Headless Browser experiments

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A headless browser is a web browser without a graphical user interface. Headless browsers provide automated control of a web page in an environment similar to popular web browsers, but are executed via a command-line interface or using network communication.

I plan to use the headless browser for the Camunda project.

This project is sourced in `~\Dropbox\MyDev\Headless\Browser`

Bootstrap

There are quite a few headless browser opyions. After some research I have selected the `puppeteer` package.

Reference: https://github.com/GoogleChrome/puppeteer

Puppeteer is a Node library which provides a high-level API to control headless Chrome or Chromium over the DevTools Protocol. It can also be configured to use full (non-headless) Chrome or Chromium.

Node Initilazion

This creates a Node `package.json` file used to configure the project.

```
npm Init
```

Install puppeteer

In general, the rule of thumb is:

1. If you're installing something that you want to use in your program, using require('whatever'), then install it locally, at the root of your project.
2. If you're installing something that you want to use in your shell, on the command line or something, install it globally, so that its binaries end up in your PATH environment variable.

I went with Option 1.

```
npm install puppeteer
```

When you install Puppeteer, it downloads a recent version of Chromium (~170Mb Mac, ~282Mb Linux, ~280Mb Win) that is guaranteed to work with the API. To skip the download

Remember to add `node_modules` to the `.gitignore` file!!

This added the following to the `package.json` file.

```
  "dependencies": {
    "puppeteer": "^1.2.0"
  }
```

Example code

The example code is based on the web site example.com. The example code uses ES6 syntax.

```
// --- Sample code from https://github.com/GoogleChrome/puppeteer
//     const and async and await are all advanced Node functions

const puppeteer = require('puppeteer');

(async () => {
  // --- open a browser object, wait until it's open before next statement
  const browser = await puppeteer.launch();
  console.log("-- browser object created.");
  // --- open a new blank browser page, you don't actually see a page. wait tills its
open
  //     before proceeding
  const page = await browser.newPage();
  console.log("-- Open a new blank page")
  // --- Open up the GeekMustHave web page, await until it's loaded before next
command
  //     again you will not see any actual page, just imagine it's there
  await page.goto('https://GeekMustHave.com');
  console.log("-- Load example.com");
  //  --- Now do a screen shot of the imagined page
  await page.screenshot({path: 'example.png'});
  console.log("-- Snap a PNG of the web page");
  await browser.close();
  console.log("-- Close the browser out")
})();
```

When this code is run there will be a pause just after the browser object is created.

The image below will not display in the PDF version of the documnet.

[Run] | *npmstart.gif*

The Node app will create a file `example.png` which in this case looks like.

GIT / GITHub

I'm GitHub'ing everything.

.gitignore file

Create this file before you GIT anything.

`.gitignore` *example for this project*

```
node_modules ①
.gitignore
```

① You dont need to the `node_modeles` libraries you can recreate

Create local GIT

Create GIT repository, add everything (except whats named in the `.gitignore` file), commit it.

