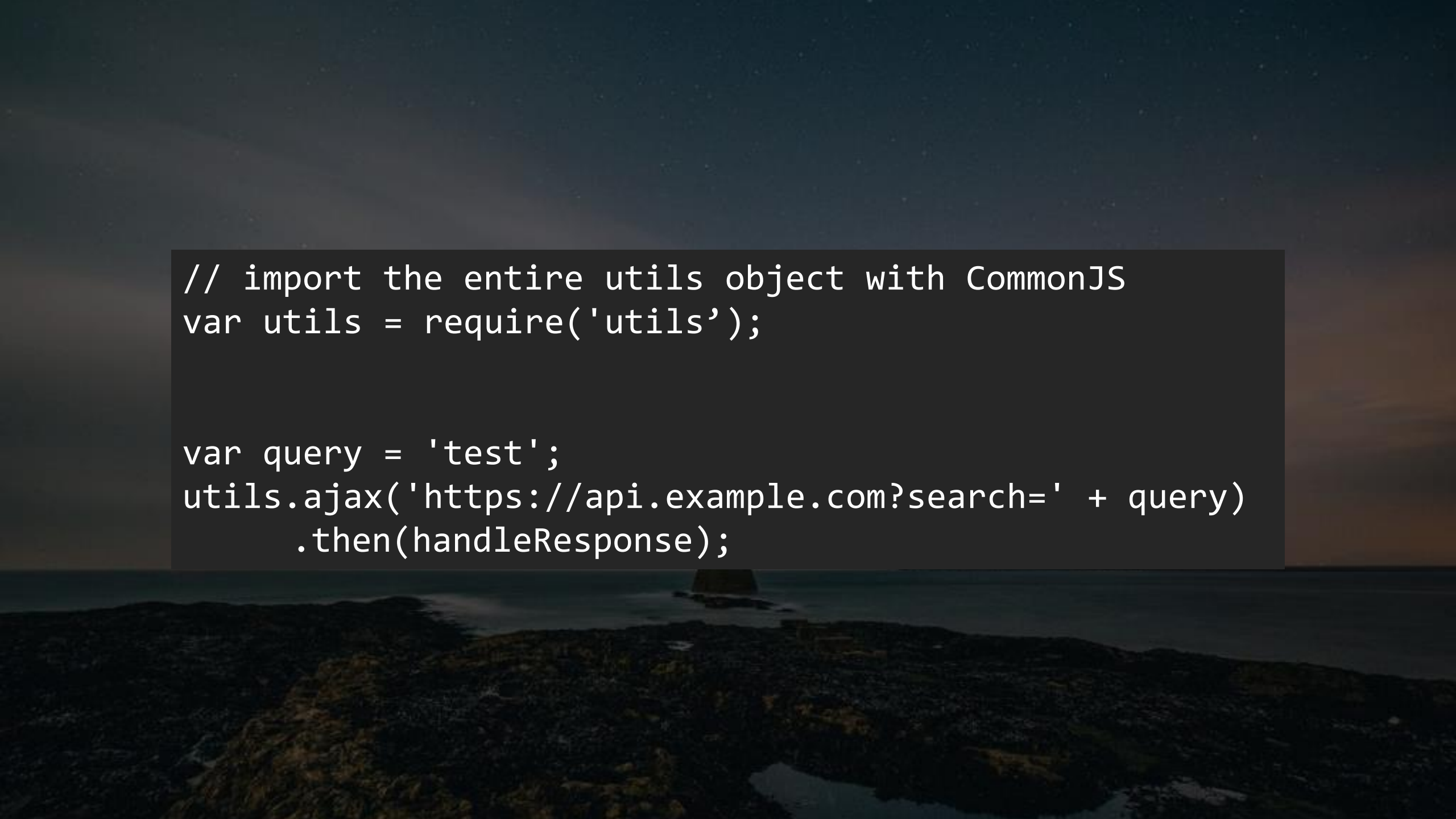
Syntax

```
import name from "module-name";
import * as name from "module-name";
import { member } from "module-name";
import { member as alias } from "module-name";
import { member1 , member2 } from "module-name";
import { member1 , member2 as alias2 , [...] } from "module-name";
import defaultMember, { member [ , [...] ] } from "module-name";
import defaultMember, * as alias from "module-name";
import defaultMember from "module-name";
import "module-name";
```


SystemJS

```
<head>
    <meta charset="UTF-8">
    <title>My Angular App!</title>

    <!-- css -->
    <link rel="stylesheet" href="…/bootstrap.min.css">
    <style>body { padding: 50px 0; }</style>

    <!-- load our angular app with systemjs -->
    <script src="node_modules/systemjs/dist/system.src.js"></script>
    <script src="systemjs.config.js"></script>
    <script>
        System.import('app').catch(function(err) { console.error(err); });
    </script>
</head>
```

