1. in your cs330 lab directory create three new directories named 'weather', 'assignment', and 'web'
   * if you do not have a cs330 lab directory then create it
2. change the permissions of the directory 'web' to -rwx r-x r-x using the octal form of chmod
3. change your working directory to weather
4. without using a text editor create three files called 'today', 'tomorrow', and 'deer'
5. check the permissions with ls -l
6. change the permissions of 'deer' to -rwx r-- r--
7. change the permissions of 'today' to -rw- r-- r--
8. check the permissions with ls -l
9. copy 'deer' to a file called 'good'
10. create a directory named 'cars'
11. move the file 'good' to the directory 'cars' and rename it 'today2'
12. change working directory to 'cars'
13. check permissions with ls -l
14. move up one directory
15. remove the directory 'cars' and its contents

Use one command to create 3 empty files called  test3.2, slide12, cis2

1. Use wildcards to list all filenames that have the letter s  in the name
2. Use wildcards to list all filenames that have the letter s  as the third character in the name
3. Use wildcards to list all filenames that have the number 1 or 3 in the name
4. Use wildcards to list all filenames that have at least 2 digits, and the digits don’t have to be next to each other. (A digit is a numeric value between 0 and 9)
5. Copy file lab1-2 (the last lab assignment) to test3.2, use the interactive option and answer yes when prompted
6. Use an option of the ls command to see the size in bytes of file test3.2
7. Rename test3.2 to temp2
8. Run a command to prove that test3.2 doesn’t exists
9. List all files that you worked with in this lab. Use wildcards to make your command as short as possible (use the fact that the files all have some common character in their names)
10. Use one command to delete all 3 files that you created in this lab

Answers:

**touch test3.2 slide12 cis2**

**(3) ls \*s\***

**(4) ls ??s\***

**(5) ls \*[13]\***

**(6) ls \*[0-9]\*[0-9]\***

**(7)**

**cp -i lab1-2 test3.2**

**y**

**(8) ls -l test3.2**

**(9) mv test3.2 temp2**

**(10) ls test3.2**

**(11)**

**ls \*2 -> probably incorrect**

**ls \*[1ps]2**

**(12)**

**rm \*2 -> probably incorrect**

**rm \*[1ps]2**

1. At your home directory, create a new, empty text file called temp1
2. Use the script utility to capture your session.
3. Show the full path name of your home directory
4. Without changing directory, do a listing of the root directory, use an option of the list utility so you can see what file type each file is, but *don't use the long listing* option
5. Use the echo command to print to screen what type of files are in the root directory
6. Create 2 subdirectories under your home directory, dir1 and dir2
7. Use an absolute path to go to the directory dir1
8. Copy the file temp1 (currently in your home directory, from step 1) to directory dir1, which is your current directory. You should not have to type temp1 twice on the command line.
9. Stay in directory dir1.  Use one command to copy the file temp1 to directory dir2 and call this file temp2.
10. Go to your home directory, using the shortest way to run the command.
11. Stay in your home directory, move directory dir2 so it becomes a subdirectory of directory dir1
12. Stay in your home directory, do a listing of directory dir2
13. Exit script and save the script output file for the next lab time. Keep your dir1 and dir2 directories also.

--------------------------------------------------------------------------------------------------------------

1. Start script again and append to the existing output file of step 16
2. Stay in your home directory, create a hard link at your home directory, call the hard link link1, and have it link to file temp1 (in directory dir1).
3. Stay in your home directory, create a hard link in directory dir2 called link2, and have it link to the same file temp1 (in directory dir1).
4. Stay in your home directory, use a command to show that file temp1 in dir1 now has 3 hard links
5. Stay in your home directory, create a link in directory dir2, call it home and have it link to your home directory
6. Use a relative path to go to directory dir2
7. Stay in directory dir2 and use the link home to do a listing of your home directory
8. Stay in directory dir2, search *from your home directory and down all subdirectories* for all regular files that have more than 2 hard links
9. Stay in directory dir2, search *from your home directory and down all subdirectories* for all hard links to the file temp1 in directory dir1 (this will take more than one command)
10. Show what utility is run when you run the command ll (2 lowercase letter ‘el’)
11. Exit out of script. Save the output file so you can continue with Module 6.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1. touch temp1**

