

Name: _____

This quiz totals 20 points. The quiz is open-note, but not open-neighbor. Relax and try to do the best you can.

1. (10 points) Explain the difference between a static webpage and a dynamic webpage. What is the implication of this difference as it relates to the workflow for automated web scraping?

Solution: A dynamic webpage is one in which the HTML source does not contain the data of interest. For example, the website (e.g. Google Maps) requires the user to input an address, from which the data are revealed.

In a static webpage, the data are nested inside the HTML source code and hence the webpage can be downloaded as a text file and parsed to obtain the data of interest.

With a dynamic webpage, one needs to use a “requests” package to pass the environment variables corresponding to the exact data of interest, and then access the webpage in an automated fashion to get it to return the requested data.

2. (10 points) You are using git from the command line and run into the following problem: You have made changes in your directory, but when you type `git push origin master`, nothing happens. (i.e. git returns with the message “Everything up-to-date”). More details below:

When you type `git push origin master`, you see the following output:

```
Username for 'https://github.com': [username]
Password for 'https://[username]@github.com':
Everything up-to-date
```

When you type `git status`, you see the following output:

```
# On branch master
# Untracked files:
# (use "git add <file>..." to include in what will be committed)
#
#      ./
nothing added to commit but untracked files present
(use "git add" to track)
```

Explain what is going on and how to resolve this problem.

Solution: What is going on here? The problem is that the user needs to *add* the files to the staging area, then issue a commit, and then do the push. The steps are:

- `git add .`
- `git commit -m "commit message"`
- `git push origin master`