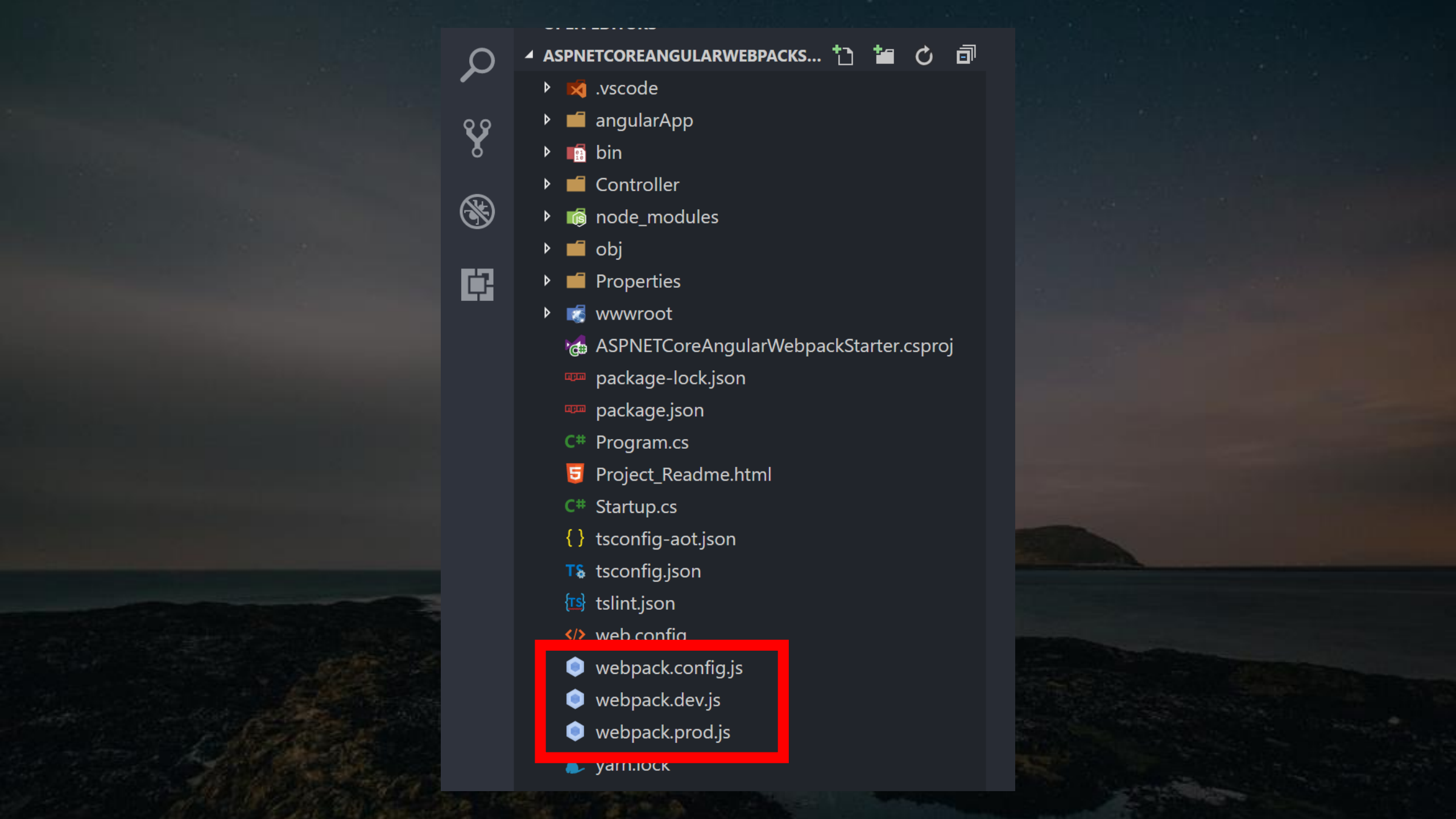
rollup.js

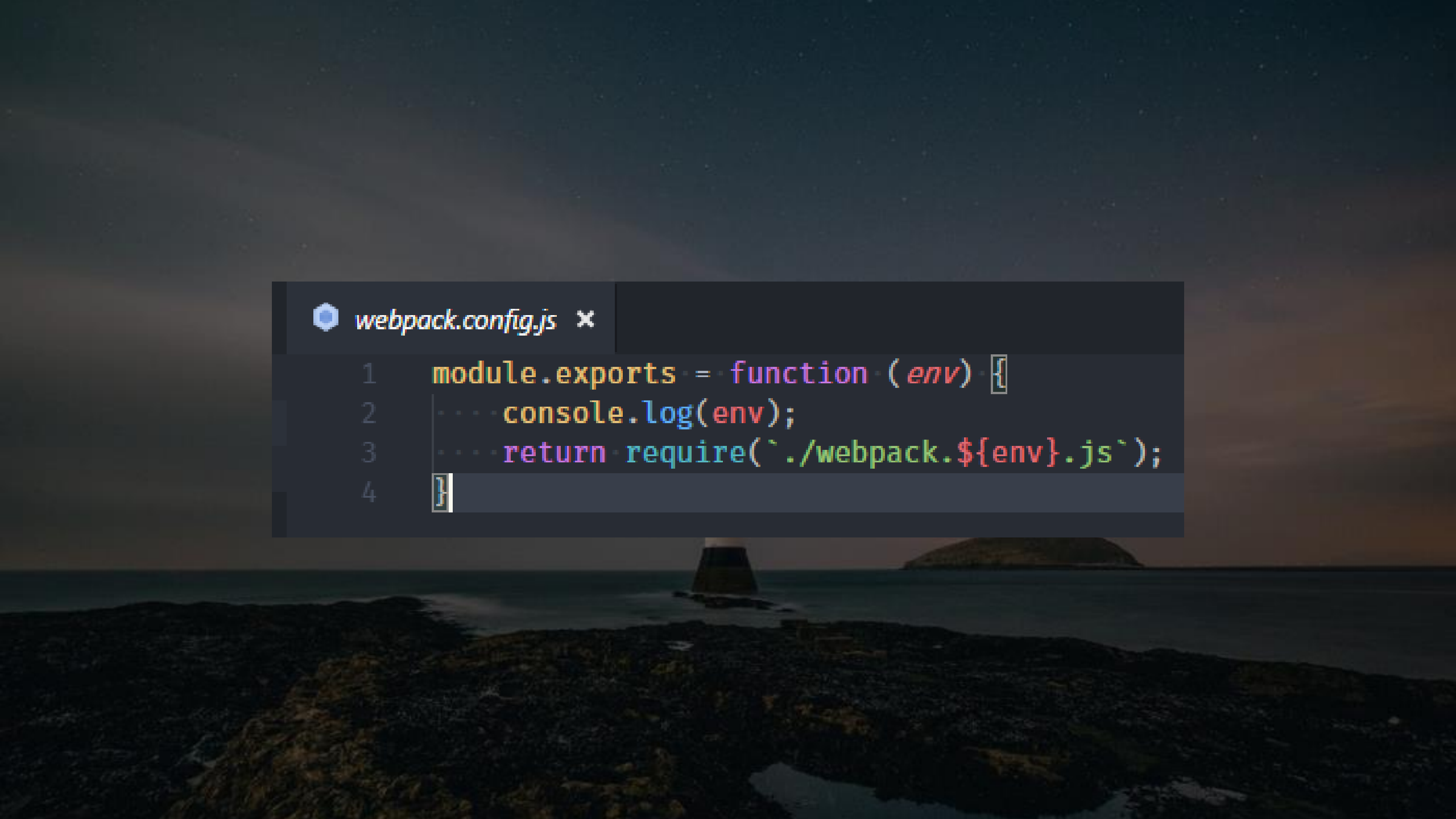


```
// import the entire utils object with CommonJS
var utils = require('utils’);


var query = 'test';
utils.ajax('https://api.example.com?search=' + query)
     .then(handleResponse);
```