**2. script lab5-6**

**3. pwd**

**4. ls -F /**

**5. echo directory**

**9. mkdir dir1 dir2**

**10. pwd**

**cd /home/student/harshlavingia/dir1/**

**11. cp ../temp1 .**

**12. cp temp1 ../dir2/temp2**

**13. cd ~**

**14. mv dir2 dir1/**

**15. ls dir1/dir2/**

**16. exit -> exit script utility**

**17. script -a lab5-6**

**18. ln dir1/temp1 link1**

**19. ln dir1/temp1 dir1/dir2/link2**

**20. ls -li dir1/temp1**

**21. ln -s ~ dir1/dir2/home**

**22. cd dir1/dir2**

**23. ls home**

**24. find home/ -type f -links +2**

**25. ls -li home/dir1/** **--> temp1 inod = 32441753**

**find ~ -inum 32441753 --> To Do: How to skip file listing and ONLY hard links**

**26. which ll**

**27. exit**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Module 6**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1. script -a ~/lab5-6**

**2.**

**cd ~**

**ls -ld .**

**3. touch f1 f2**

**4. chmod 740 f1 f2**

**5. ls -l f1 f2**

**6. echo "no.  home directory don't have rwx permission for the group"**

**7. chmod u=rw,g=x f1**

**8. ls -l f1**

**9.**

**System default -> rw- rw- rw- -> 110 110 110 -> 666**

**Change default to -> rw- --- --- -> 110 000 000 -> 600**

**umask         ->         -> 000 110 110 -> 066**

**umask 066**

**10.**

**touch f3**

**ls -l f3**

**11. exit**

**12. cp /home/distribution/cnguyen/cis18a/clean.sh ~**

**13. clean.sh lab5-6**

**14.**

**- Clean typing error**

**- Check difference between lab5-6.cleaned and lab5-6**

**15. Turn in**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1. touch temp1**

**2. script lab5-6**

**3. pwd**

**4. ls -F /**

**5. echo directory**

**9. mkdir dir1 dir2**

**10. pwd**

**cd /home/student/harshlavingia/dir1/**

**11. cp ../temp1 .**

**12. cp temp1 ../dir2/temp2**

**13. cd ~**

**14. mv dir2 dir1/**

**15. ls dir1/dir2/**

**16. exit -> exit script utility**

**17. script -a lab5-6**

**18. ln dir1/temp1 link1**

**19. ln dir1/temp1 dir1/dir2/link2**

**20. ls -li dir1/temp1**

**21. ln -s ~ dir1/dir2/home**

**22. cd dir1/dir2**

**23. ls home**

**24. find home/ -type f -links +2**

**25. ls -li home/dir1/** **--> temp1 inod = 32441753**

**find ~ -inum 32441753 --> To Do: How to skip file listing and ONLY hard links**

**26. which ll**

**27. exit**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Module 6**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**1. script -a ~/lab5-6**

**2.**

**cd ~**

**ls -ld .**

**3. touch f1 f2**

**4. chmod 740 f1 f2**

**5. ls -l f1 f2**

**6. echo "no.  home directory don't have rwx permission for the group"**

**7. chmod u=rw,g=x f1**

**8. ls -l f1**

**9.**

**System default -> rw- rw- rw- -> 110 110 110 -> 666**

**Change default to -> rw- --- --- -> 110 000 000 -> 600**

**umask         ->         -> 000 110 110 -> 066**

**umask 066**

**10.**

**touch f3**

**ls -l f3**

**11. exit**

**12. cp /home/distribution/cnguyen/cis18a/clean.sh ~**

**13. clean.sh lab5-6**

**14.**

**- Clean typing error**

**- Check difference between lab5-6.cleaned and lab5-6**

**15. Turn in**

**Module 6**

1. Start script again to capture your screen output, make sure to append to the output file of Module 5.
2. Go to your home directory.  Show the permission of your home directory.
3. Create 2 files in home directory called f1 and f2
4. Use one command and the octal mode to change the access rights of f1 and f2 so that:

