Nano and File Paths Homework

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Date: __1/17/22__

Lesson 1

QBIO Public Data Analysis

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Background:

File paths are very important to understand. What different file paths can we use?

- Absolute File Paths: The *entire* path of a file or folder starting with /
    - Mac Example: `/Users/Kate/Documents/job_docs/my_resume.pdf`
    - PC Example: `/mnt/c/Users/Kate/Documents/job_docs/my_resume.pdf`
- Relative File Paths: A shortened file path that takes your current location into consideration.
    - `.` is the current directory, `..` is one directory previous or above.
    - kguion@LAPTOP147 Documents % `job_docs/my_resume.pdf`
    - kguion@LAPTOP148: /mnt/c/Users/Kate/Documents $ `../Desktop/projects/final_pres.ppt`

Activity:

1. Navigate to your Documents folder using `cd PATH/TO/Documents`
2. List your documents using `ls`
3. Make a directory named "QBIO_test_folder" using `mkdir`
4. Navigate into "QBIO_test_folder" using `cd`
5. Create a text file using `nano test.txt`
6. Type a message.
7. Write out, save, and exit your file.
8. Use the move, `mv`, command to move test.txt from QBIO_test_folder to Documents.
    - The format is: `mv PATH/TO/FILE PATH/TO/DESTINATION` (notice the space between file and destination)
    - Mac Example: `mv /Users/Kate/QBIO_test_folder/test.txt /Users/Kate/Documents`
    - PC Example: `mv /mnt/c/Users/Kate/QBIO_test_folder/test.txt /mnt/c/Users/Kate/Documents`
9. Use both your Terminal and GUI file system to view your QBIO_test_folder and Documents.
10. Use `mv` to move test.txt back to QBIO_test_folder using *relative paths.*
11. Use the secure copy, `scp`, command to copy test.txt from QBIO_test_folder to Documents.
    - The format is the same for the `mv` command. Try using a *relative path* with `.` or `..` .
    - TIP: If you want to copy into your current location, just use a `.` to represent current location
    - REVIEW: How is the `scp` command different from `mv` ?
12. Using nano, edit the test.txt in the *Documents* directory.
13. Use `cat` to view test.txt from Documents AND from QBIO_test_folder. What do you notice?
14. Use `rm -r PATH/TO/QBIO_test_folder/` to delete the entire folder.
    - TIP: The `-r` flag is added to `rm` and `scp` when removing or coping an entire directory rather than an individual file.

Try using TAB-complete throughout this homework!

Homework Check:

1. Draw out the file organization of the box at the top of the worksheet. Start with Users -> Kate.
2. To navigate into the projects folder starting from Users/Kate, use: `cd  Desktop/Projects`
3. Starting in Users/Kate/Desktop navigate to the job_docs directory using: `cd ../documents/job_docs`
4. To quickly navigate back to Desktop from Users/Kate/Desktop/projects, use: `cd ..`
5. Starting in Users/Kate/Desktop move my_resume into Desktop with: `mv ../Documents/job_docs/my_rseume.pdf .`
6. Starting in Users/Kate, copy the entire project directory into Documents using absolute file paths: `scp -r Desktop/projects Users/Kate/Documents/`
   and relative file paths: `scp -r Desktop/projects Documents`

Please email the answers to the Homework Check to blackn@usc.edu before the start of the next class with the Subject Line: QBIO 490 Homework 1 – LastNameFirstInitial. For example: QBIO 490 Homework 1 – GuionK.