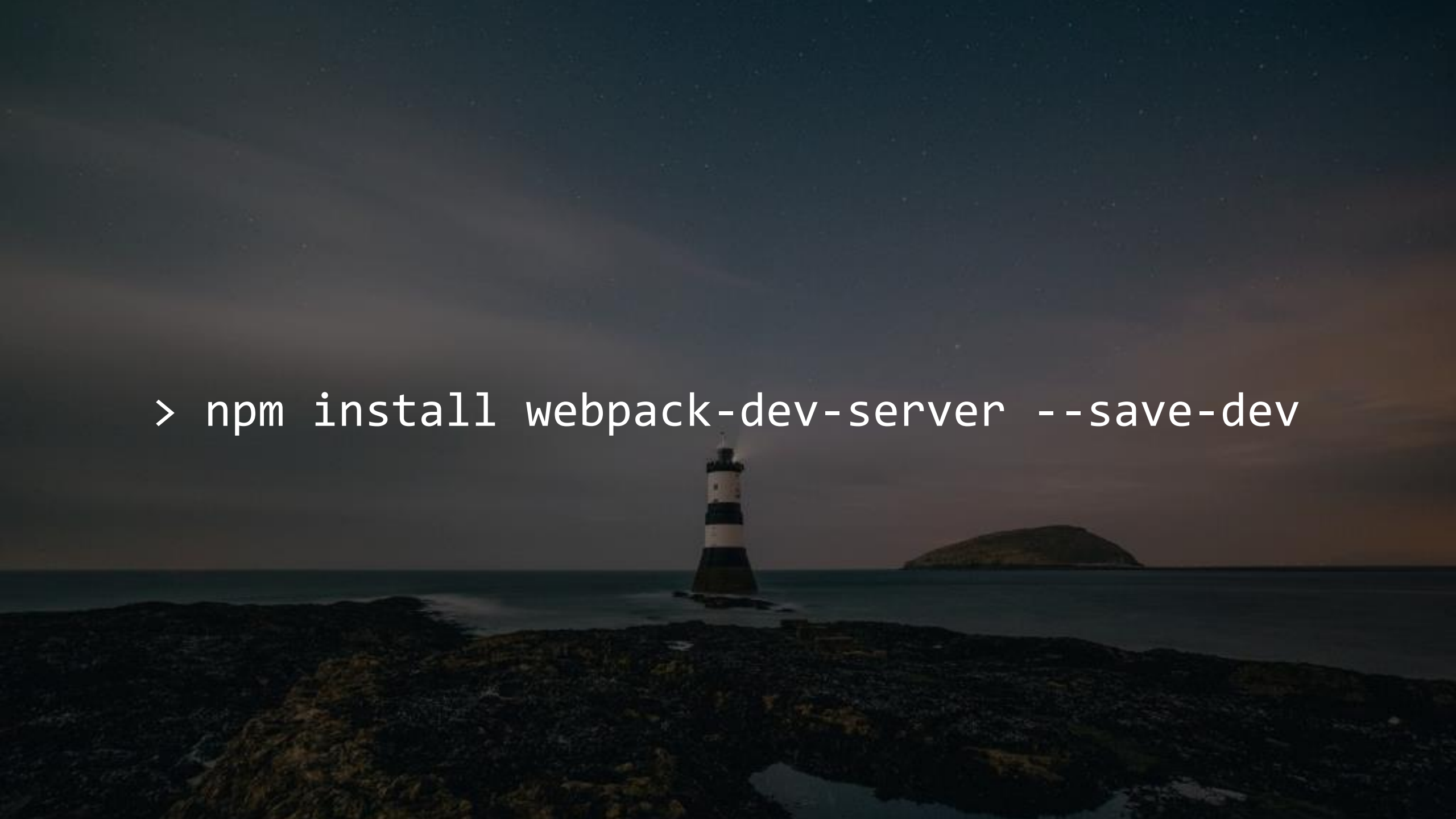
```
// import the ajax function with an ES6 import statement
import { ajax } from 'utils';
var query = 'test‘;

// call the ajax function
ajax('https://api.example.com?search=' + query )
     .then(handleResponse);
```


webpack

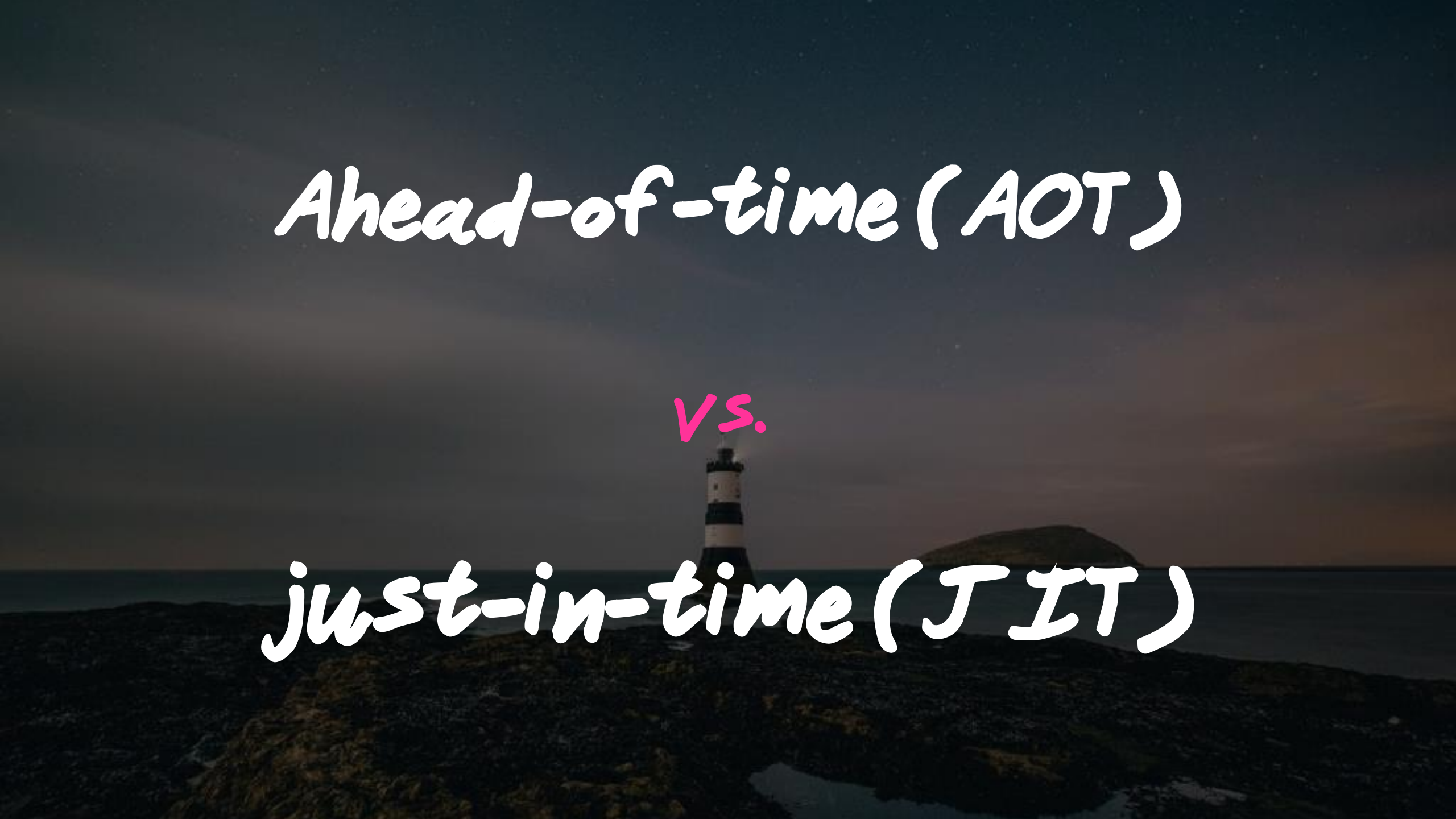

ASPNETCOREANGULARWEBPACKS...
.vscode
angularApp
bin
Controller
node_modules
obj
Properties
wwwroot
ASPNETCoreAngularWebpackStarter.csproj
package-lock.json
package.json
Program.cs
Project_Readme.html
Startup.cs
tsconfig-aot.json
tsconfig.json
tslint.json
web.config
webpack.config.js
webpack.dev.js
webpack.prod.js
yarn.lock

