Assignment #2

(Exploring Linux)

Paste answers in space below questions. You may create additional space below questions needed to paste your answers.

1. Try the following command sequence:
    - cd
    - pwd
    - ls -al
    - cd .
    - pwd (where did that get you?)

    - cd ..
    - pwd
    - ls -al
    - cd ..
    - pwd
    - ls -al
    - cd ..
    - pwd (what happens now?)

    - cd /etc
    - ls -al | more
    - cat passwd
    - cd -
    - pwd (what happens now?)

2. Look in /bin, /usr/bin, /sbin, /tmp and /boot. What do you see?

3. Explore /dev. Can you identify what devices are available? Which are character-oriented and which are block-oriented? Can you identify your tty (terminal) device (typing who am i might help); who is the owner of your tty (use ls -l)?

4. Create another user on your Linux system. How?

5. Change to the home directory of another user directly, using cd ~username.

6. Change back into your home directory.
7. Make subdirectories called work and play.
8. Delete the subdirectory called work.
9. Copy the file /etc/passwd into your home directory.
10. Move it into the subdirectory play.
11. Create a file called hello.txt that contains the words "hello world". Can you use "cp" using "terminal" as the source file to achieve the same effect?
12. Copy hello.txt to terminal. What happens?

13. What is the output of the command: echo {con,pre}{sent,fer}{s,ed}? Now, from your home directory, copy /etc/passwd and /etc/group into your home directory in one command given that you can only type /etc once.
14. Experiment with the options on the ls command. What do the d, i, R and F options do?
15. Describe three different ways of setting the permissions on a file or directory to r--r--r--. Create a file and see if this works.

16. Modify the permissions on your home directory to make it completely private. Check that your directory can't accessed by another user. Now put the permissions back to how they were.
17. Type umask 000 and then create a file called world.txt containing the words "hello world". Look at the permissions on the file. What's happened? Now type umask 022 and create a file called world2.txt. When might this feature be useful?
18. Use find to display the names of all files in the /home subdirectory tree. Can you do this without displaying errors for files you can't read?
19. Use find and file to display all files in the /home subdirectory tree, as well as a determine file types. Do this in two different ways.
20. Use grep to isolate the line in /etc/passwd that contains your login details.
21. Use find and grep and sort to display a sorted list of all files in the /home subdirectory tree that contain the word hello somewhere inside them.

Challenge Question

22. Create a file containing some lines that you think would match the regular expression: (^[0-9]{1,5}[a-zA-z]+$)|none and some lines that you think would not match.

23. How can you check to determine if you are right?