

## Assignment: Lab 4 – Group and User Accounts

### Task A – User Account management (8 \* 5 = 40 points)

1. 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.

```
gavin@gavin-VirtualBox: ~  
gavin@gavin-VirtualBox:~$ whoami  
gavin  
gavin@gavin-VirtualBox:~$ grep "gavin" /etc/passwd  
gavin:x:1000:1000:gavin,,,:/home/gavin:/bin/bash  
gavin@gavin-VirtualBox:~$
```

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

```
gavin@gavin-VirtualBox:~$ sudo grep "gavin" /etc/shadow  
[sudo] password for gavin:  
gavin:$y$j9T$4VbCZV8me9kkPHcIbZTyB/$c7hFE5S6/jsytiWGT6Ej/eV5z9e/sBNBj8bAT.iS8hC:19600:0:99999:7:::  
gavin@gavin-VirtualBox:~$
```

3. Create a new user named xxxxx and explicitly use options to create the home directory /home/xxxxx for this user.

```
gavin@gavin-VirtualBox:~/Desktop$ sudo useradd -m -k /etc/skel gwill018  
[sudo] password for gavin:  
gavin@gavin-VirtualBox:~/Desktop$  
gavin@gavin-VirtualBox:~$ grep "gwill018" /etc/passwd  
gwill018:x:1001:1001:~/home/gwill018:/bin/sh  
gavin@gavin-VirtualBox:~$
```

4. Set a password for the new user.

```
gavin@gavin-VirtualBox:~$ sudo passwd gwill018  
New password:  
BAD PASSWORD: The password fails the dictionary check - it is based on a dictionary word  
Retype new password:  
passwd: password updated successfully  
gavin@gavin-VirtualBox:~$
```

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

```
gavin@gavin-VirtualBox:~$ sudo usermod -s /bin/bash gwill018
gavin@gavin-VirtualBox:~$ getent passwd gwill018
gwill018:x:1001:1001:~/home/gwill018:/bin/bash
gavin@gavin-VirtualBox:~$
```

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

```
gavin@gavin-VirtualBox:~$ sudo grep gwill018 /etc/shadow
gwill018:$y$j9T$RIsSz5UHT05exhMoupdKk1$RGpBe73lF2Kv.8VzSa65sKyQBzl00xZFhHX.ofBLQ0C:19625:0:99999:7:::
gavin@gavin-VirtualBox:~$
```

7. Add the new user **xxxxx** to sudo group without overriding the existing group membership.
8. Switch to the new user's account.

```
gavin@gavin-VirtualBox:~$ sudo usermod -aG sudo gwill018
gavin@gavin-VirtualBox:~$ su gwill018
Password:
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

gwill018@gavin-VirtualBox:~/home/gavin$

gwill018@gavin-VirtualBox:~$ pwd
/home/gwill018
gwill018@gavin-VirtualBox:~$
```

### Task B – Group account management (12 \* 5 = 60 points)

Use Linux commands to execute the following tasks:

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

```
gwill018@gavin-VirtualBox:~$ exit
exit
gavin@gavin-VirtualBox:~$ pwd
/home/gavin
gavin@gavin-VirtualBox:~$
```

2. Display the current user's ID and group membership.

```
gavin@gavin-VirtualBox:~$ id
uid=1000(gavin) gid=1000(gavin) groups=1000(gavin),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),122(lpadmin),
135(lxd),136(sambashare)
gavin@gavin-VirtualBox:~$
```

3. Display the group membership of the root account.

```
gavin@gavin-VirtualBox:~$ groups root
root : root
gavin@gavin-VirtualBox:~$
```

4. Run the correct command to determine the **user owner** and **group owner** of the `/etc/group` file.

```
gavin@gavin-VirtualBox:~$ ls -l /etc/group
-rw-r--r-- 1 root root 1140 Sep 24 22:09 /etc/group
gavin@gavin-VirtualBox:~$
```

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

```
gavin@gavin-VirtualBox:~$ sudo groupadd -g 01230006 test
[sudo] password for gavin:
gavin@gavin-VirtualBox:~$
```

6. Display the group account information for the test group using `grep`.

```
gavin@gavin-VirtualBox:~$ grep "test" /etc/group
test:x:1230006:
gavin@gavin-VirtualBox:~$
```

7. Change the group name of the test group to **newtest**.

```
gavin@gavin-VirtualBox:~$ sudo groupmod -n newtest test
gavin@gavin-VirtualBox:~$
```

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

```
gavin@gavin-VirtualBox:~$ sudo usermod -aG newtest gwill018
gavin@gavin-VirtualBox:~$
```

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

```
gwill018@gavin-VirtualBox:~$ touch testfile
gwill018@gavin-VirtualBox:~$ sudo chown :newtest testfile
```

10. Display the user owner and group owner information of the file **testfile**.

```
gwill018@gavin-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 gwill018 newtest 0 Sep 24 22:54 testfile
gwill018@gavin-VirtualBox:~$
```

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

```
gwill018@gavin-VirtualBox:~$ sudo groupdel newtest
gwill018@gavin-VirtualBox:~$ ls -l testfile
-rw-rw-r-- 1 gwill018 1230006 0 Sep 24 22:54 testfile
gwill018@gavin-VirtualBox:~$
```

The group owner of the file changed from newtest to 1230006 (which is the GID of the group 'test').

12. Delete the user **xxxxxx** along with the home directory using a single command.

```
gavin@gavin-VirtualBox:~$ sudo userdel -r gwill018
userdel: gwill018 mail spool (/var/mail/gwill018) not found
gavin@gavin-VirtualBox:~$ userdel -r gwill018
userdel: user 'gwill018' does not exist
gavin@gavin-VirtualBox:~$ grep "gwill018" /etc/passwd
gavin@gavin-VirtualBox:~$
```