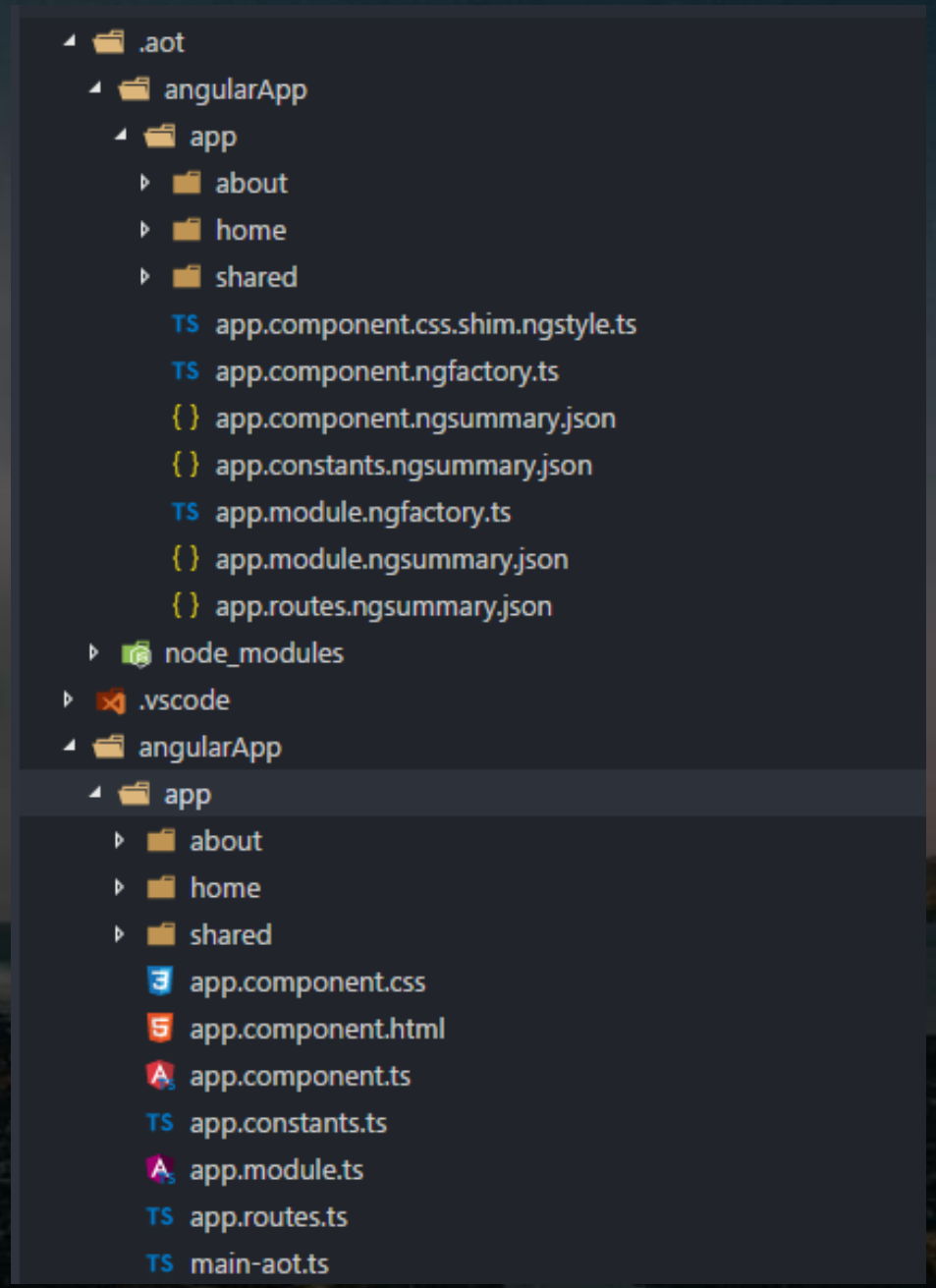

webpack.config.js
module.exports = function (env) {
console.log(env);
return require(`./webpack.${env}.js`);
}

```
const webpack = require('webpack');
// ...

module.exports = {
     entry: {
          // ...
     },

     output: {
          path: path.join(__dirname, 'wwwroot'),
          filename: 'js/[name].[hash:6].bundle.js',
          chunkFilename: 'js/[id].[hash:6].chunk.js',
     },

     module: {
          rules: [
               {
                    test: /\.ts$/,
                    use: '@ngtools/webpack'
               },
               // ...
          ]
     },

     plugins: [
          // AoT plugin.
          new ngToolsWebpack.AotPlugin({
                    tsConfigPath: './tsconfig-aot.json'
          }),
          // ...
     ]
};
```

