TASK A

Step 1:

```
lyndlee@lyndlee-VirtualBox:~ Q = - D x

lyndlee@lyndlee-VirtualBox:-$ grep lyndlee /etc/passwd
lyndlee:x:1000:1000:Lyndlee,,,:/home/lyndlee:/bin/bash
lyndlee@lyndlee-VirtualBox:-$
```

Open a terminal window in VM and execute the correct command to display user account information (including the login shell and home directory) for the current user using grep.

Step 2:

Execute the correct command to display user password information (including the encrypted password and password aging) for the current user using grep

Step 3:

Create a new user named xxxxx and explicitly use the option to create the home directory for this user

Step 4:

Set a password for the new user

Step 5:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                   Q
[sudo] password for lyndlee:
lyndlee:$y$j9T$aQHK7nwBuLPRR/a4VGHpq1$DxMrjUAQt9c4QRstUbLCsPHWUzN4WE4C5kpIj87Zc3
9:19650:0:99999:7:::
lyndlee@lyndlee-VirtualBox:~$ sudo useradd -m lreni001
lyndlee@lyndlee-VirtualBox:~$ grep lreni001 /etc/passwd
lreni001:x:1001:1001::/home/lreni001:/bin/sh
lyndlee@lyndlee-VirtualBox:~$ sudo passwd lreni001
New password:
Retype new password:
passwd: password updated successfully
lyndlee@lyndlee-VirtualBox:~$ su lreni001
Password:
$ whoami
lreni001
$ pwd
/home/lyndlee
$ cd
$ pwd
/home/lreni001
$ exit
Lyndlee@lyndlee-VirtualBox:~$ sudo usermod -s /bin/bash lreni001
lyndlee@lyndlee-VirtualBox:~$ grep lreni001 /etc/passwd
 reni001:x:1001:1001::/home/lre
.yndlee@lyndlee-VirtualBox:~$
                                       01:/bin/bash
```

Set bash shell as the default login shell for the new user xxxxx, then verify the change

Step 6:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                Q
lyndlee@lyndlee-VirtualBox:~$ su lreni001
Password:
$ whoami
lreni001
$ pwd
/home/lyndlee
$ cd
$ pwd
/home/lreni001
$ exit
Lyndlee@lyndlee-VirtualBox:~$ sudo usermod -s /bin/bash lreni001
lyndlee@lyndlee-VirtualBox:~$ grep lreni001 /etc/passwd
lreni001:x:1001:1001::/home/lreni001:/bin,
lyndlee@lyndlee-VirtualBox:~$ su lreni001
                                      L:/bin/bash
Password:
lreni001@lyndlee-VirtualBox:/home/lyndlee$ cd
lreni001@lyndlee-VirtualBox:~$ exit
exit
lyndlee@lyndlee-VirtualBox:~$ grep lreni001 /etc/shadow
grep: /etc/shadow: Permission denied
lyndlee@lyndlee-VirtualBox:~$ sudo grep lreni001 /etc/shadow
lreni001:$y$j9T$HYs2iSe2OjHOQBXj7.Gcm.$FhB/ayT7lzVRYjLvXc8tJzoOmVuzJgRd/y0qzj30D
l.:19660:0:99999:7:::
lyndlee@lyndlee-VirtualBox:~$
```

Execute the correct command to display user password information (including the encrypted password and password aging) for the new user xxxxx using grep

Step 7:

```
lyndlee@lyndlee-VirtualBox:~ Q = - □ X

lyndlee@lyndlee-VirtualBox:~$ id lreni001
uid=1001(lreni001) gid=1001(lreni001) groups=1001(lreni001)
lyndlee@lyndlee-VirtualBox:~$ groups lreni001
lreni001 : lreni001
lyndlee@lyndlee-VirtualBox:~$ sudo usermod -G sudo lreni001
lyndlee@lyndlee-VirtualBox:~$ id lreni001
uid=1001(lreni001) gid=1001(lreni001) groups=1001(lreni001),27(sudo)
lyndlee@lyndlee-VirtualBox:~$
```

Add the new user xxxxx to sudo group without overriding the existing group membership

Step 8:

Switch to the new user's account

TASK B

Step 1:

Return to your home directory and determine the shell you are using

Step 2:

Display the current user's ID and group membership

Step 3:

```
lyndlee@lyndlee-VirtualBox:~$ exit
exit
lyndlee@lyndlee-VirtualBox:~$ pwd
/home/lyndlee
lyndlee@lyndlee-VirtualBox:~$ id
uid=1000(lyndlee) gid=1000(lyndlee) groups=1000(lyndlee),4(adm),24(cdrom),27(sud
o),30(dip),46(plugdev),122(lpadmin),135(lxd),136(sambashare)
lyndlee@lyndlee-VirtualBox:~$ groups
lyndlee@lyndlee-VirtualBox:~$
```

Display the group membership of the root account

Step 4:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                    Q =
exit
 .yndlee@lyndlee-VirtualBox:~$ pwd
/home/lyndlee
lyndlee@lyndlee-VirtualBox:~$ id
uid=1000(lyndlee) gid=1000(lyndlee) groups=1000(lyndlee),4(adm),24(cdrom),27(sud
o),30(dip),46(plugdev),122(lpadmin),135(lxd),136(sambashare)
lyndlee@lyndlee-VirtualBox:~$ groups
lyndlee adm cdrom sudo dip plugdev lpadmin lxd sambashare
lyndlee@lyndlee-VirtualBox:~$ ls
lyndlee@lyndlee-VirtualBox:~$ ls -l
total 40
drwxrwxr-x 2 lyndlee lyndlee 4096 Oct 20 17:55 <mark>data</mark>
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Desktop
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
drwx----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$
```

Run the correct command to determine the user owner and group owner of the /etc/group file

Step 5 and 6:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                Q
lyndlee@lyndlee-VirtualBox:~$ groups
lyndlee adm cdrom sudo dip plugdev lpadmin lxd sambashare
lyndlee@lyndlee-VirtualBox:~$ ls
lyndlee@lyndlee-VirtualBox:~$ ls -l
total 40
drwxrwxr-x 2 lyndlee lyndlee 4096 Oct 20 17:55 data
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Desktop
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
drwx----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$ sudo groupadd -g 01100438 test
[sudo] password for lyndlee:
Sorry, try again.
[sudo] password for lyndlee:
Lyndlee@lyndlee-VirtualBox:~$ grep test /etc/group
    :x:1100438:
 .yndlee@lyndlee-VirtualBox:~$
```

