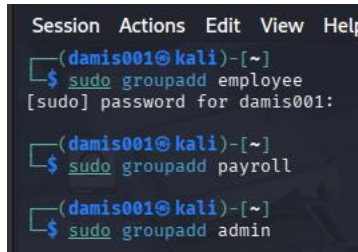


You need to configure the system to allow three users to perform the shared folder actions.  
Please

submit the screenshot for all the steps in a word or pdf file

Task A: Get accounts and groups ready (70 points)

Step 1. Create three groups- employee, payroll, and admin. (You may refer to the slides under Module



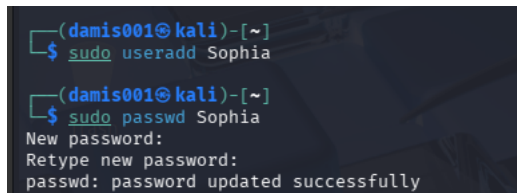
```
Session Actions Edit View Help
(damis001@kali)-[~]
└─$ sudo groupadd employee
[sudo] password for damis001:
(damis001@kali)-[~]
└─$ sudo groupadd payroll
(damis001@kali)-[~]
└─$ sudo groupadd admin
```

2 – Group Management)

Step 2. Create three user accounts with a specified home directory for Sophia, Olivia, and Emma.  
Set

the primary group for Sophia, Olivia, and Emma to "employee", "payroll", and "admin", respectively.

And change their login shell to /bin/bash. Don't forget to set their passwords.



```
(damis001@kali)-[~]
└─$ sudo useradd Sophia
(damis001@kali)-[~]
└─$ sudo passwd Sophia
New password:
Retype new password:
passwd: password updated successfully
```

```
(damis001@kali)-[~]
└─$ sudo usermod -g employee Sophia

(damis001@kali)-[~]
└─$ sudo useradd Olivia

(damis001@kali)-[~]
└─$ sudo passwd Olivia
New password:
Retype new password:
passwd: password updated successfully

(damis001@kali)-[~]
└─$ sudo usermod -g payroll Olivia

(damis001@kali)-[~]
└─$ sudo useradd Emma

(damis001@kali)-[~]
└─$ sudo passwd Emma
New password:
Retype new password:
passwd: password updated successfully

(damis001@kali)-[~]
└─$ sudo usermod -g admin Emma
```

```
(damis001@kali)-[~]
└─$ sudo usermod -s /bin/bash Sophia

(damis001@kali)-[~]
└─$ sudo usermod -s /bin/bash Olivia

(damis001@kali)-[~]
└─$ sudo usermod -s /bin/bash Emma

(damis001@kali)-[~]
└─$ /etc/pass
zsh: no such file or directory: /etc/pass
```

```
(damis001@kali)-[~]
└─$ sudo mkdir -p /home/Sophia

(damis001@kali)-[~]
└─$ sudo chown sophia:employee /home/Sophia
chown: invalid user: 'sophia:employee'

(damis001@kali)-[~]
└─$ sudo chown Sophia:employee /home/Sophia

(damis001@kali)-[~]
└─$ sudo mkdir -p /home/Olivia

(damis001@kali)-[~]
└─$ sudo chown Olivia:payroll /home/Olivia

(damis001@kali)-[~]
└─$ sudo mkdir -p /home/Emma

(damis001@kali)-[~]
└─$ sudo chown Olivia:admin /home/Olivia
```

Step 3. Create a shared group called "your\_midass" (replace it with your MIDAS name) and set this shared

```
Session Actions Edit View Help
(damis001@kali)-[~]
└─$ sudo groupadd your_damis001
[sudo] password for damis001:
(damis001@kali)-[~]
└─$ sudo usermod -aG your_damis001 Sophia
(damis001@kali)-[~]
└─$ sudo usermod -aG your_damis001 Olivia
(damis001@kali)-[~]
└─$ sudo usermod -aG your_damis001 Emma
(damis001@kali)-[~]
└─$ id Sophia
uid=1012(Sophia) gid=1012(employee) groups=1012(employee),1018(your_damis001)
(damis001@kali)-[~]
└─$ id Olivia
uid=1013(Olivia) gid=1013 payroll) groups=1013 payroll),1018(your_damis001)
(damis001@kali)-[~]
└─$ id Emma
uid=1014(Emma) gid=1014(admin) groups=1014(admin),1018(your_damis001)
└─$
```

group as the above accounts' secondary group. After this step, remember to check each user's group profile.

Step 4. Create a directory named /home/cyse\_project, which is to be owned by the “your\_midas” group

which is a shared group). After this step, remember to check the permission of this shared

```
(damis001@kali)-[~]
└─$ sudo mkdir /home/cyse_project
(damis001@kali)-[~]
└─$ sudo chown :your_damis001 /home/cyse_project
(damis001@kali)-[~]
└─$ ls -ld /home/cyse_project
drwxr-xr-x 2 root your_damis001 4096 Mar 10 10:47 /home/cyse_project
└─$
```

directory.