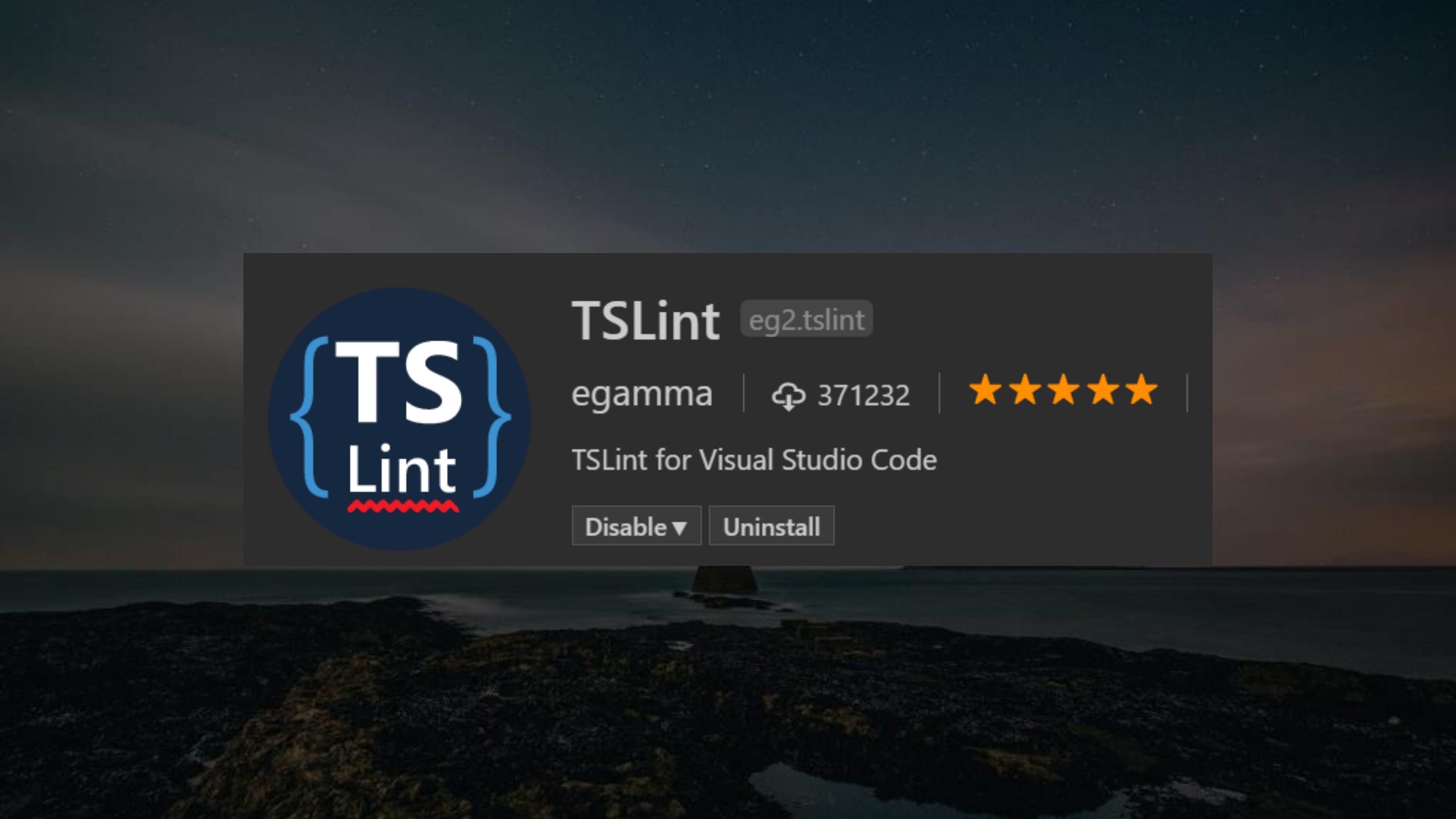

> npm install webpack-dev-server --save-dev

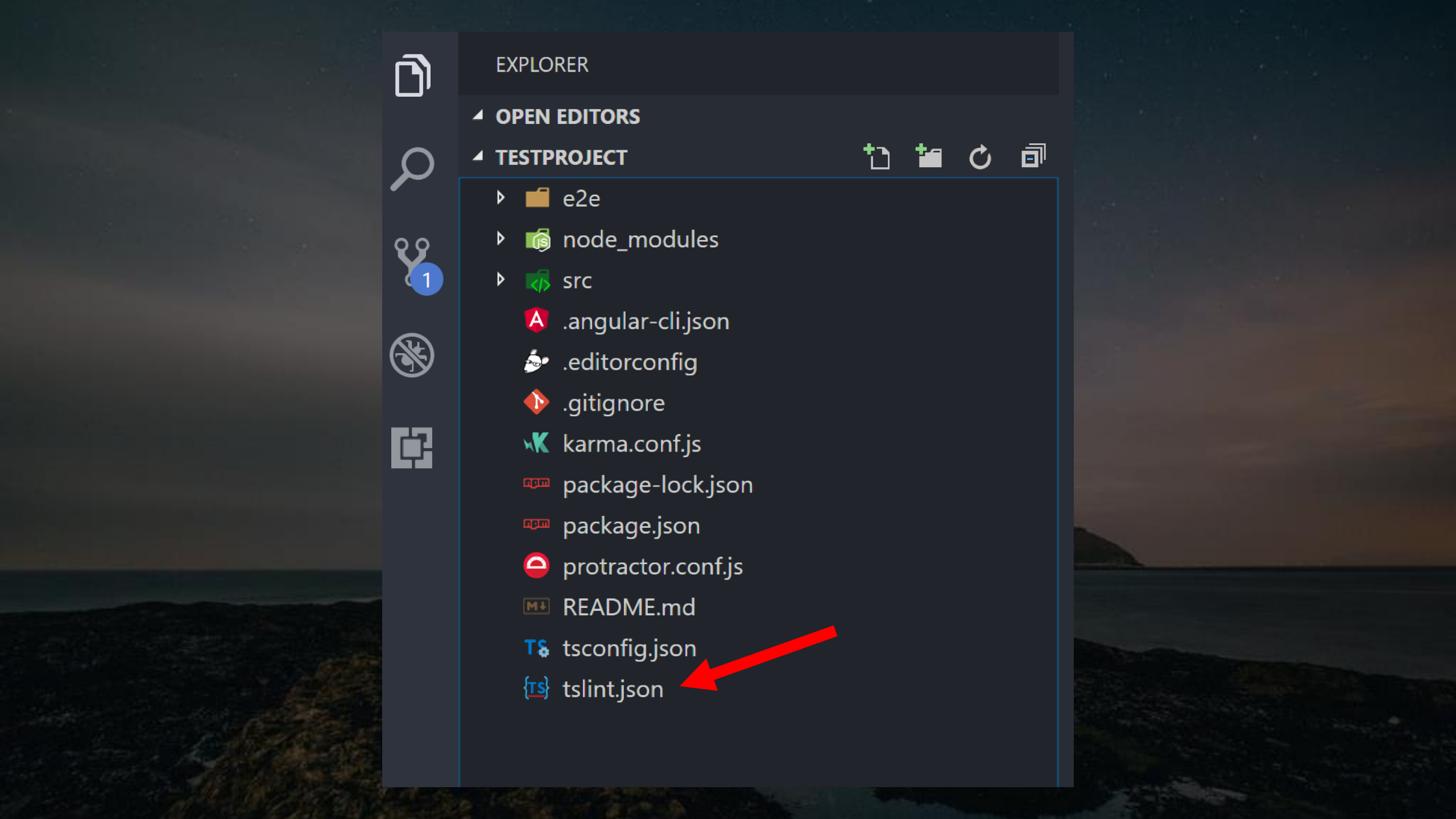
```
"scripts": {
  "ngc": "ngc -p ./tsconfig-aot.json",
  "start": "concurrently \"webpack-dev-server --env=dev --open\" \"dotnet
     run\" ",
  "build:dev": "webpack --env=dev --progress --profile --colors",
  "build:dist": "webpack --env=prod --progress --profile --colors",
  "lint": "tslint ./angularApp/**/*.ts -t verbose",
  "tsc": "tsc",
  "tsc:w": "tsc -w"
},
```


Ahead-of-time (AOT)
vs.
just-in-time (JIT)