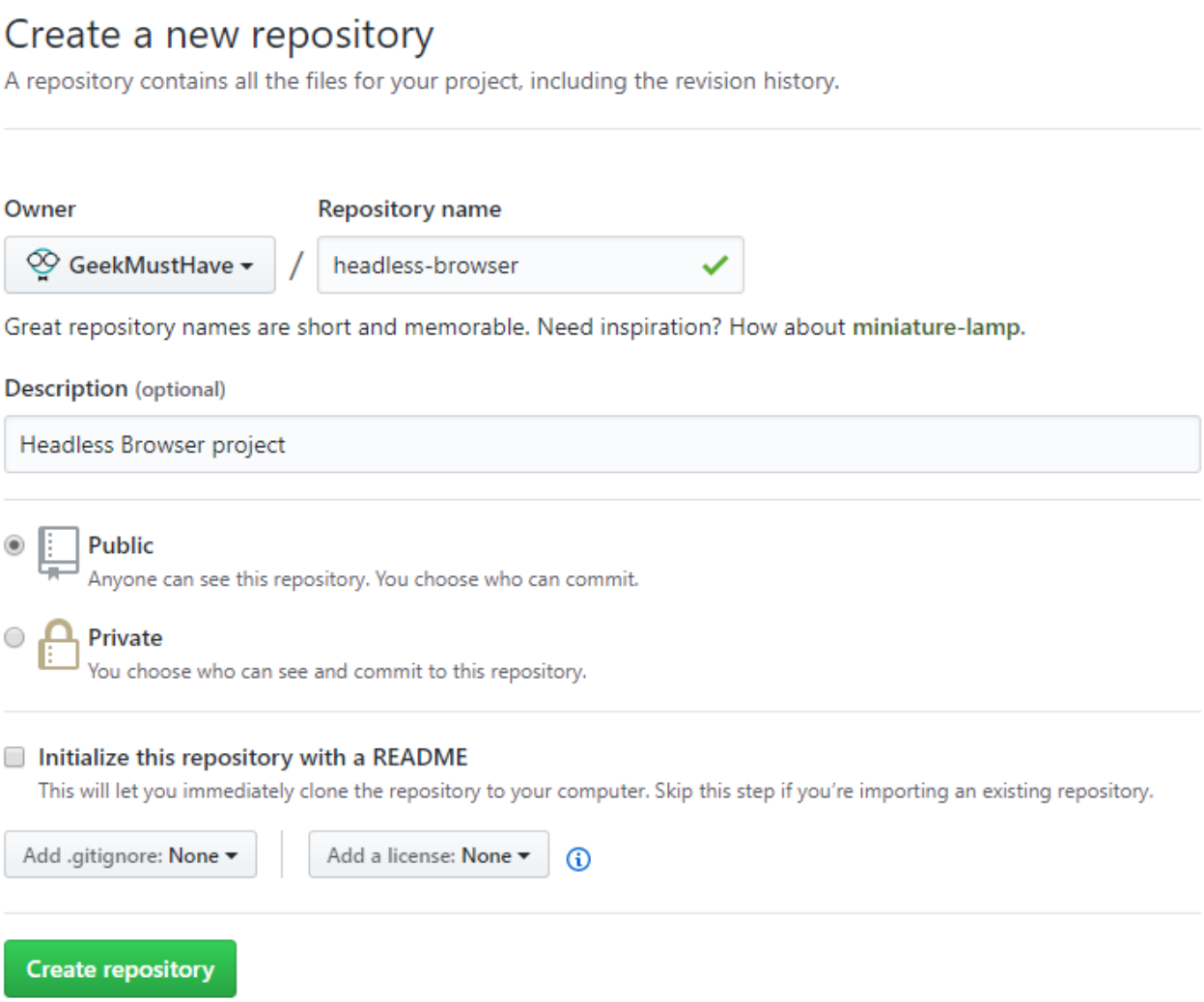
```
git init
git add .
git commit -mFirst-One
```

