# **Lab Exercise 4**

# **UNIX Filesystem**

1. **What command do you use to find out what group you belong to?**

\_\_\_id\_\_\_\_\_\_\_\_\_\_

**2. In your home directory, create a new file called “myfile”.**

**Check and record the default access permissions assigned to this file by**

**using the ls –l command.**

**\_\_\_read, write, group-only read, others-only read\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Change the access permissions using the chmod command so that the**

**owner (you) cannot write to the file.**

**What are the access permissions on the file “myfile”**

**\_\_\_ read, group-only read, others-only read \_\_\_\_\_\_\_\_\_\_**

**Edit the file and try to make changes to it. What happens?**

**\_\_\_\_Changes cannot be saved\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Change the access permissions using the chmod command so that the**

**owner (you) can write to the file.**

**Edit the file and verify that you can update it.**

**What are the access permissions on the file “myfile”**

**\_\_ read, write, group-only read, others-only read \_\_\_\_\_\_\_\_\_\_\_**

1. **Working with another student in the lab, (or log in with another account if using your own Linux system) give other members of your group read access (but not write or execute access) to your myfile file.**

**Have your lab partner try to read your file. Your partner should get “permission denied” as they do not have any permissions to access your home directory even though they have read permission on a file within that directory. Now change the permission on your home directory to allow others in the group to read write and execute in your directory. Use “chmod g+wrx . “ Have your lab partner verify that he/she can read the file while logged in to their account. What happens when he/she tries to update the file?**

**\_\_\_\_Their changes\_are saved\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**4. Modify the permissions on myfile so that other members of your group can**

**read and modify the file (but not execute it).**

**Have your lab partner verify that he/she can read and update the file.**

**What are the access permissions on the file “myfile”**

**\_\_ read, write, group-only read, others-only read \_\_\_\_\_\_\_\_\_**

**5. Create a file called myprog containing the following information:**

**Clear**

**Echo “starting shell script”**

**cd**

**ls -l**

**Now try to run the file by typing ./myprog.**

**What happens?**

**\_\_\_The terminal returns: -bash: ./myprog: Permission denied \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Look at the access permissions on the file. Why can you not run the file?**

**\_\_User is not given execute permission only read and write\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Now use the chmod command to change the mode of access which will**

**enable your new file to run. Run the program. Does it work?**

**\_\_No, it returns: ./myprog: line 1: Clear: command not found**

**./myprog: line 2: Echo: command not found \_\_\_\_\_\_\_\_\_\_\_\_**

**7.**  **Create four files myfile1, myfile2, myfile3 and myfile4.**

**Using the numeric form of the chmod command, set the access**

**permissions on each of the files as follows (in each case use ls -l to verify**

**that the command has worked correctly):**

**rwx------ myfile1**

**r-xr-xr-x myfile2**

**r--r--r-- myfile3**

**rwxrwxrwx myfile4**

**What numeric chmod commands did you use for each of the files?**

**chmod 700 myfile1,**

**chmod 555 myfile2,**

**chmod\_444 myfile3,**

**chmod 777 myfile4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Create a file. What are the default access permissions?**

**\_\_read,write, group-only read, others-only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Change the default access privileges to 400 and create another file. Verify that the new access privileges have taken effect. What are they? Paste the result of ls-l for the two files created in 8 and 9 into the space below:**

**New1 (from part 8) = read**

**New2 (from part 9) = read, write, group-only read, others-only**