.aot
angularApp
app
about
home
shared
app.component.css.shim.ngstyle.ts
app.component.ngfactory.ts
app.component.ngsummary.json
app.constants.ngsummary.json
app.module.ngfactory.ts
app.module.ngsummary.json
app.routes.ngsummary.json
node_modules
.vscode
angularApp
app
about
home
shared
app.component.css
app.component.html
app.component.ts
app.constants.ts
app.module.ts
app.routes.ts
main-aot.ts

```
<!DOCTYPE html>
<html>

<head>
<base href="/" />
<title>ASP.NET Core Angular Webpack Demo</title>
<link href="css/vendor-8e8c7a.bundle.css" rel="stylesheet"></head>

<body>
<app-sample>Loading...</app-sample>
<script type="text/javascript"
src="js/polyfills.8e8c7a.bundle.js"></script><script type="text/javascript"
src="js/vendor.8e8c7a.bundle.js"></script><script type="text/javascript"
src="js/app.8e8c7a.bundle.js"></script></body>

</html>
```


TSLint
eg2.tslint
egamma
371232
TSLint for Visual Studio Code
Disable
Uninstall


EXPLORER
OPEN EDITORS
TESTPROJECT
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


ES
Lint
JS Hint


Testing


JASMINE
KARMA
PROTRACTOR

Jasmine

Behaviour Driven Development

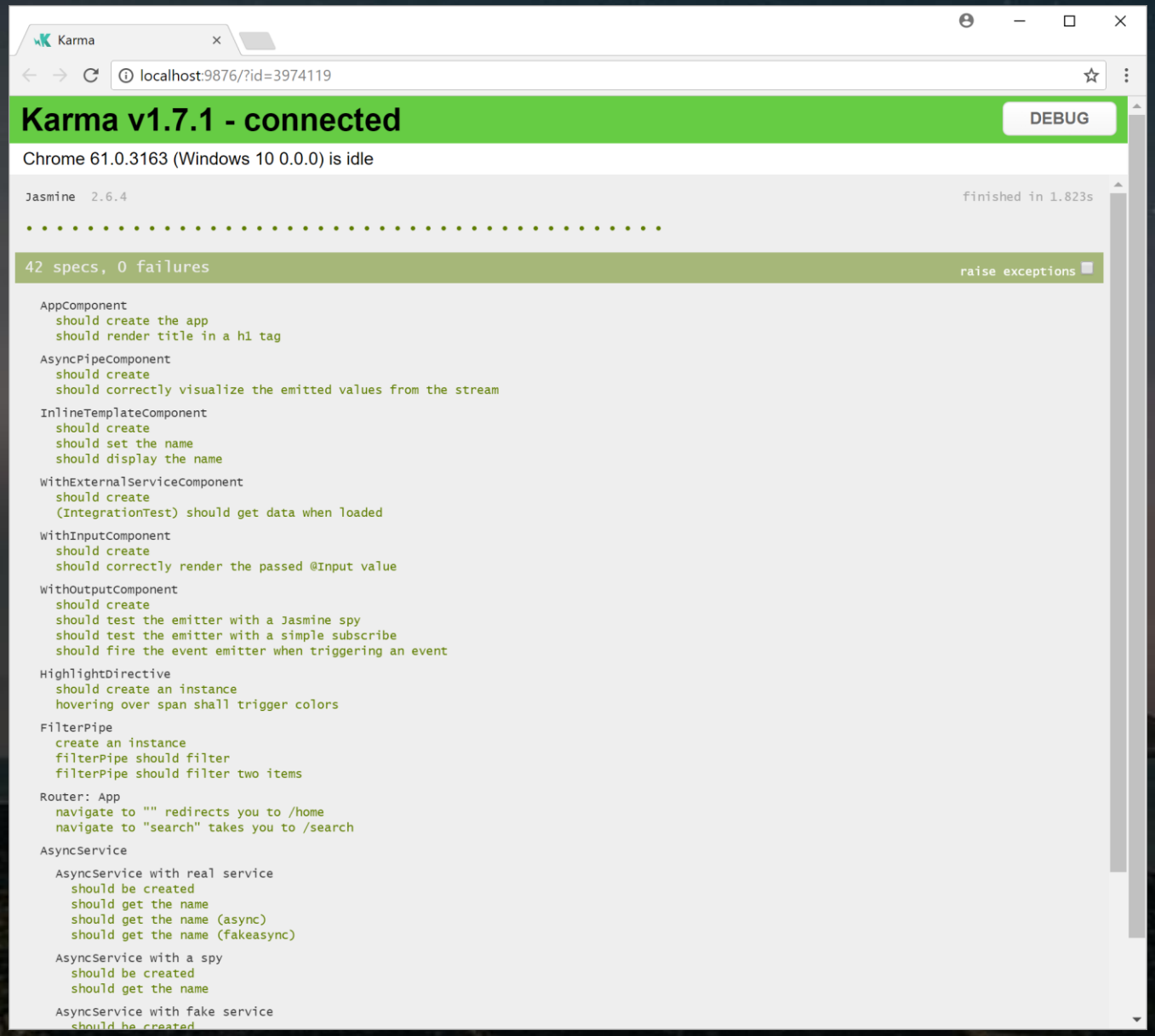
Fast

Karma

Test runner

Spawns browser & runs tests

Also on CommandLine


Karma
localhost:9876/?id=3974119
Karma v1.7.1 - connected
DEBUG
Chrome 61.0.3163 (Windows 10 0.0.0) is idle
Jasmine 2.6.4
finished in 1.823s
42 specs, 0 failures
raise exceptions
AppComponent
should create the app
should render title in a h1 tag
AsyncPipeComponent
should create
should correctly visualize the emitted values from the stream
InlineTemplateComponent
should create
should set the name
should display the name
WithExternalServiceComponent
should create
(IntegrationTest) should get data when loaded
WithInputComponent
should create
should correctly render the passed @Input value
WithOutputComponent
should create
should test the emitter with a Jasmine spy
should test the emitter with a simple subscribe
should fire the event emitter when triggering an event
HighlightDirective
should create an instance
hovering over span shall trigger colors
FilterPipe
create an instance
filterPipe should filter
filterPipe should filter two items
Router: App
navigate to "" redirects you to /home
navigate to "search" takes you to /search
AsyncService
AsyncService with real service
should be created
should get the name
should get the name (async)
should get the name (fakeasync)
AsyncService with a spy
should be created
should get the name
AsyncService with fake service

