

```
—(student@kali.example.com)-[~]  
—$ sudo groupadd employee  
  
—(student@kali.example.com)-[~]  
—$ sudo groupadd payroll  
  
—(student@kali.example.com)-[~]  
—$ sudo groupadd admin
```

#1

```
—(student@kali.example.com)-[~]  
—$ id sophia  
uid=1007(sophia) gid=1008(employee) groups=1008(employee)  
  
—(student@kali.example.com)-[~]  
—$ id olivia  
uid=1008(olivia) gid=1009(payroll) groups=1009(payroll)  
  
—(student@kali.example.com)-[~]  
—$ id emma  
uid=1009(emma) gid=1010(admin) groups=1010(admin)
```

#2

```
(student@kali.example.com)-[~]  
$ id sophia  
uid=1007(sophia) gid=1008(employee) groups=1008(employee),1011(vsaun005)  
  
(student@kali.example.com)-[~]  
$ id olivia  
uid=1008(olivia) gid=1009(payroll) groups=1009(payroll),1011(vsaun005)  
  
(student@kali.example.com)-[~]  
$ id emma  
uid=1009(emma) gid=1010(admin) groups=1010(admin),1011(vsaun005)  
  
(student@kali.example.com)-[~]
```

#3

```
(student@kali.example.com)-[~]  
$ ls -ld /home/cyse_project  
drwxr-xr-x 2 root vsaun005 4096 Oct 24 03:56 /home/cyse_project
```

#4

```
(student@kali.example.com)-[~]  
$ sudo chmod 770 /home/cyse_project  
  
(student@kali.example.com)-[~]  
$ ls -ld /home/cyse_project  
drwxrwx--- 2 root vsaun005 4096 Oct 24 03:56 /home/cyse_project
```

#5

```
(student@kali.example.com)-[~]  
$ sudo su - sophia  
(sophia@kali)-[~]  
$ umask 027  
  
(sophia@kali)-[~]  
$ umask  
0027
```

#6

```
(sophia@kali)-[~]  
$ echo "vincent Saunders" > /home/sophia/Sophia_homework  
  
(sophia@kali)-[~]  
$ cat /home/sophia/Sophia_homework  
vincent Saunders
```

#7

```
(sophia@kali)-[~]  
$ cp /home/sophia/Sophia_homework /home/cyse_project/  
  
(sophia@kali)-[~]  
$ ls -l /home/cyse_project  
total 4  
-rw-r----- 1 sophia employee 17 Oct 24 04:33 Sophia_homework
```

#8

```
(emma@kali)-[~]  
$ cat /home/cyse_project/Sophia_homework  
cat: /home/cyse_project/Sophia_homework: Permission denied  
  
(emma@kali)-[~]  
$
```

#9

Task B

```

(student@kali.example.com)-[~]
$ sudo chmod g+s /home/cyse_project

(student@kali.example.com)-[~]
$ ls -ld /home/cyse_project
drwxrws--- 2 root vsaun005 4096 Oct 24 04:33 /home/cyse_project

```

#1

```

(student@kali.example.com)-[~]
$ sudo su - sophia
(sophia@kali)-[~]
$ cp /home/sophia/Sophia_homework /home/cyse_project/Sophia_homework2

(sophia@kali)-[~]
$ ls -l /home/cyse_project
total 8
-rw-r----- 1 sophia employee 17 Oct 24 04:33 Sophia_homework
-rw-r----- 1 sophia vsaun005 17 Oct 24 04:52 Sophia_homework2

(sophia@kali)-[~]

```

#2

```

(student@kali.example.com)-[~]
$ sudo su - emma
(emma@kali)-[~]
$ cat /home/cyse_project/Sophia_homework2
vincent Saunders

```

#3

Task C

```

(student@kali.example.com)-[~]
$ sudo chmod g-s /home/cyse_project

```

#1

```
(sophia@kali)-[~]  
$ ls -l /home/cyse_project  
total 12  
-rw-r----- 1 sophia employee 17 Oct 24 04:33 Sophia_homework  
-rw-r----- 1 sophia vsaun005 17 Oct 24 04:52 Sophia_homework2  
-rw-r----- 1 sophia employee 17 Oct 24 05:02 Sophia_homework3
```

#2

```
(student@kali.example.com)-[~]  
$ sudo su - olivia  
(olivia@kali)-[~]  
$ cat /home/cyse_project/Sophia_homework3  
cat: /home/cyse_project/Sophia_homework3: Permission denied
```

#3