24 September 2020

Lab 3

1. $ umask
    a. 0002
2. (No Question)
3. Go into your ~/homework/week-3/lec-3 directory.
4. Verify that you are in your lec-3 directory before you execute the following commands. Record the output of ls -ld dirx.
    a. $ mkdir dirx
    b. $ ls -ld dirx
        i. drwxrwxr-x. 2 cs45aa06 cs45aa06 6 Sep 24 05:19 dirx
5. Create an empty file
    a. $ touch xfile
    b. $ ls -l xfile
        i. -rw-rw-r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:19 xfile
    c. Who owns xfile?
        i. cs45aa06
    d. What is the size of xfile?
        i. 0
    e. What are the permissions of xfile?
        i. -rw-rw-r--
            1. Owner: Read, write
            2. Group: Read, write
            3. Others: Read
    f. What are the owners' permission for xfile?
        i. Read, write
    g. What are the permissions for the group owner of xfile?
        i. Read, write
    h. If you are not the owner and not in the group, what permissions do you get?
        i. Read
6. Change your umask to 033
    a. 0033

7. Create another file called zfile
    a. $ touch zfile
    b. $ ls -l zfile
        i. -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:23 zfile
    c. What are the permissions of zfile?
        i. -rw-r--r--
            1. Owner: Read, write
            2. Group: Read
            3. Others: Read
    d. Why does zfile have those permissions?
        i. Because the umask value is set to 033, setting the file permission to 666 (full file permission value) - 33 = 644:
            1. 6 = 110 = rw-
            2. 4 = 100 = r--
            3. 4 = 100 = r--
8. Create a directory called 'zdir'
    a. $ mkdir zdir
    b. $ ls -ld zdir
        i. drwxr-xr-x. 2 cs45aa06 cs45aa06 6 Sep 24 05:26 zdir
    c. What are the permissions of zdir
        i. drwxr-xr-x
            1. Owner: Read, write, execute
            2. Group: Read, execute
            3. Others: Execute
    d. Why does zdir have those permissions
        i. Because the umask value is set to 033, setting the file permission to 777 (full directory permission value) - 33 = 744:
            1. 7 = 111 = rwx
            2. 4 = 100 = r--
            3. 4 = 100 = r--
    e. What does the 'x' permission allow on a directory?
        i. Execute

f. What does the 'w' permission allow on a directory?
    i. Write
g. What does the 'r' permission allow on a directory?
    i. Read

9. What groups does mr-tester belong to?
    a. $ groups mr-tester
        i. mr-tester : mr-tester
    b. $ grep mr-tester /etc/group
        i. mr-tester:x:1047:
    c. $ id -a mr-tester
        i. uid=1045(mr-tester) gid=1047(mr-tester) groups=1047(mr-tester)
10. How can I change my current group id during this login session? What is the difference using the '-' and without the '-' . You will change your current real groupID to the new group or if no new group name is listed, you get the default in /etc/passwd file.
    a. I'm getting prompted for a password so I can't enter change groups
11. Use the chgrp command to assign your file to another group that you belong to.
    a. $ touch gxfile
    b. $ ls -l gxfile
        i. -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:46 gxfile
        ii. cs45aa06
    c. chgrp wheel gxfile
        i. No
12. Try to give your group ownership to cs45.
    a. $ touch mr-tfile
    b. $ ls -l mr-tfile
        i. -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:49 mr-tfile
    c. $ chgrp cs45 mr-tfile
        i. No
            1. Because I'm not a part of the cs45 group
13. Test to see if mr-tfile is a regular file. If the test is successful, you will get a return or exit status of zero '0'. The test command is used to test file types and compare values.
    a. $ test -f mr-tfile

b. $ echo $?
    i. 0
c. $ mkdir mr-dir
d. $ ls -ld mr-dir
    i. drwxr--r--. 2 cs45aa06 cs45aa06 6 Sep 24 05:50 mr-dir
e. $ test -d mr-dir
f. $ echo $0
    i. -bash

