

CYSE 270: Linux System for Cybersecurity

Lab 6 – File Permission

Task A:

Step 1-

```
(dom-davis@kali)-[~]
└─$ sudo groupadd employee
[sudo] password for dom-davis:

(dom-davis@kali)-[~]
└─$ sudo groupadd payroll

(dom-davis@kali)-[~]
└─$ sudo groupadd admin

(dom-davis@kali)-[~]
└─$
```

Step 2-

```
(dom-davis@kali)-[~]
└─$ sudo useradd -m -d /home/sophia -s /bin/bash -g employee sophia

(dom-davis@kali)-[~]
└─$ sudo useradd -m -d /home/olivia -s /bin/bash -g payroll olivia

(dom-davis@kali)-[~]
└─$ sudo useradd -m -d /home/emma -s /bin/bash -g admin emma

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

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

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

(dom-davis@kali)-[~]
└─$
```

Step 3-

```
(dom-davis@kali)-[~]
└─$ sudo groupadd ddavi_105

(dom-davis@kali)-[~]
└─$ sudo usermod -aG ddavi_105 sophia

(dom-davis@kali)-[~]
└─$ sudo usermod -aG ddavi_105 olivia

(dom-davis@kali)-[~]
└─$ sudo usermod -aG ddavi_105 emma

(dom-davis@kali)-[~]
└─$ █
```

```
(dom-davis@kali)-[~]
└─$ groups sophia
sophia : employee ddavi_105

(dom-davis@kali)-[~]
└─$ groups olivia
olivia : payroll ddavi_105

(dom-davis@kali)-[~]
└─$ groups emma
emma : admin ddavi_105

(dom-davis@kali)-[~]
└─$ █
```

Step 4-

```
(dom-davis@kali)-[~]
└─$ sudo mkdir /home/cyse_project

(dom-davis@kali)-[~]
└─$ sudo chown :ddavi_105 /home/cyse_project

(dom-davis@kali)-[~]
└─$ ls -ld /home/cyse_project
drwxr-xr-x 2 root ddavi_105 4096 Oct 12 22:30 /home/cyse_project

(dom-davis@kali)-[~]
└─$ █
```

Step 5-

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

(dom-davis@kali)-[~]
└─$ ls -ld /home/cyse_project
drwxrwx--- 2 root ddavi_105 4096 Oct 12 22:30 /home/cyse_project

(dom-davis@kali)-[~]
└─$ █
```

Step 6-

```
(dom-davis@kali)-[~]
└─$ su - sophia
Password:
(sophia@kali)-[~]
└─$ umask 027

(sophia@kali)-[~]
└─$ umask
0027

(sophia@kali)-[~]
└─$ touch testfile

(sophia@kali)-[~]
└─$ ls -l testfile
-rw-r----- 1 sophia employee 0 Oct 12 22:40 testfile

(sophia@kali)-[~]
└─$ █
```

Step 7-

```
(sophia@kali)-[~]
└─$ ls -l testfile
-rw-r----- 1 sophia employee 0 Oct 12 22:40 testfile

(sophia@kali)-[~]
└─$ echo "Dominic" > ~/Sophia_homework

(sophia@kali)-[~]
└─$ ls -l ~/Sophia_homework
-rw-r----- 1 sophia employee 8 Oct 12 22:44 /home/sophia/Sophia_homework

(sophia@kali)-[~]
└─$ cat ~/Sophia_homework
Dominic

(sophia@kali)-[~]
└─$ █
```

Step 8-

```
(sophia@kali)-[~]
└─$ cp ~/Sophia_homework /home/cyse_project/

(sophia@kali)-[~]
└─$ ls -l /home/cyse_project/Sophia_homework
-rw-r----- 1 sophia employee 8 Oct 12 22:48 /home/cyse_project/Sophia_homework
```

Step 9-

```
(sophia@kali)-[~]
└─$ su - emma
Password:
└─(emma@kali)-[~]
└─$ cat /home/cyse_project/Sophia_homework
cat: /home/cyse_project/Sophia_homework: Permission denied
```

Step 10-

```
(emma@kali)-[~]
└─$ exit # from emma
logout

(sophia@kali)-[~]
└─$ exit # from sophia
logout
```

TASK B:

Step 1-

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

└─(dom-davis@kali)-[~]
└─$ ls -ld /home/cyse_project
drwxrws— 2 root ddavi_105 4096 Oct 12 22:48 /home/cyse_project

└─(dom-davis@kali)-[~]
└─$ █
```

Step 2-

```
(dom-davis@kali)-[~]
└─$ su - sophia
Password:
└─(sophia@kali)-[~]
└─$ cp ~/Sophia_homework /home/cyse_project/Sophia_homework2

└─(sophia@kali)-[~]
└─$ ls -l /home/cyse_project/Sophia_homework2
-rw-r— 1 sophia ddavi_105 8 Oct 12 23:00 /home/cyse_project/Sophia_homework2

└─(sophia@kali)-[~]
└─$ █
```

Step 3-

```
(sophia@kali)-[~]
└─$ su - emma
Password:

└─(emma@kali)-[~]
└─$ cat /home/cyse_project/Sophia_homework2
Dominic
```

Task C-

Step 1-

```
(emma@kali)-[~]
└─$ su - dom-davis
Password:
└─$ sudo chmod g-r /home/cyse_project

└─$ sudo chmod g-s /home/cyse_project

└─$ ls -ld /home/cyse_project
drwx-wx-- 2 root ddavi_105 4096 Oct 12 23:00 /home/cyse_project

└─$
```

Step 2-

```
(dom-davis@kali)-[~]
└─$ su - sophia
Password:
└─$ cp ~/Sophia_homework /home/cyse_project/Sophia_homework3
```

Step 3-

```
(sophia@kali)-[~]
└─$ su - olivia
Password:
└─$ cat /home/cyse_project/Sophia_homework3
cat: /home/cyse_project/Sophia_homework3: Permission denied
```