



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA  
Denkleiers • Leading Minds • Dikgopolo tša Dihlalefi

# Puzzle Generator: Technical installation manual

Team Prometheus

19 August 2020

Clients: Mark Anthony and Francois

Name	Student Number	Email
Yuval Langa	u18174142	u18174142@tuks.co.za
Tsholofelo Gomba	u17391718	u17391718@tuks.co.za
Tapiwa Mazibuko	u18203541	u18203541@tuks.co.za
Charlotte Jacobs	u15165622	u15165622@tuks.co.za
Jaynill Gopal	u15175295	u15175295@tuks.co.za

# Contents

<b>1</b>	<b>Server setup - Backend</b>	<b>3</b>
1.1	Prerequisites . . . . .	3
1.2	Installation on localhost . . . . .	3
1.3	Deploying to Heroku . . . . .	4
1.4	Customizing your server . . . . .	7
1.4.1	Changing server's default port . . . . .	7
1.4.2	Adding your web pages to be deployed . . . . .	7
<b>2</b>	<b>Angular Usage - Front-end</b>	<b>7</b>
2.1	Development server . . . . .	7
2.2	Code scaffolding . . . . .	7
2.3	Build . . . . .	7
2.4	Running unit tests . . . . .	7
2.5	Further help . . . . .	8
2.6	Angular File Structure . . . . .	8
2.7	Main Folder . . . . .	8
2.8	src folder . . . . .	8
2.9	assets folder . . . . .	8
2.10	app folder . . . . .	8
2.11	models folder . . . . .	8
2.12	services folder . . . . .	8
2.13	pages folder . . . . .	8

# 1 Server setup - Backend

## 1.1 Prerequisites

Ensure that you have the following installed on your system.

1. NodeJS version 12.0+
2. npm version 4.0+
3. Angular CLI via NPM
4. PostgreSQL

## 1.2 Installation on localhost

In order to use the server and load files to be hosted on the website the following needs to be done:

1. Open terminal to the directory which you had cloned/ downloaded the source code from the Puzzle-Generator GIT
2. Enter the following command to install dependencies: **npm install**

```
C:\Users\... \GIT\Puzzle-Generator>npm install
npm WARN deprecated @angular/http@7.2.16: Package no longer supported. Use @angular/common instead, see https://angular.io/
npm WARN deprecated core-js@2.6.11: core-js@<3 is no longer maintained and not recommended for usage due to the number of d...
```

3. Once the dependencies have been downloaded and installed, a post installation task will automatically be run in order to build the relevant Angular files which reside in the subdirectory **/src** and output the built application in the directory **/dist**.

```
> ng build --output-path dist
Generating ES5 bundles for differential loading...
ES5 bundle generation complete.
chunk {polyfills} polyfills-es2015.js, polyfills-es2015.js.map (polyfills) 141 kB [initial] [rendered]
chunk {polyfills-es5} polyfills-es5.js, polyfills-es5.js.map (polyfills-es5) 752 kB [initial] [rendered]
chunk {main} main-es2015.js, main-es2015.js.map (main) 156 kB [initial] [rendered]
chunk {main} main-es5.js, main-es5.js.map (main) 170 kB [initial] [rendered]
chunk {runtime} runtime-es2015.js, runtime-es2015.js.map (runtime) 6.16 kB [entry] [rendered]
chunk {runtime} runtime-es5.js, runtime-es5.js.map (runtime) 6.16 kB [entry] [rendered]
chunk {styles} styles-es2015.js, styles-es2015.js.map (styles) 156 kB [initial] [rendered]
chunk {styles} styles-es5.js, styles-es5.js.map (styles) 158 kB [initial] [rendered]
chunk {vendor} vendor-es2015.js, vendor-es2015.js.map (vendor) 5.07 MB [initial] [rendered]
chunk {vendor} vendor-es5.js, vendor-es5.js.map (vendor) 5.92 MB [initial] [rendered]
Date: 2020-07-23T20:04:36.172Z - Hash: cf9cc37ce258023eb80a - Time: 60058ms
```

4. If a directory **/dist** is not created after calling the command **npm install**, you may use the command **npm postinstall** which will run the command **ng build --output=dist**.

5. In order for the system to run on your localhost, please indicate the following environment variables in order to connect to your postgres database:

- **dbDatabase** = databaseName,
- **dbpass** = database password,
- **dbUsername** = database username,
- **dbHost** = database host

User environment variables:


Name	Value
dbDatabase	d[REDACTED].l
dbpass	a[REDACTED]57...
dbUsername	y[REDACTED]n
dbHost	ec2-[REDACTED].amazonaws.com

6. You are now ready to run the server.
7. To run the server enter the following command into your terminal in the root folder of your app: **npm start**.
8. You are now ready to access your server at **localhost:3200** in your browser.

