DS-GA-1007 Programming for Data Science

Homework 6

Git Practice

1. Sign into your GitHub account and create a new repository called `DS-GA-1007-HW06`. Choose to initialize the repository with a README.
2. Clone the repository to your machine. (If you are unsure, use the HTTPS version, not the SSH version.)
3. Create a new file named `myfile.txt`. Add the file and make a commit with the message
   "`First Commit`".
4. Push all changes to GitHub. (You should be able to see it online.)
5. Create a `.gitignore` file . Add a globbing pattern to ignore all files with a `.dat` extension.
6. Create a new file named `badfile.dat`.
7. Create a directory named `dir1/`, and add a file `innerfile.txt` inside that directory.
8. Create a directory named `dir2/`.
9. Remove `README.md` **using git**.
10. Edit the content of `myfile.txt` by adding a new row with the text `changing content`. Save the file.

Your directory tree should look like

```
.gitignore
```
(Only shows up if you choose to view hidden files on Unix systems)

```
badfile.dat
dir1/
     innerfile.txt
dir2/
myfile.txt
```

11. Add and commit all changes with the message "`files modified by` **NETID**".

Use your actual NetID.

To change the default editor for commit messages use

`git config --global core.editor "default editor"`

For example, on the cluster use `which nano` to locate the path to the nano text editor. Replace "default editor" with the path.

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12. Push all changes to GitHub.

Does badfile.dat or dir2 appear?

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13. Create "`text to be reverted`" to the end of `myfile.txt`. Commit the change to your local repository with the message "`Commit to be reverted`"

14. Use `git --no-pager log --oneline` to determine the first 7 characters of the identifier (this is known as a "git hash") associated to the latest commit. For

example, the git hash appearing next to “Commit to be reverted” could be a string like `447de45`.

15. Use `git revert GITHASH` to undo the changes from the last commit. (Use the actual git hash identified from the previous example) Add the commit message `“Undoing change to myfile.txt”`

Note that `revert` differs from `reset`. For example, `git reset --hard “7 characters from Question 14”` would rewrite your commit history to make working directory, staging area and local repository match the last commit. If the most recent commit had already been shared (pushed) to the remote repository, then why would `reset` be problematic?

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16. Run the command

```
git --no-pager log -p origin/master > HW06.txt
```

The flag `--no-pager` indicates that cat should print the log to standard output instead of less which shows a snippet of the commit history page by page. You can change the setting with `git config --global core.pager cat`

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17. Install **pandoc** (https://pandoc.org/installing.html). This will allow us to convert text files to PDF.

    If you do not wish to install pandoc, then do Question 18 on the cluster.

18. Run the command

```
pandoc HW06.txt -o HW06.pdf
```

19. Upload the file `HW06.pdf` to Gradescope.