Create a new group named test and use your UIN as the GID

Display the group account information for the test group using grep

Step 7:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                      Q =
lyndlee adm cdrom sudo dip plugdev lpadmin lxd sambashare
lyndlee@lyndlee-VirtualBox:~$ ls
data Documents Music Public Templates
Desktop Downloads Pictures snap Videos
lyndlee@lyndlee-VirtualBox:~$ ls -l
total 40
drwxrwxr-x 2 lyndlee lyndlee 4096 Oct 20 17:55 <mark>data</mark>
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Desktop
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public drwxr----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$ sudo groupadd -g 01100438 test
[sudo] password for lyndlee:
Sorry, try again.
[sudo] password for lyndlee:
lyndlee@lyndlee-VirtualBox:~$ grep test /etc/group
    :x:1100438:
 .yndlee@lyndlee-VirtualBox:~$ sudo groupmod -n newtest test
lyndlee@lyndlee-VirtualBox:~$
```

Change the group name of the test group to newtest

Step 8:

```
lyndlee@lyndlee-VirtualBox: ~
                                                                Q
 Ħ
lyndlee@lyndlee-VirtualBox:~$ ls -l
total 40
drwxrwxr-x 2 lyndlee lyndlee 4096 Oct 20 17:55 data
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Desktop
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
drwx----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$ sudo groupadd -g 01100438 test
[sudo] password for lyndlee:
Sorry, try again.
[sudo] password for lyndlee:
Lyndlee@lyndlee-VirtualBox:~$ grep test /etc/group
    :x:1100438:
Lyndlee@lyndlee-VirtualBox:~$ sudo groupmod -n newtest test
lyndlee@lyndlee-VirtualBox:~$ sudo usermod -aG newtest lreni001
lyndlee@lyndlee-VirtualBox:~$ sudo usermod -aG newtest lyndlee
.yndlee@lyndlee-VirtualBox:~$
```

Add the current account (xxxxx) as a secondary member of the newtest group without overriding this user's current group membership

```
lee@lyndlee-VirtualBox:~$ sudo usermod -aG newtest lyndlee
lee@lyndlee-VirtualBox:~$ touch testfile
lee@lyndlee-VirtualBox:~$ ls -l
rwxr-x 2 lyndlee lyndlee 4096 Oct 20 17:55 data
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Desktop
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
rw-r-- 1 lyndlee lyndlee 0 Oct 30 16:00 testfile
r-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lee@lyndlee-VirtualBox:~$ ls -l testfile
rw-r-- 1 lyndlee lyndlee 0 Oct 30 16:00 testfile
lee@lyndlee-VirtualBox:~$ chgrp newtest testfile
p: changing group of 'testfile': Operation not permitted
lee@lyndlee-VirtualBox:~$ sudo chgrp newtest testfile
o] password for lyndlee:
lee@lyndlee-VirtualBox:~$ ls -l testfile
rw-r-- 1 lyndlee newtest 0 Oct 30 16:00 testfile
lee@lyndlee-VirtualBox:~$
```

Create a new file testfile in the account's home directory, then change the group owner to newtest

Display the user owner and group owner information of the file testfile

Step 11:

```
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Des
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Documents
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Downloads
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
drwx----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
-rw-rw-r-- 1 lyndlee lyndlee
                                0 Oct 30 16:00 testfile
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee lyndlee 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~$ chgrp newtest testfile
chgrp: changing group of 'testfile': Operation not permitted
lyndlee@lyndlee-VirtualBox:~$ sudo chgrp newtest testfile
[sudo] password for lyndlee:
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee newtest 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~$ sudo groupdel newtest
lyndlee@lyndlee-VirtualBox:~$ ls -l newtest
ls: cannot access 'newtest': No such file or directory
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee 1100438 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~S
```

Delete the newtest group, then repeat the previous step. What do you find?

Step 12:

```
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Do
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Music
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Pictures
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Public
drwx----- 3 lyndlee lyndlee 4096 Oct 20 15:32 snap
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Templates
-rw-rw-r-- 1 lyndlee lyndlee 0 Oct 30 16:00 testfile
drwxr-xr-x 2 lyndlee lyndlee 4096 Oct 20 15:32 Videos
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee lyndlee 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~$ chgrp newtest testfile
chgrp: changing group of 'testfile': Operation not permitted
lyndlee@lyndlee-VirtualBox:~$ sudo chgrp newtest testfile
[sudo] password for lyndlee:
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee newtest 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~$ sudo groupdel newtest
lyndlee@lyndlee-VirtualBox:~$ ls -l newtest
ls: cannot access 'newtest': No such file or directory
lyndlee@lyndlee-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 lyndlee 1100438 0 Oct 30 16:00 testfile
lyndlee@lyndlee-VirtualBox:~$ sudo userdel -r lreni001
userdel: lreni001 mail spool (/var/mail/lreni001) not found
lyndlee@lyndlee-VirtualBox:~$
```

Delete the user xxxxx along with the home directory using a single command