

# Headless Browser experiments

John HR Schuster

Version 2.1d, 04/04/2018

# Table of Contents

Bootstrap.....	1
Node Initilazion .....	1
Install puppeteer .....	1
Example code.....	2
GIT / GitHub .....	3
.gitignore file .....	3
Create local GIT.....	3
Create remote GitHub .....	4
Sync local to remote .....	6

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`

The HTML version of this document is at <https://geekmusthave.com/Courses/Headless-Browser/readme.html>

The PDF version of this document is at <https://geekmusthave.com/Courses/Headless-Browser/readme.pdf>

## Bootstrap

There are quite a few headless browser options. 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 [GeekMustHave.com](https://GeekMustHave.com), best website on the planet. 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 till 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 document.

[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.

# Create a new repository

A repository contains all the files for your project, including the revision history.

Owner

 GeekMustHave ▾

Repository name

/ headless-browser ✓

Great repository names are short and memorable. Need inspiration? How about **miniature-lamp**.

Description (optional)

Headless Browser project



Public

Anyone can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.



Initialize this repository with a README

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None ▾



Add a license: None ▾



Create repository

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

**Quick setup — if you've done this kind of thing before**

 Set up in Desktop or **HTTPS** **SSH** `https://github.com/GeekMustHave/headless-browser.git` 

We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

**...or create a new repository on the command line**

```
echo "# headless-browser" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/GeekMustHave/headless-browser.git
git push -u origin master
```

**Do these commands**

**...or push an existing repository from the command line**

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

**...or import code from another repository**

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

[Import code](#)

## 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 GitHub	21 seconds ago
readme.html	First-one	20 minutes ago

readme.adoc

Headless Browser experiments

Table of Contents

Bootstrap

- Node Initilazion
- Install puppeteer

Example code

GIT / GitHub

Our readme.adoc