Step 5. Change the permissions of the /home/cyse\_project directory to "rwxrwx---" using the octal

method so that only the project group members have access to this directory. After this step, remember

to check the permission of this shared directory.

```
(damis001@kali)-[~]
└─$ sudo chmod 770 /home/cyse_project

(damis001@kali)-[~]
└─$ ls -ld /home/cyse_project
drwxrwx--- 2 root your_damis001 4096 Mar 10 10:47 /home/cyse_project
```

Step 6. Switch to Sophia's account. Change the default permissions using octal method with umask

command, to "rw-r-----" for Sophia when she creates a file or directory. Check the value of umask, and

permission of a new file after this step.

```
Session Actions Edit View Help
└─$ su - Sophia
Password:
Sophia@kali:~$ umask 026
Sophia@kali:~$ umask
0026
Sophia@kali:~$ touch testfile.txt
Sophia@kali:~$ ls -l testfile.txt
-rw-r----- 1 Sophia employee 0 Mar 10 10:53 testfile.txt
Sophia@kali:~$
```

Step 7. Create a new file called "Sophia\_homework" in the home directory of Sophia and put your name

in the file as content. After this step, remember to check the content and the permission of the new file.

(ls -l Sophia\_homework)

```
Session Actions Edit View Help
└─$ su - Sophia
Password:
Sophia@kali:~$ umask 026
Sophia@kali:~$ umask
0026
Sophia@kali:~$ touch Sophia_homework.txt
Sophia@kali:~$ echo "derrick amissah" > Sophia_homework.txt
Sophia@kali:~$ cat Sophia_homework.txt
derrick amissah
Sophia@kali:~$ ls -l Sophia_homework.txt
-rw-r----- 1 Sophia employee 16 Mar 10 10:57 Sophia_homework.txt
Sophia@kali:~$
```

Step 8. Copy "Sophia\_homework" to the /home/cyse\_project directory. After this step, remember to

check the permission of the file in the shared directory.

```
derrick amissah
Sophia@kali:~$ ls -l Sophia_homework.txt
-rw-r----- 1 Sophia employee 16 Mar 10 10:57 Sophia_homework.txt
Sophia@kali:~$
```

Step 9. Switch to Emma's account. Try to read "Sophia\_homework" in the /home/cyse\_project

Directory.

```
Emma@kali:~$ cat Sophia_homework.txt
cat: Sophia_homework.txt: No such file or directory
Emma@kali:~$
```

Step 10. Exit out of Emma's account and Sophia's account.

```
Emma@kali:~$ exit
logout
```

```
Sophia@kali:~$ exit
logout
```

Task B: Set SGID permission (15 points)

Step 1. Switch to root or the regular user's account. To allow group members to access the files shared

in the shared directory, you need to fix the sharing issue by setting the correct SGID group values to

/home/cyse\_project directory.

```
(damis001@kali)-[~]
└─$ ls -l /home/cyse_project
ls: cannot open directory '/home/cyse_project': Permission denied

(damis001@kali)-[~]
└─$ sudo ls -l /home/cyse_project
[sudo] password for damis001:
total 0

(damis001@kali)-[~]
└─$ sudo chmod g+s /home/cyse_project

(damis001@kali)-[~]
└─$
```

Step 2. Switch to Sophia's account. Copy "Sophia\_homework" to the /home/cyse\_project directory as

"Sophia\_homework2".

```
Sophia@kali:~$ cp /home/Sophia/Sophia_homework.txt /home/cyse_project/Sophia_homework2
Sophia@kali:~$ ls -l /home/cyse_project
total 8
-rw-r----- 1 Sophia your_damis001 16 Mar 10 11:19 Sophia_homework2
-rw-r----- 1 Sophia your_damis001 16 Mar 10 11:14 Sophia_homework3.
Sophia@kali:~$
```

Step 3. Switch to Emma's account. Try to read "Sophia\_homework2" in the /home/cyse\_project

```
(damis001@kali) [~]
└─$ su - Emma
Password:
Emma@kali:~$ cat Sophia_homework2
cat: Sophia_homework2: No such file or directory
Emma@kali:~$
```

Directory.

### Task C: Unset SGID permissions (15 points)

Step 1. Switch to root the regular user's account. To disallow group members to access the files in the

shared folder, you need to fix the sharing issue by setting the correct SGID group values to /home/cyse\_project directory to remove the group user read permission.

```
(damis001@kali) [~]
└─$ sudo chmod g-s /home/cyse_project
[sudo] password for damis001:
```

Step 2. Switch to Sophia's account. Copy "Sophia\_homework" to the /home/cyse\_project directory as

"Sophia\_homework3".

```
(damis001@kali) [~]
└─$ su - Sophia
Password:
Sophia@kali:~$ cp /home/Sophia/Sophia_homework.txt /home/cyse_project/Sophia_homework3.
Sophia@kali:~$
```

Step 3. Switch to Olivia's account. Try to read "Sophia\_home3" in the /home/cyse\_project directory.

```
(damis001@kali) [~]
└─$ su - Emma
Password:
Emma@kali:~$ cat Sophia_homework3.txt
cat: Sophia_homework3.txt: No such file or directory
Emma@kali:~$ cd /home/cyse_project
Emma@kali:/home/cyse_project$ cat Sophia_homework3.txt
cat: Sophia_homework3.txt: No such file or directory
Emma@kali:/home/cyse_project$
```