14. Let's have some fun with the test command.
    a. $ test 4 -lt 5
    b. $ echo $?
        i. 0
    c. $ test 4 -lt 5 && echo "I got this!"
        i. -bash: !": event not found
    d. $ test 2 -ne 3 && echo "Rock on"
        i. Rock on
    e. $ test -d mr-dir && echo "mr-dir is a directory"
        i. mr-dir is a directory
15. Create a directory called permtest
    a. $ mkdir permtest
    b. $ cd permtest
    c. $ touch feedback1 feedback2 feedback3
    d. $ ls -lh
        i. total 0
            -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback1
            -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback2
            -rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback3
16. vi feedback1 and add two lines and safe the file.
    a. $ vi feedback1
        i. o "I am : $0 "
            echo "Practice harder!:)"
17. Give the file execute permissions

a. $ chmod +x feedback1

b. $ ls -lh

i. total 4.0K

-rwxr--r--. 1 cs45aa06 cs45aa06 42 Sep 24 05:59 feedback1

-rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback2

-rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback3

18. Use the symbolic options(u,g,o,a) to give feedback2 read,write for owner, read for group and nothing for others.

a. $ chmod u=rw,g=r,o= feedback2

b. $ ls -lh

i. total 4.0K

-rwxr--r--. 1 cs45aa06 cs45aa06 42 Sep 24 05:59 feedback1

-rw-r-----. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback2

-rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback3

19. Use the symbolic options to subtract write from group and others on feedback2

a. $ chmod g-w,o-w feedback2

b. $ ls -lh

i. total 4.0K

-rwxr--r--. 1 cs45aa06 cs45aa06 42 Sep 24 05:59 feedback1

-rw-r-----. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback2

-rw-r--r--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback3

20. Use the Octal permissions to give read,write,execute to owner of feedback3, read and execute to group of feedback3 and read only for others.

a. $ chmod 754 feedback3

b. $ ls -lh

i. -rwxr--r--. 1 cs45aa06 cs45aa06 42 Sep 24 05:59 feedback1

-rw-r-----. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback2

-rwxr-xr--. 1 cs45aa06 cs45aa06 0 Sep 24 05:57 feedback3

21. Make a directory called 'dir-tester'

a. $ mkdir dir-tester

22. Make another directory in dir-tester called dir-test2

a. $ cd dir-tester

b. $ mkdir dir-test2

23. Create 4 files in dir-test2 called 'tester-file{1..4}'
    a. $ touch dir-tester/dir-test2/tester-file1
    b. $ touch dir-tester/dir-test2/tester-file2
    c. $ touch dir-tester/dir-test2/tester-file3
    d. $ touch dir-tester/dir-test2/tester-file4
    e. $ ls dir-tester/dir-test2/*
        i. dir-tester/dir-test2/tester-file1 dir-tester/dir-test2/tester-file3
           dir-tester/dir-test2/tester-file2 dir-tester/dir-test2/tester-file4
24. Recursively do a long listing of dir-tester and all contents below
    a. $ ls -lR dir-tester
        i. dir-tester:
           total 0
           drwxrwxr-x. 2 cs45aa06 cs45aa06 86 Sep 24 06:38 dir-test2

           dir-tester/dir-test2:
           total 0
           -rw-rw-r--. 1 cs45aa06 cs45aa06 0 Sep 24 06:37 tester-file1
           -rw-rw-r--. 1 cs45aa06 cs45aa06 0 Sep 24 06:37 tester-file2
           -rw-rw-r--. 1 cs45aa06 cs45aa06 0 Sep 24 06:38 tester-file3
           -rw-rw-r--. 1 cs45aa06 cs45aa06 0 Sep 24 06:38 tester-file4
25. Recursively change the permissions of all the content of dir-tester --all files and directory below to 600
    a. $ chmod -R 600 dir-tester
        i. chmod: cannot access ‘dir-tester/dir-test2’: Permission denied
            1. Tried with a second folder and got the same result