    you can read, write, and execute    rwx = 7

    your group can read            r--   = 4

    others have no access            ---   = 0

1. Use one command to show the new access rights of f1 and f2
2. Can users in your group copy file f1 from your home directory? Use the echo utility to answer yes / no and why or why not.
3. Use the symbolic mode to change the permission of f1 so that there is only read and write permission for you, and there is only execute permission for your group
4. Show the new access rights of f1
5. Change the default access of new regular files so that you can read and write, your group and others have no access.
6. Create a new regular file and show its access rights to see that its default permission is the new one that you just set.
7. Exit out of script.
8. Copy the file /home/distribution/cnguyen/cis18a/clean.sh to your home directory. This executable will clean up control characters from your output file so you don’t have to do it manually like in the previous lab.
9. Run clean.sh with your script output file by typing on the command line:

clean.sh  filename

1. clean.sh will go through and remove the control characters that are in the your file, and will produce a cleaned output file with the same name as your filename, but with an extension .cleaned

For example, if you run:  clean.sh  lab5-6

You will have in your directory a file called lab5-6.cleaned

Since clean.sh doesn’t remove typing mistakes, backspaces, or commands with errors, use vi on the .cleaned file to remove these errors. (You still have to clean up your own mess ,  just like your mom always said)

15. Turn in a hard copy of a completely “clean” output file.  You will get full credit only if the file is completely cleaned.

**script lab9-10**

**2. finger | head -3 > out1**

**3. finger | head -5 > out2**

**4. cmp out1 out2 -- EOF on out1**

**5. ls -a | wc -l**

**6.**

**-- 1. cat /etc/passwd | tail -6                 -- last 6 line of the file**

**-- 2. cut -f1,7 -d':' /etc/passwd | tail -6 -- output on screen**

**3. cut -f1,7 -d':' /etc/passwd | tail -6 | tee out -- output on screen and file**

**7. head -2 out | tail -1**

**8. export LC\_ALL="POSIX"**

**who | cut -f1 -d' ' | sort -r | uniq**

**9. grep 'testUser' /etc/passwd | cut -f5 -d':' | tr [a-z] [A-Z] | tr -d ' '**

**10. cat /etc/passwd | cut -f4 -d':' | sort | uniq**

**11. cat /etc/passwd | cut -f1 -d':' | sort | tail -1**

**12. who | tr -s ' ' '$' | cut -f1,3,4,5 -d'$' | tr '$' ' ' | sort -Mnk +2 -k+3 -k+4**

**13. exit**

**\*\* Module 10 \*\***

**1. script -a lab9-10**

**2. cp /home/distribution/cnguyen/cis18a/lab9-10input .**

**3. egrep [oO] lab9-10input**

**4. egrep [a-zA-Z]{5} lab9-10input**

**5. egrep [.]$ lab9-10input OR egrep ' \.'$ lab9-10input**

**6. egrep ^\ + lab9-10input**

**7. egrep '^[0-9/]+$|^[0-9\ ]+$' lab9-10input**

**8. egrep ^[^0-9a-zA-Z]+$ lab9-10input**

**-- Incorrect egrep ^\ \*[^0-9a-zA-Z]+\ \*$ lab9-10input**

**-- But how to avoid line having only blank space**

**9. egrep '^ \*[a-zA-Z]{5} \*$' lab9-10input**

**10. egrep '^[^t]+t{1}[^t]+$' lab9-10input**

**\*\* Extra Credit \*\***

**11. egrep '^.\*[0-9]\*[.][0-9]{1,2}.\*$|^.\*[0-9]+[.][0-9]{2}[^0-9].\*$' lab9-10input**

**12.**

**exit**

**clean.sh lab9-10**

**- Clean typing error**

**- Check difference between lab9-10.cleaned and lab9-10**

**- Turn in lab**

**Print the PID of all the tasks running in your system in the file 'ps.txt'.**

1. Append the command that started each task running in your system to the the file 'ps.txt'.
2. Run the fictional command **als** and print the error output to 'err.txt'.
3. Copy the contents of 'ps.txt' to 'ps\_copy.txt' using only the **cat** command.
4. Print the contents of the 'ls' man page in **more**.
5. Print the first 10 lines of the output of the command **ps aux**.
6. Determine the number of files and folders in the current directory using the **wc** command.
7. Print the first 3 lines of all ".txt" files in current directory.
8. Create a backup of all text files in current directory in the tar file text.tar.