Lab 1: Unix Commands Overview

This lab is about the different commands of Linux for personal use. Editing, compiling, and executing the C programs.

1. Read the man pages for the following commands (write man [command] on terminal, press q to exit man):
    1. script
    2. finger, who, w
    3. touch
    4. top
    5. mkdir
    6. umask: umask [value] (shell built in command)
    7. text utilities: sort, uniq, tr, expand, unexpand, cut.
    8. gcc
    9. history
    10. grep
    11. awk
    12. Ps
    13. echo

2. In your home directory create the subdirectory ~/cse302/labs/lab1 . (Use multiple mkdir commands or consult the -p option for mkdir in the man page for mkdir).
    1. cd ~/cse302/labs/lab1
    2. Copy or create a file named **myfile** into ~/cse302/labs/lab1 (if you create it, type something into it). For information on how to create a quick empty file, man touch.
    3. Create a soft link **soft_link** and a hard link **hard_link** to that file.
    4. Based on the output returned by stat and ls commands (using all relevant options), explain in detail (but briefly) the differences between the three files.

3. Create a script and show how many usernames have logged in use pipelining, grep and who command also investigate wc in man.

4. Change your file permission mask such that by default your colleagues do not have read permissions for your newly created files. Please show in the transcript file the following:
    1. the initial mask
    2. how you changed it
    3. show that people in your user group don't have read permissions for a new file you're creating.
       Change the umask permanently by placing the umask ... command in your .bash_profile file.

5. List the PIDs of all processes running as root on your computer on a line, separated by commas. E.g., 1,2,3,4,5,657,658, ... Use pipes to create a one-line

command that accomplishes this. You'll need some of the text processing tools presented in class. Hint: man ps (-a and -x flags), man tr.

6. List the usernames and names of the people logged on the list returned should be sorted and should have the following format:

   1 <username1> <Time>
   2 <username2> <Time>
   3 <username3> <Time>
   ...

   Hint: use the "nl" command to number lines.