@angular/cli

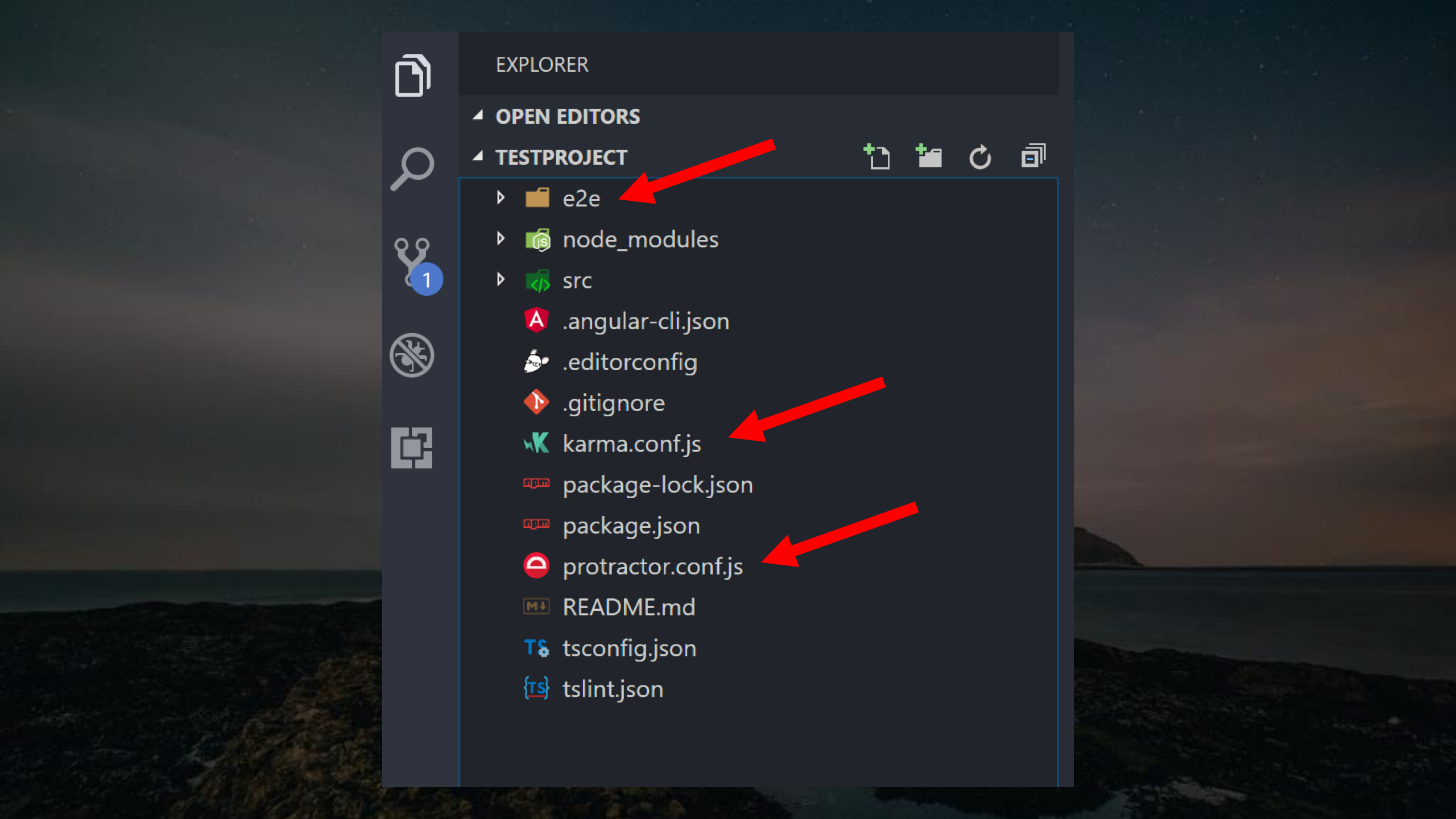
```
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\_git\AngularDays-2017\tests>npm run test

> angularworkshop@0.0.0 test C:\_git\AngularDays-2017\tests
> ng test

 10% building modules 1/1 modules 0 active08 10 2017 21:27:45.722:WARN [karma]: No captured browser, open http://
localhost:9876/
08 10 2017 21:27:45.742:INFO [karma]: Karma v1.7.1 server started at http://0.0.0.0:9876/
08 10 2017 21:27:45.742:INFO [launcher]: Launching browser Chrome with unlimited concurrency
08 10 2017 21:27:45.760:INFO [launcher]: Starting browser Chrome       08 10 2017 21:27:54.508:WARN [karma]: No c
aptured browser, open http://localhost:9876/
08 10 2017 21:27:55.172:INFO [Chrome 61.0.3163 (Windows 10 0.0.0)]: Connected on socket OVSH4x-_jFNxOrA4AAAA with
 id 3974119

START:
  AppComponent
    √ should create the app
    √ should render title in a h1 tag
  AsyncPipeComponent
    √ should create
    √ should correctly visualize the emitted values from the stream
  InlineTemplateComponent
    √ should create
    √ should set the name
    √ should display the name
  WithExternalServiceComponent
    √ should create
```

Protractor

End-to-end test framework

Runs in a real browser

Test like a user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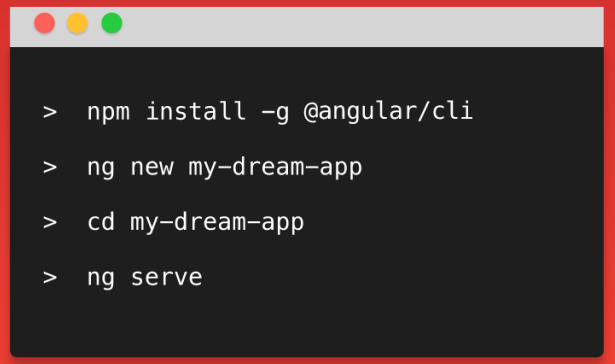
.gitignore
karma.conf.js
package-lock.json
package.json
protractor.conf.js
README.md
tsconfig.json
tslint.json

