

CYSE 609 – FUND LINUX SYST FOR CYBER

Module 5 | User Management and File Permissions

Total: 100 Points

Name: [Click or tap here to enter text.](#)

Directions: Practice the following tasks in Linux VM – Ubuntu using various Linux commands for file management. Insert screenshots where applicable. Upload completed document in Canvas.

Task 1: User Account

- Create a new group named **employee**. Upload the screenshot for this step after executing the command.

```
See 'snap info <snapname>' for additional versions.
ubuntu@ubuntu:~$ sudo groupadd employee
ubuntu@ubuntu:~$ getent group employee
employee:x:1002:
ubuntu@ubuntu:~$
```

- Create a new user named **Sophia** with a home directory. Upload the screenshot for this step after executing the command.

```
employee:x:1002:
ubuntu@ubuntu:~$ sudo useradd -m Sophia
ubuntu@ubuntu:~$ ls -l /home/Sophia
```

- Set a password for the newly created user. Upload the screenshot for this step after executing the command.

```
Try 'ls --help' for more information.
ubuntu@ubuntu:~$ sudo passwd Sophia
New password:
Retype new password:
passwd: password updated successfully
ubuntu@ubuntu:~$
```

- Set the secondary group for Sophia to **employee**. After this step, remember to check Sophia's group profile. Upload the screenshot for this step after executing the command.

```
passwd: password updated successfully
ubuntu@ubuntu:~$ sudo usermod -aG employee Sophia
ubuntu@ubuntu:~$ id Sophia
uid=1002(Sophia) gid=1003(Sophia) groups=1003(Sophia),1002(employee)
ubuntu@ubuntu:~$
```

- Change their login shell to **/bin/bash**. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ sudo usermod -s /bin/bash Sophia
ubuntu@ubuntu:~$ getent passwd Sophia | cut -d: -f1,7
Sophia:/bin/bash
ubuntu@ubuntu:~$
```

- Switch to Sophia's account. Upload the screenshot for this step after executing the command.

```
Sophia:/bin/bash
ubuntu@ubuntu:~$ su - Sophia
Password:
Sophia@ubuntu:~$ pwd
/home/Sophia
Sophia@ubuntu:~$ whoami
Sophia
Sophia@ubuntu:~$
```

- Create a new directory called **cyse-project** in the home directory of Sophia. Upload the screenshot for this step after executing the command.

```
Sophia@ubuntu:~$ mkdir ~/cyse-project
Sophia@ubuntu:~$ ls -l ~
total 0
drwxrwxr-x 2 Sophia Sophia 40 Mar  2 02:16 cyse-project
Sophia@ubuntu:~$
```

- Using the Linux command, check the permissions, user owner and group owner of the **cyse_project** directory. Upload the screenshot for this step after executing the command.

```
Sophia@ubuntu:~$ ls -ld ~/cyse-project
drwxrwxr-x 2 Sophia Sophia 40 Mar  2 02:16 /home/Sophia/cyse-project
Sophia@ubuntu:~$
```

- Return to the original user account. Upload the screenshot for this step after executing the command.

```
Sophia@ubuntu:~$ exit
logout
ubuntu@ubuntu:~$ whoami
ubuntu
ubuntu@ubuntu:~$
```

- Create a new file named **sample.txt** in your home directory. Upload the screenshot for this step after executing the command.

```
ubuntu
ubuntu@ubuntu:~$ touch ~/sample.txt
ubuntu@ubuntu:~$ ls -l ~/sample.txt
-rw-rw-r-- 1 ubuntu ubuntu 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$
```

Task 2: File Permission

- Display the current permissions of the file **sample.txt**. Upload the screenshot for this step after executing the command.

```
-rw-rw-r-- 1 ubuntu ubuntu 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$ ls -l ~/sample.txt
-rw-rw-r-- 1 ubuntu ubuntu 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$
```

- Change the permissions of **sample.txt** to give read, write, and execute permissions to the owner, and only read permissions to others. Upload the screenshot for this step after executing the command.

```
-rw-rw-r-- 1 ubuntu ubuntu 0 Mar  2 02:18 /home/u
ubuntu@ubuntu:~$ chmod 744 ~/sample.txt
ubuntu@ubuntu:~$
```

- Verify that the permissions have been changed correctly for **sample.txt**. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ chmod 744 ~/sample.txt
ubuntu@ubuntu:~$ ls -l ~/sample.txt
-rwxr--r-- 1 ubuntu ubuntu 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$
```

- Change the group ownership of the file **sample.txt** to **employee**. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ sudo chgrp employee ~/sample.txt
ubuntu@ubuntu:~$
```

- Verify the changes to group ownership. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ ls -l ~/sample.txt
-rwxr--r-- 1 ubuntu employee 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$
```

- Delete the user **Sophia**. Upload the screenshot for this step after executing the command.

```
-rwxr--r-- 1 ubuntu employee 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$ sudo userdel -r Sophia
userdel: Sophia mail spool (/var/mail/Sophia) not found
ubuntu@ubuntu:~$ getent passwd Sophia
ubuntu@ubuntu:~$
```

- Delete the group **employee**. Verify the changes to group ownership for **sample.txt**. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ sudo groupdel employee
ubuntu@ubuntu:~$ getent group employee
ubuntu@ubuntu:~$
```

Verify the changes to group ownership for **sample.txt**. Upload the screenshot for this step after executing the command.

```
ls -l: command not found
ubuntu@ubuntu:~$ ls -l ~/sample.txt
-rwxr--r-- 1 ubuntu 1002 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$ ls -n ~/sample.txt
-rwxr--r-- 1 1000 1002 0 Mar  2 02:18 /home/ubuntu/sample.txt
ubuntu@ubuntu:~$
```

Grading

Criteria

Task 1: User Account [10 subtasks x 6 Points = 60 Points]

Task 2: File Permission [8 subtasks x 5 Points = 40 Points]