Assignment 2

Due: February 22, 2023 at 11:59 pm

# **Part 1) Basic concepts [6 marks]**

1. What do you mean by your home directory in UNIX? Write the absolute

path of your home directory.

**A: The home directory is the present working directory when the user first logs in. It is the directory containing the files and directories for a given user of the system.**

**/home/students/trns0286**

1. What are the differences between absolute and relative path in UNIX?

**A: The absolute path is the path starting from the root. The relative path is the path starting from the present working directory.**

1. Can root/superusers read your read access protected files?

**A: Yes because the superuser can modify permissions to access protected files.**

1. Write the meaning of the following special characters used in Unix.[3 marks]

|  |  |
| --- | --- |
| .(dot) | Special character used as path of the present working directory. |
| .. (double dot) | Special character used as path of the directory the present working directory is located in. |
| / | Special character used to separate paths. |
| \* | Special character used represent any character(s). |
| ? | Special character used to represent any single character. |
| ~ | Special character used to represent home directory. |

**Part 2:Unix Command [6 marks]**

1. Suppose you are in your home directory. Write a command that will search your username from /etc/passwd and will send the information to a file named “myfile”, which is on your home directory.

**A: grep 'trns0286' /etc/passwd > myfile**

1. Suppose we have the following files under a directory called *flower*. Display only top 3 files sorted in alphabetical order.

cat elephant bird fox dog

**A: ls flower | head -3**

1. Assume we have the following list of files in the current working directory.Using wildcard/ambiguous file names, issue a single command to list all the files (in long format) that include the word ***section*** and sort them in reverse order.

# section1 firstsection multipesections section4a

# **A: ls -lr \*section\***

# **Part 3) Permissions in Linux [8 marks]**

Your answer should be in a way how you write the commands to accomplish the task.

1. For each of the following explain what permissions are granted. A file with: [3 marks]
   1. 1) 777 permissions
   2. 2) 655 permissions
   3. 3) 455 permissions

**A: 1) User, group, and other have read, write, and execute permissions.**

**2) User has read and write permissions, group and other have read and execute permissions.**

**3) User has read permission, group and other have read and execute permissions.**

* 1. b) In the previous question which permission is the riskiest? Why? Which of the above permission is safest ? Why? [1 mark]

**A: The 777 permission is the riskiest because it allows all users full control of the files and directories. The 455 permission is safest because it prevents the user, group, and other from modifying files.**

c)For the following file

-rw--wxrwx *foo.txt*

Change the permissions so that ( use symbolic representation) [4 marks]

1. The Owner/user and the group do not have any permissions. Others can read it.
2. The owner can write to it. The group can read it. Others will not have any permissions.
3. Only others have the permission to read it.
4. Only the owner can read it.

**A: 1) chmod ug=,o+r foo.txt**

**2) chmod u+w,g+r,o= foo.txt**

**3) chmod uw-r,g+r foo.txt**

**4) chmod u+r,go-r foo.txt**

# SUBMISSION GUIDELINES

* Submit a **pdf** containing your answers to the questions by using the submission link (**Assignment2**) under the *Assignment Submission* Folder on Blackboard.
* Your document should contain your information: full name, student id and section number.
* If you have any questions regarding the submission guideline ask your instructor.

**LATE SUBMISSION** will be penalized 5 % per day up to 5 days.