DS-GA-1007 Programming for Data Science

Assignment 3

Instructions

You will need to use the VirtualBox image to complete the first part of this assignment. Submit your answers directly to the NYUClasses site.

Shell Practice

1. Explore the filesystem tree using `cd`, `ls`, `pwd`, and `cat`. Look in `/bin`, `/usr/bin`, `/usr/lib`, `/tmp`, and `/boot`. What is the path of the `python2.7` directory?

2. Explore the `/dev` directory. This directory contains files that are not ordinary files and not directories. What do you think they are? (Hint: Use the `man` command to see a description of the `ls` command's long format)

3. Set your current directory to your home directory. Create subdirectories called `work` and `play`. Delete the subdirectory called `work`. Copy the file `/etc/hosts` into your home directory. Move it into the subdirectory `play`. Copy the entire `play` directory into a new directory called `work`. What command did you use to copy the `play` directory? (Hint: use the "`man cp`" command to see the extra options available.)

4. What command would you use to copy all the files in the current directory that start with the sequence `nyu` followed by two numbers and that end with any sequence of three characters, into the immediate parent directory.

5. What command would you use to display the number of files in the current directory?

6. What command would you use to display the number of characters in a file?

7. What option to the `ls` command can be used to show hidden files (those beginning with a ".")

Git Practice

1. Use a shell to create a new directory and initialize a repository in it. This will be the repository working directory. Ensure the repository is correctly configured.

2. Create a subdirectory in the working directory that is your Net ID.

3. Download the `file2play.txt` file from NYU Classes, copy into the new subdirectory, and commit it.

4. Edit the content of `file2play.txt` by creating a second row in the file using a text editor, modifying the original content. Save the file and then commit the change.

5. Create a new branch called **testing** and switch to that branch.

6. Change the `file2play.txt` file once again by creating a third row, save the file, then commit the change.

7. Now merge the change back into the **master** branch.

8. Change `file2play.txt` by creating a fourth row, save the file, then commit the change to the **testing** branch.

9. Merge the **testing** branch back into the **master** branch. Assume the master branch version is the correct version.

10. Sign up for your GitHub account.

11. Push your **master** branch to your repository

12. Copy the output of the command "git log" in a solution file and upload it in NYU Classes