CSE 313   Homework Assignment 2

Theme: Chapters 5-7

Due:

Monday, 15-November-2021 by 13:30

Deliverables:

The following should be completed and submitted by the due date and time specified above. Submissions received after the deadline will be subject to the late policy described in the syllabus. Submit using MS Teams or in person in class.

Acceptable formats for the submissions include:

- o Printed or neatly handwritten document (scanned)
- o Microsoft Word, text, or PDF document
- o Other similar methods

Grading Information:

This assignment is worth 100 points. Each task or question is worth 5 points.

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Problem Set (assume the current user has username {your first initial}{your last name}):

1. What does the **id** command do? What does it show?
2. If I wanted to see the password information for users, where would I look?
3. Explain the format of how passwords are stored. As an example, paste the password for your user on your Linux system (You may use a screenshot of your screen when you view your password information).
4. What is the difference between a primary group and a supplementary group?
5. Draw a UML diagram representing how users and groups are related. For full credit you must include all necessary relationships between the User class and Group class and each class you create must have at least three (3) attributes defined.
6. Explain all ways that a user can gain superuser (root) access without logging into the root user directly from the login screen.
7. Write a list of commands to create a new user on your system with the userid "wanda" and the password "V!s!0n". Then create a group named "marvel" and put the user you created into this group. Also put your own user into this group.
8. Remove the user "agatha" from the system and remove the home directory for this user.
9. Lock the account "pietro".
10. Explain how permissions are applied. Give an example of how a user could be not the owner of a file and yet be able to view a file that the owner could not.

    Using the following users and file information answer questions 11 - 15:
    ```
    Users and their groups:
    thor    thor, asgard, avengers
    loki    loki, asgard, villains
    hulk    hulk, avengers
    pquill  pquill, guardians

    File attributes:
    drwxrwxr-x   hulk        avengers    mcu
     -rw-r--r--  pquill      pquill      gamora
     --wxrw--w-  tstark      avengers    starktower
     -rwxrw----  loki        villains    evilPlans
     -r--r--r--  thor        asgard      disney
    ```

11. List the users that can view file "starktower".
12. List the users that can edit the file "evilPlans".
13. How could we change the permissions to allow anyone in the "villains" group to execute the "evilPlans" file?
14. List the users that can view a list of all files in the "mcu" directory.
15. List users that can delete the file "evilPlans".
16. What command is used to show the default permissions? Explain the value that is shown when you view the default permissions. (i.e. run the command on your system, state what the value is and explain what the numbers shown mean).
17. What is a process?
18. What happens to a parent process when a child is executing?
19. What happens to a child process when it is completed executing and exits? What is the term used to describe this process?
20. What is the first thing a parent process does upon having control returned and "waking up"?