Results are

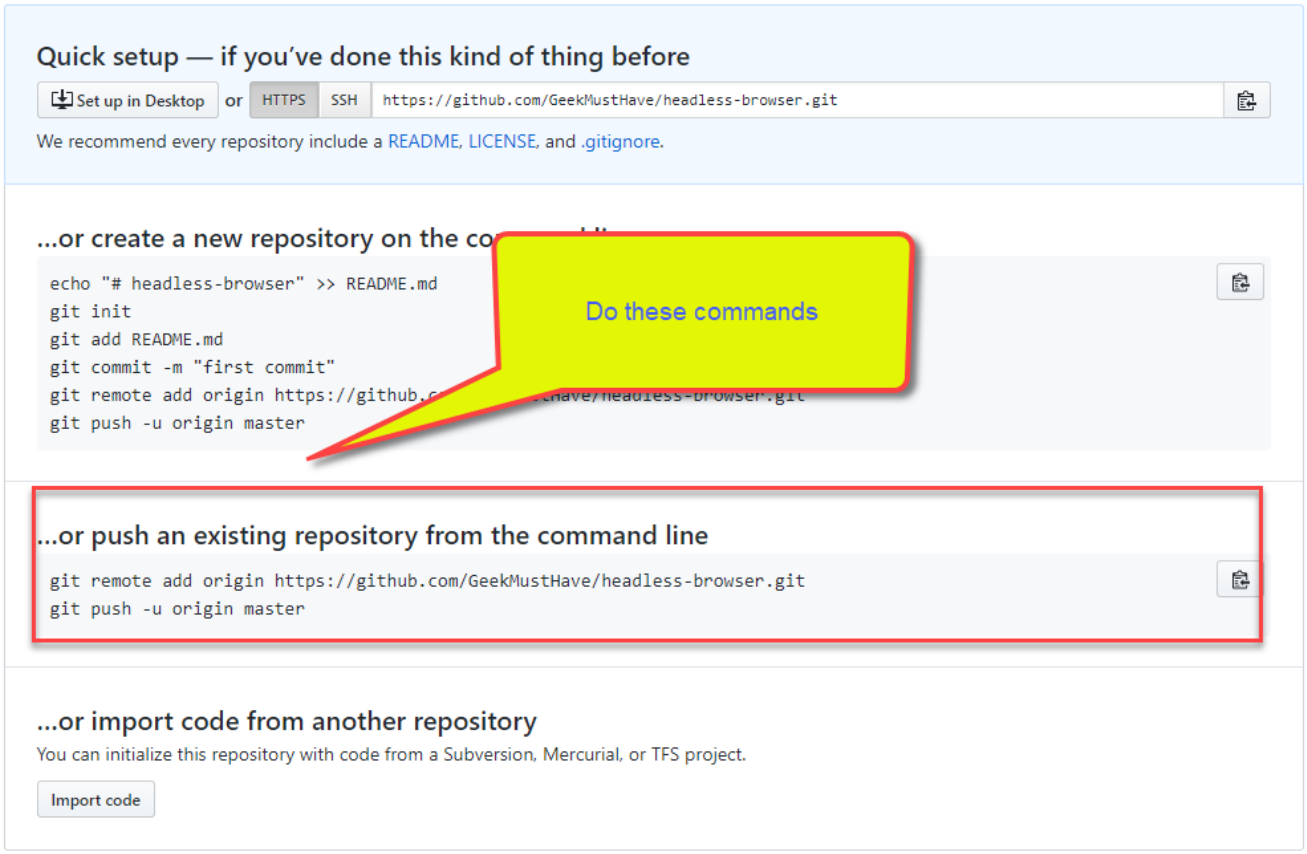
```
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser> git init
Initialized empty Git repository in
F:/users/jschust2/Dropbox/myDev/HeadlessBrowser/.git/
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser> git add .
warning: LF will be replaced by CRLF in package-lock.json.
The file will have its original line endings in your working directory.
warning: LF will be replaced by CRLF in package.json.
The file will have its original line endings in your working directory.
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser>
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser> git commit -mFirst-one
[master (root-commit) d327034] First-one
 7 files changed, 1045 insertions(+)
 create mode 100644 example.js
 create mode 100644 example.png
 create mode 100644 images/npmstart.gif
 create mode 100644 package-lock.json
 create mode 100644 package.json
 create mode 100644 readme.adoc
 create mode 100644 readme.html
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser>
```

Create remote GitHub

Create a new repository on GitHub.



Github will give you the commands to sync the local Git to the remote Git.



