CSE 5408- Lab #3
Version Control System
GitHub

Due: Wednesday February 23rd, 11:45 am

Lab objectives:

After the lab, you should know how to

- create and use a repository
- make changes to a file and push them to GitHub as commits
- start and manage a new branch
- open and merge a pull request

Lab activities: (This is an individual activity.)

Part 1. (25 pts) **Create a Github account (if you don't already have one) and use the terminal to create a repository and upload a file.**

1. After creating a github account, go under the "+" and select "new repository".
2. Open your terminal
3. Create a folder where you want to store your git repository work and place any file(s) you want in it.
4. In the command line of the folder run "git init" to initialize it as a git repository.
5. Next in the command line run either "git add ." or "git add your_file_name". Using the period after add includes all the files in the repository/current folder.
6. Afterwards run the command "git commit -m "whatever message you want to write to appear with the upload""
7. Go back to the repository on github.com you made and copy the link it has provided since it's still currently empty.
8. Run "git remote add origin url_your_copied"
9. Finally run "git push -u origin master" and you should see your file(s) uploaded to your repository.

Part 2. (30 pts)**After uploading a file, create a new branch and then modify the file and merge it with the master branch**

1. In the command line now run the command "git checkout -b your_new_branch_name". This command switches and creates a new branch at the same time.
2. Use the command "git branch" to confirm your in the new branch.
3. Add new random files to folder containing your repository.
4. Run "git add ." or "git add your_file_name".
5. Followed by "git commit -m "whatever message your want to appear with your new upload""
6. Then run "git push origin your_new_branch".
7. Now use "git checkout master" to swap into the master branch.

8. Verify by running “git branch”
9. Afterwards run “git merge your_new_branch”
10. If no errors, run “git push” and you should see your items from your new_branch appear in the master branch.

Part 3. (25 pts) **Clone a repo from a different github user (https://github.com/Juan-Inzunza) and perform a pull request**.

1. Create a new folder on your computer to hold the cloned repository.
2. Next open up the terminal and head to that new folder
3. Go to https://github.com/Juan-Inzunza and select any of the repositories.
4. Once in the repo, hit the green “Clone or Download” button, and copy the link in the pop-up box.
5. In the terminal run “git clone copied_repo_url”
6. Then run “git pull” and you should see a copy of the repo contents in your folder.

Deliverables:

1. Screenshots of the terminal for parts 1,2, and 3.
2. The file showing commands and explanation how you did each step.
   Example:
   - Create a folder where you want to store your git repository work and place any file(s) you want in it.

```
Assuming you  are using  linux/MacOS
$ mkdir cse408class
$nano myfirstfile.txt  # to  create new empty  file
```

3. Answer the following questions:
   a) What benefits would a large team of developers get from version control? Identify at least two.
   b) What benefits would a single developer (working alone) get from version control? Identify at least two.
   (c) What kind of files should you put in version control?
   (d) What kind of files should you not put in version control? Why?
4. Save the files and answers in a folder named as: **lastname_firstname_lab3**.zip, and submit on Canvas.

Grading

This lab is worth 100 points

Resources:

https://git-scm.com/
https://swcarpentry.github.io/git-novice/