

Task A:

Step 1:

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

Step 2:

```
(student@kali.example.com)-[~]
└─$ sudo useradd -m Sophia
(student@kali.example.com)-[~]
└─$ sudo useradd -m Olivia
(student@kali.example.com)-[~]
└─$ sudo useradd -m Emma
```

```
(student@kali.example.com)-[~]
└─$ sudo passwd Sophia
New password:
Retype new password:
passwd: password updated successfully
```

```
(student@kali.example.com)-[~]
└─$ sudo passwd Olivia
New password:
Retype new password:
passwd: password updated successfully
```

```
(student@kali.example.com)-[~]
└─$ sudo passwd Emma
New password:
Retype new password:
passwd: password updated successfully
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -g employee Sophia
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -g payroll Olivia
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -g admin Emma
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -s /bin/bash Sophia
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -s /bin/bash Olivia
```

```
(student@kali.example.com)-[~]
└─$ sudo usermod -s /bin/bash Emma
```

Step 3:

```
(student@kali.example.com)-[~]
└─$ sudo groupadd jsano006
(student@kali.example.com)-[~]
└─$ sudo usermod -G jsano006 Sophia
(student@kali.example.com)-[~]
└─$ sudo usermod -G jsano006 Olivia
(student@kali.example.com)-[~]
└─$ sudo usermod -G jsano006 Emma
```

```
(student@kali.example.com)-[~]
└─$ id Sophia
uid=1016(Sophia) gid=6003(employee) groups=6003(employee),6006(jsano006)
```

```
(student@kali.example.com)-[~]
└─$ id Olivia
uid=1017(Olivia) gid=6004(payload) groups=6004(payload),6006(jsano006)
```

```
(student@kali.example.com)-[~]
└─$ id Emma
uid=1018(Emma) gid=6005(admin) groups=6005(admin),6006(jsano006)
```

Step 4:

```
(student@kali.example.com)-[~]
└─$ sudo mkdir /home/cyse_project
mkdir: cannot create directory '/home/cyse_project': File exists
```

```
(student@kali.example.com)-[~]
└─$ sudo chown :jsano006 /home/cyse_project
```

```
(student@kali.example.com)-[~]
└─$ ls -ld /home/cyse_project
```

```
drwxr-xr-x 2 root jsano006 4096 Oct 10 16:11 /home/cyse_project
```

Step 5:

```
(student@kali.example.com)-[~]
└─$ sudo chmod 770 /home/cyse_project
```

```
(student@kali.example.com)-[~]
└─$ ls -ld /home/cyse_project
```

```
drwxrwx--- 2 root jsano006 4096 Oct 10 16:11 /home/cyse_project
```

Step 6:

```
(student@kali.example.com)-[~]
└─$ sudo su - Sophia
(sophia@kali.example.com)-[~]
└─$ touch test.txt
(sophia@kali.example.com)-[~]
└─$ ls -l test.txt
-rw-r--r-- 1 Sophia employee 0 Oct 10 16:33 test.txt
```

Step 7:

```
(sophia@kali.example.com)-[~]
└─$ vi Sophia_homework
(sophia@kali.example.com)-[~]
└─$ ls -l Sophia_homework
-rw-r--r-- 1 Sophia employee 15 Oct 10 16:39 Sophia_homework
(sophia@kali.example.com)-[~]
└─$ cat Sophia_homework
Julian Samonte
```

Step 8 and 9:

```
(sophia@kali.example.com)-[~]
└─$ cp ~/Sophia_homework /home/cyse_project/
(sophia@kali.example.com)-[~]
└─$ exit
logout
(student@kali.example.com)-[~]
└─$ su Emma
Password:
(sophia@kali.example.com)-[~/home/student]
└─$ cat /home/cyse_project/Sophia_homework
Julian Samonte
```

Step 10:

```
(emma@kali.example.com)-[~/home/student]
└─$ exit
exit
```

Task B:

```
(student@kali.example.com)-[~]
└─$ sudo chmod g+s /home/cyse_project
(student@kali.example.com)-[~]
└─$ su Sophia
Password:
(sophia@kali.example.com)-[~/home/student]
└─$ cp ~/Sophia_homework /home/cyse_project/Sophia_homework2
(sophia@kali.example.com)-[~/home/student]
└─$ exit
exit
(student@kali.example.com)-[~]
└─$ su Emma
Password:
(sophia@kali.example.com)-[~/home/student]
└─$ cat /home/cyse_project/Sophia_homework2
Julian Samonte
```

Task C:

```
(student@kali.example.com)-[~]
└─$ sudo chmod g-rwx /home/cyse_project
(student@kali.example.com)-[~]
└─$ su Sophia
Password:
(sophia@kali.example.com)-[~/home/student]
└─$ cp ~/Sophia_homework /home/cyse_project/Sophia_homework3
cp: cannot stat '/home/cyse_project/Sophia_homework3': Permission denied
(sophia@kali.example.com)-[~/home/student]
└─$ exit
exit
(student@kali.example.com)-[~]
└─$ su Olivia
Password:
(sophia@kali.example.com)-[~/home/student]
└─$ cat /home/cyse_project/Sophia_homework3
cat: /home/cyse_project/Sophia_homework3: Permission denied
```