### 1.3 Deploying to Heroku


In order to deploy to Heroku, the following needs to be done:

- Sign into the Prometheus puzzles Heroku app, by going to [dashboard.heroku.com](https://dashboard.heroku.com), and selecting **prometheuspuzzles**

 Personal ▾ cos301db prometheuspuzzles

1 app ▾

STAGING

 prometheuspuzzles

- Select the Deploy tab and select a branch to deploy. After which select "Enable Automatic Deploys" to enable automatic deployment when you push to the selected branch.

Personal > prometheuspuzzles > prometheuspuzzles

GitHub COS301-SE-2020/Puzzle-Generator

OverviewResourcesDeployMetricsActivityAccessSettings

Connected to a pipeline

Assigned to staging in prometheuspuzzles

Manage this pipeline and this app's stage on the pipeline overview

Review apps are available on the pipeline overview

Deployment method

Heroku Git  
Use Heroku CLI

GitHub  
Connected

Container Registry  
Use Heroku CLI

HEROKU

Jump to Favorites, Apps, Pipelines, Spaces...

available for this app.

Releases in the activity feed link to GitHub to view commit diffs

Automatic deploys

Enables a chosen branch to be automatically deployed to this app.

You can now change your main deploy branch from "master" to "main" for both manual and automatic deploys, please follow the instructions here.

Enable automatic deploys from GitHub

Every push to the branch you specify here will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch is always in a deployable state and any tests have passed before you push. [Learn more](#)

Choose a branch to deploy

Website

☒ Wait for CI to pass before deploy

Only enable this option if you have a Continuous Integration service configured on your repo.

2

3

Enable Automatic Deploys

Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#)

Choose a branch to deploy

Website

Deploy Branch

heroku.com Blogs Careers DocumentationSupport

Terms of Service Privacy Cookies © 2020 Salesforce

## 1.4 Customizing your server

### 1.4.1 Changing server's default port

1. If you wish to alter the default server port on localhost, you may do so by modifying the file: `/bin/www` and locating the variable **PORT**

### 1.4.2 Adding your web pages to be deployed

1. All additional web pages and subsequent CSS and JavaScript files intended for the use of the user should be placed in `/src /src/app` (see **Section 2** for usage of the front-end and Angular components)
2. In order to access the API the following routes are used:
  - `/routes/user`
  - `/routes/puzzles`
3. By default all links to the API (in the front end Angular files `/src/app`) will point you to the API hosted on Heroku.

## 2 Angular Usage - Front-end

*The following documentation was generated from Angular CLI:*

This project was generated with [Angular CLI](<https://github.com/angular/angular-cli>) version 9.0.6.

### 2.1 Development server

Run **'ng serve'** for a dev server. Navigate to **'http://localhost:4200/'**. The app will automatically reload if you change any of the source files.

### 2.2 Code scaffolding

Run **'ng generate component component-name'** to generate a new component. You can also use **'ng generate directive—pipe—service—class—guard—interface—enum—module'**.

### 2.3 Build

Run **'ng build'** to build the project. The build artifacts will be stored in the **'dist/'** directory. Use the **'-prod'** flag for a production build.

### 2.4 Running unit tests

Run **'ng test'** to execute the unit tests via [Karma](<https://karma-runner.github.io>).

Running end-to-end tests

Run **'ng e2e'** to execute the end-to-end tests via [Protractor](<http://www.protractortest.org/>).

## 2.5 Further help

To get more help on the Angular CLI use **'ng help'** or go check out the [Angular CLI README](<https://github.com/angular/angular-cli/blob/master/README.md>).

## 2.6 Angular File Structure

We kept the file structure that Angular uses.

## 2.7 Main Folder

The parent directory consists of all our proxy files, package files, config files and our gitignore file - which consists of our node modules folder and other files git should ignore. It also has the src folder which consists of our whole website.

## 2.8 src folder

The src folder has the index.html file which is the main file that gets called when our website is running. The src folder also has the assets folder and the app folder.

## 2.9 assets folder

The assets folder consists of all our images, fonts and our js files used for the manual creation.

## 2.10 app folder

The app folder has the app component and the routing component. It also has the following folders: models, services, pages, navbar and rate-dialog. The navbar and rate-dialog is used throughout our website and that is why they have separate components on this directory.

## 2.11 models folder

The models folder is used for the puzzles, puzzleRatings and users to provide a model that we can use throughout the website.

## 2.12 services folder

The services folder consists of our the service that interacts with our API.

## 2.13 pages folder

We use the pages folder for all the pages components of our website. Each folder inside the pages folder uses the same file structure - we have the .html file for all the html of the page, then we have the .css file that consists of the styles for



that specific page, we also have the .ts file that consists of the functions and we have the spec.ts file that will be used for unit testing.