Angular CLI

Fabian

Secure | https://cli.angular.io

ANGULAR CLI DOCUMENTATION GITHUB GET STARTED



Angular CLI

A command line interface for Angular

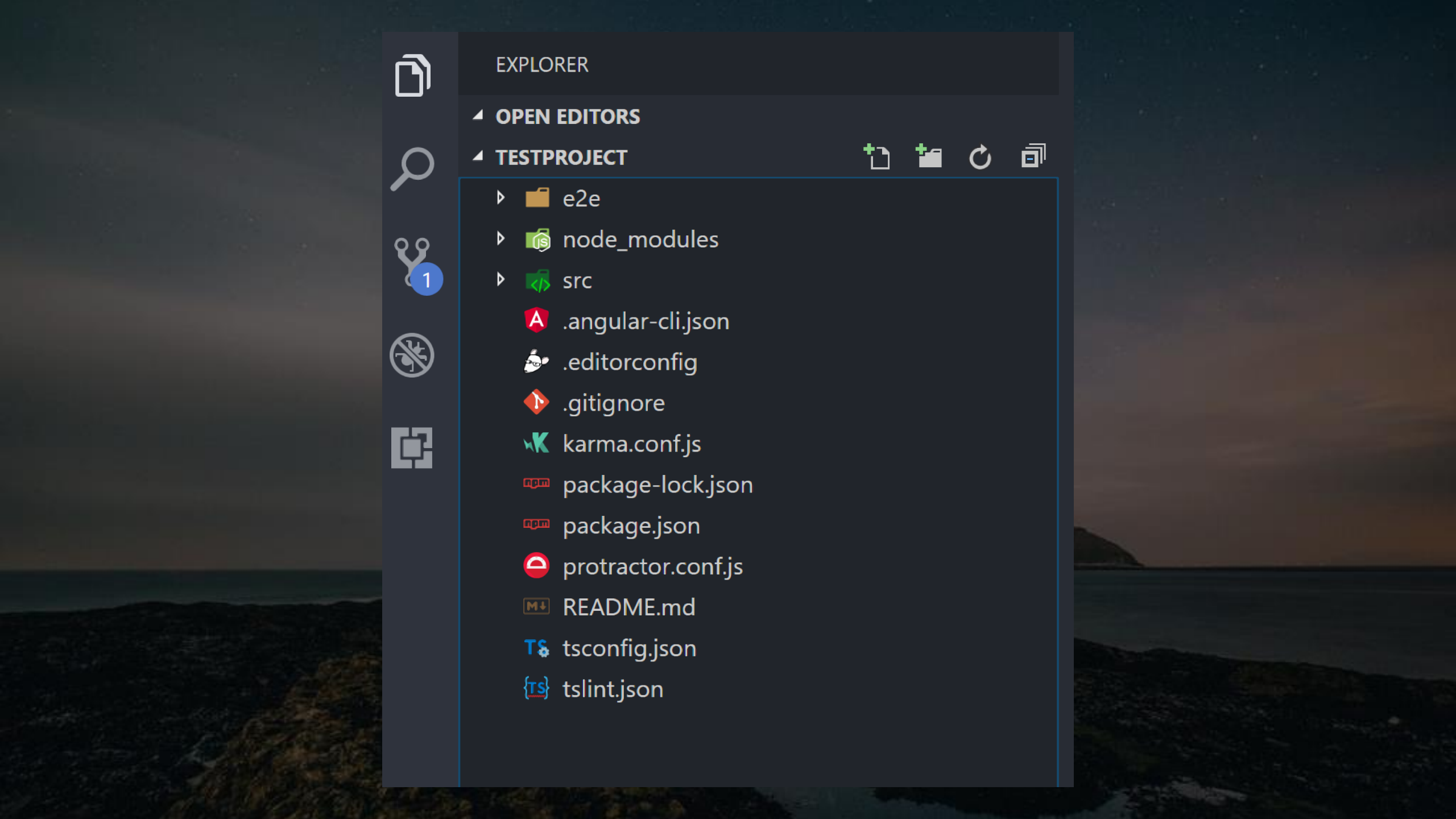
GET STARTED

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!

ng generate

Generate components, routes, services and pipes with a simple command. The CLI will also create simple test shells for all of these.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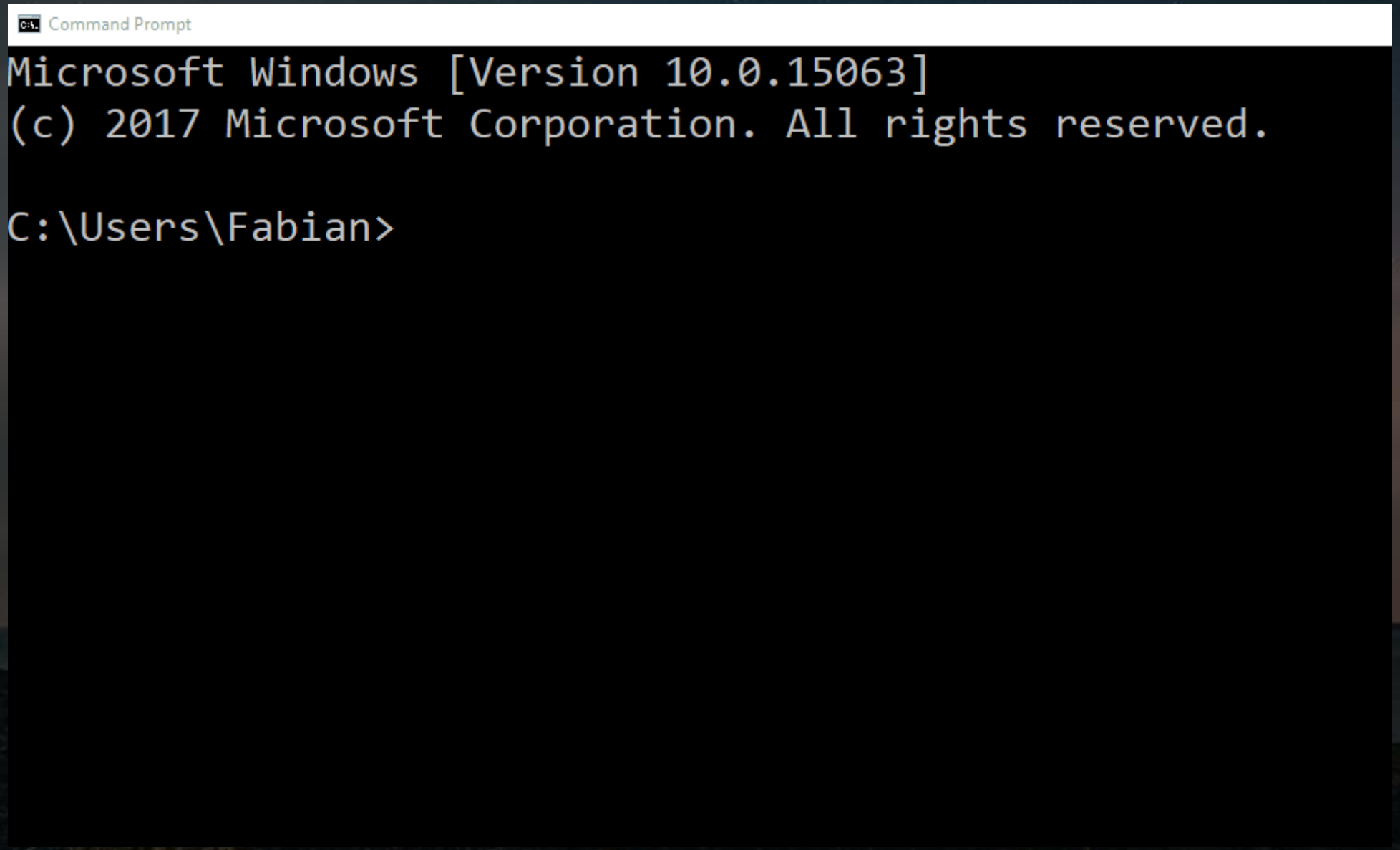
package-lock.json
package.json
protractor.conf.js
README.md
tsconfig.json
tslint.json
1


How do you
keep up 2 date?


Conferences!


Command Prompt
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.
C:\Users\Fabian>


Le Fin


@FabianGosebrink
https://github.com/FabianGosebrink
https://offering.solutions
https://swissangular.com