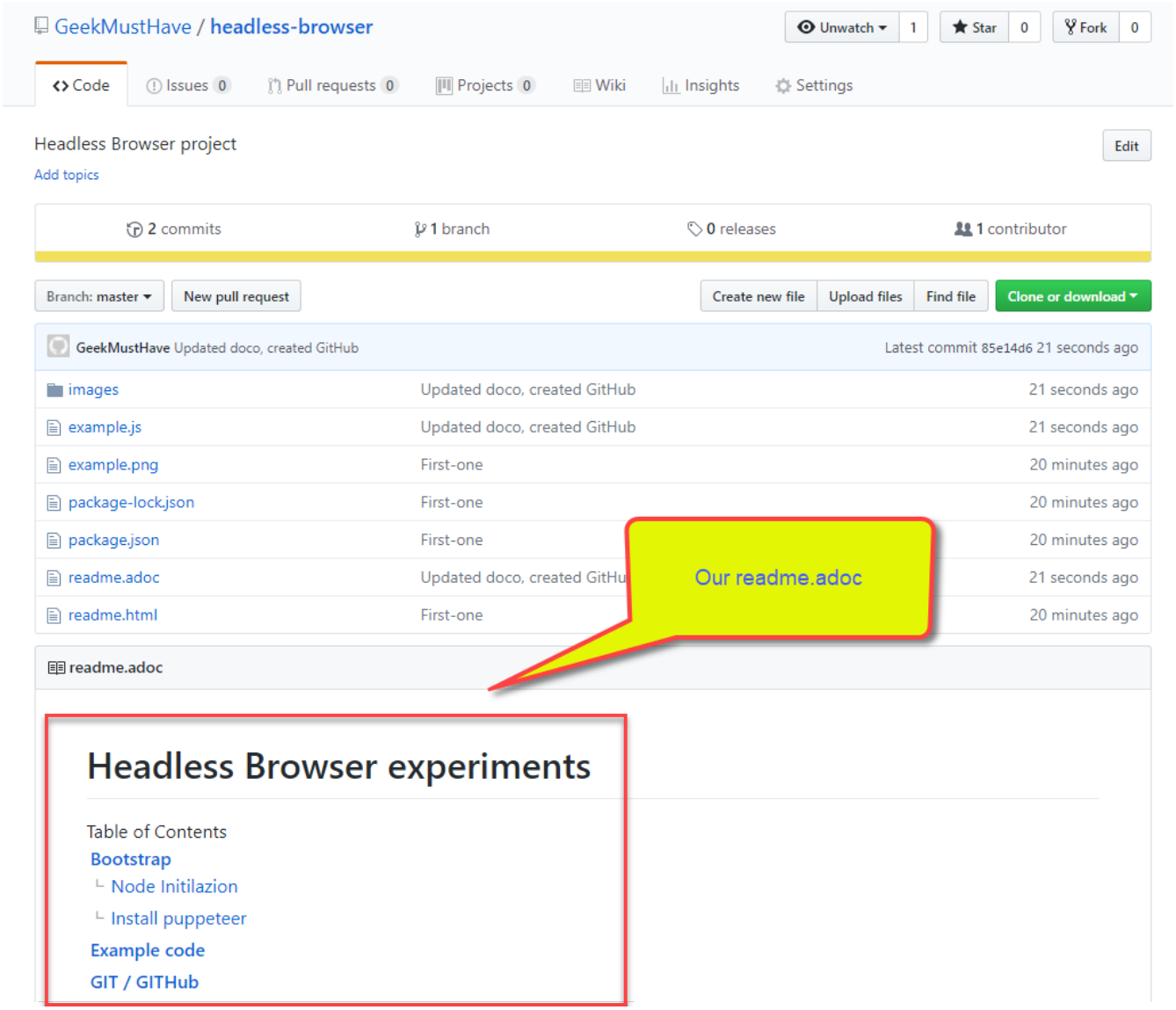
Sync local to remote

```
git remote add origin https://github.com/GeekMustHave/headless-browser.git
git push -u origin master
```

Which results in

```
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser> git remote add origin
https://github.com/GeekMustHave/headless-browser.git
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser> git push -u origin master
Counting objects: 10, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (9/9), done.
Writing objects: 100% (10/10), 2.72 MiB | 1.05 MiB/s, done.
Total 10 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/GeekMustHave/headless-browser.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
PS F:\users\jschust2\Dropbox\myDev\HeadlessBrowser>
```

Now the GitHub will be loaded with the project and the `readme.adoc` file is used as the documentation for the repository.


GeekMustHave / headless-browser
Unwatch 1
Star 0
Fork 0
Code
Issues 0
Pull requests 0
Projects 0
Wiki
Insights
Settings
Headless Browser project
Edit
Add topics
2 commits
1 branch
0 releases
1 contributor
Branch: master
New pull request
Create new file
Upload files
Find file
Clone or download
GeekMustHave Updated doco, created GitHub
Latest commit 85e14d6 21 seconds ago
images Updated doco, created GitHub 21 seconds ago
example.js Updated doco, created GitHub 21 seconds ago
example.png First-one 20 minutes ago
package-lock.json First-one 20 minutes ago
package.json First-one 20 minutes ago
readme.adoc Updated doco, created GitHu 21 seconds ago
readme.html First-one 20 minutes ago
Our readme.adoc
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