

UNIX Lab #4

1 pt

Due Date: 03/14 11:59 pm

Instructions:

- If you haven't yet, Read the "About this module" file before starting this lab
- Go to <http://lynda.psu.edu/> and sign in using your PSU credentials
- After you logged in, use the search box to look for "Unix for Mac OS X Users"
- Watch the Chapter 5 videos. It is important to take notes as Unix-related questions will be always asked in exams.
- After you are done watching and understanding the videos, complete the exercises below and do the quiz on CANVAS.

Before you start, remember:

- Complete the section "Getting access to UNIX" in the "About this module" file
- Learn how to take screenshots of a window:
 - o Mac users: <https://support.apple.com/en-us/HT201361>
 - o Windows users: <https://support.microsoft.com/en-us/help/13776/windows-use-snipping-tool-to-capture-screenshots>
- Open your terminal (Terminal for Mac users, MobaXterm for Windows users)

EXERCISE:

- Create a new directory by typing "mkdir Desktop/ulab4". Enter that directory by typing "cd Desktop/ulab4"
- Create the file ice_cream.txt by typing "touch ice_cream.txt"
- Open the txt file using nano (for Mac users) or emacs (Windows users). At this point, you should be familiar with these UNIX commands. Type the following flavors, and save the changes:
 - Bittersweet Mint
 - Chocolate Chip Cookie Doug
 - Alumni Swirl
 - Black Raspberry
 - Death by Chocolate
 - Butter Pecan
- In the command line, type "wc ice_cream.txt" and then "sort !\$". Take a screenshot of the shell.

- Also do “`uniq !$`”, and “`grep Chocolate !$`”. Examine the results to see the commands are working correctly. (grep is the keyword search command in UNIX)
- Go to the directory where the grep command file is contained (“which grep” tells you the directory that contains it):
 - Mac Users: do “`cd /usr/bin`” and then “`ls`”
 - Windows Users: do “`cd /bin`” and then “`ls`”
- Copy the grep.exe file:
 - Mac Users: do “`cp grep ~/Desktop/ulab4`”
 - Windows Users: do “`cp grep.exe ~/Desktop/ulab4`”
- Go back to the ulab4 directory to see that grep was copied correctly. (`cd ~/Desktop/ulab4`)
- Do “`PATH=~/Desktop/ulab4`”, then “`grep Chocolate ice_cream.txt`” to see grep is working the same as before
- Do “`ls`” to see it is not working. Take the second screenshot of the shell.
- To restore the path for the command lines:
 - Mac users: do “`PATH=/bin:/usr/bin`”
 - Windows users: do “`PATH=/bin`”
- In the command line type “`bash`” and then “`ps`” (Mac users) or “`ps aux`” (Windows users). Among the processes, kill the most recent bash process without the -9 option.
- Type “`ps`” (Mac users) or “`ps aux`” (Windows users) again to see the process hasn’t actually stopped. Take the third screenshot of the shell.
- Now, try to kill the process with the -9 option. Type “`ps`” (Mac users) or “`ps aux`” (Windows users) again to see you exited from the bash shell.
- Do “`df -h`” and “`du -h`” to show the total free disk space, and allocated disk space under /bin. Take the fourth screenshot of the shell. (If you did not restore the PATH variable correctly, it may show something different)
- Copy the four screenshots in a Word document, save it as a PDF and submit the file ULAB4.pdf to the Unix Lab 4 assignment on CANVAS.
- Go back to the command line. Do “`cd ~/Desktop`” and then “`rm -r ulab4`”. Now the ulab4 directory is deleted.
- Complete the Quiz 4 of the UNIX module before the due date of this assignment.