

**Bash and GitHub**  
**Due Date: Thursday 9/19 @ 11:59 PM**

Note on Absolute vs Relative File Paths

Absolute File Paths: The entire path of a file or folder starting with “/” or “/mnt/c/”

- Mac example: `/Users/wadeb/Documents/QBIO490/course_description.pdf`
- PC Example: `/mnt/c/Users/wadeb/Documents/QBIO490/course_calendar.pdf`

Relative File Paths: A shortened file path that takes your current location into consideration.

- `.` represents your current directory, `..` represents the previous directory (one above)
- In `/Documents` folder...

`./QBIO490/ = ../Documents/QBIO490/ = /mnt/c/Users/wadeb/Documents/QBIO490/`

**Answer the following questions about Bash:**

- Type out definitions for the following commands and shortcuts in your own words. Refer to the slides for definitions of commands, and use google to look up the definitions of any unknown shortcuts.
  - `pwd` | (print working directory) outputs the full path to the current directory
  - `mkdir` | (make directory) creates a new directory
  - `cd <dir>` | (changes directory) moves you to a new directory
  - `cd ..` | moves you to the relative previous directory
  - `ls` | (list) lists all files in the current directory
  - `rm` and the `-r` flag | (remove) deletes files, `-r` (recursive) deletes directories
  - `cat` | (concatenates) reads the contents of an entire file
  - `head` | reads the first 10 lines of a file
  - `tail` | reads the last 10 lines of a file
  - `scp` | (secure copy) copies a directory (`-r`) or file to another location
  - `nano` (including `Ctrl+o` and `Ctrl+x`) | terminal text editor for small edits; `Ctrl+o` writes out (saves) the file; `Ctrl+x` exits the file
  - `help` | displays information about built in-shell commands
  - `TAB` | completes the typing command (auto-fills)
  - `Ctrl+a` | places the cursor at the start of the active line
  - `Ctrl+e` | places the cursor at the end of the active line
  - `Ctrl+r` | performs a history search for commands that match the current input
  - `Ctrl+k` | removes all text to the right of the cursor
  - `Ctrl+u` | removes the active line
  - `Ctrl+l` | clears terminal display
- What command would you use to navigate to your Desktop from `/Users/` using an absolute path? Relative path?  
`cd /mnt/c/Users/xande/OneDrive/Desktop`  
`cd xande/OneDrive/Desktop`
- How would you copy `/Desktop/Example Folder/` with multiple documents inside to `/Documents/`?  
`scp -r 'Example Folder' ../Documents`

- If you didn't know which folder you were in, how would you navigate back to /Documents/?

`cd /mnt/c/Users/xande/OneDrive/Documents` (absolute file path)

**Fill in the blank:**

- To push your local changes to GitHub, use the following sequence of commands:
  1. `git status` to view any unsaved changes.
  2. `git add <file>` to save all files, or to save a specific file/folder.
  3. `git commit -m "[message]"` to commit files for saving. Use '-m' to include a message.
  4. `git push` to push your changes to GitHub.

**Do it yourself!**

- ☐ Use commands in Bash to add the completed homework file to your week3\_bash\_github folder in your local qbio\_490\_name repository
- ☐ Use GitHub to stage, commit, and upload your completed Bash and Github HW into your personal GitHub repo.

**Turn in your answers for this assignment by attaching a link to your personal GitHub repo on Brightspace for full credit**