

**Matthew Austin**

## **Assignment 5**

**CIS356 – Spring Term 2018**

**Point Value: 100 points**

**Assignment Due Date: In class Thursday, April 6, 2018**

### **Submission Instruction**

Please submit your assignment 5 to your instructor in class on the due date and submit your hw5\_lastname\_firstname.pdf or .docx on Schoology. You need to write down your entire procedure including every command you use for creating new users. For some of the tasks, you can write a *shell script* to do them. This is not required. If you write your own script, please attach it at the end of this assignment. Finally, you need to show the instructor that you successfully created these users and their directories on your Ubuntu server.

### **Description of creating new users**

1. You have received a new batch of distinguished users; their basic information is located in newusers.txt on Schoology. This file contains a colon-separated entry for each user: the username, the uid, the GECOS information, and the user's preferred shell.
2. Please add these users to your Ubuntu machine as local users (you might verify that no name clashes occur before you proceed!). Create home directories on your Ubuntu server with the usual files from /etc/skel (.bash\_logout, .bashrc, .profile), but put the home directories in /home/users/USERNAME/, not just /home/USERNAME. Each user should have his own group, where the group id matches the user id. Assign a password to each of these accounts. Try to use the “su USERNAME” command to verify that each user has the right permissions and owns appropriate directory(s). (50 points)

```
adams:x:5000:5000:adams:/home/users/adams:/bin/bash
atiyah:x:5001:5001:atiyah:/home/users/atiyah:/bin/bash
babbage:x:5002:5002:babbage:/home/users/babbage:/bin/bash
baker:x:5003:5003:baker:/home/users/baker:/bin/bash
barrow:x:5004:5004:barrow:/home/users/barrow:/bin/bash
birch:x:5005:5005:birch:/home/users/birch:/bin/bash
borcherds:x:5006:5006:borcherds:/home/users/borcherds:/bin/bash
cartwright:x:5007:5007:carwright:/home/users/carwright:/bin/bash
cayley:x:5008:5008:cayley:/home/users/cayley:/bin/bash
clifford:x:5009:5009:clifford:/home/users/clifford:/bin/bash
coates:x:5010:5010:coates:/home/users/coates:/bin/bash
conway:x:5011:5011:conway:/home/users/conway:/bin/bash
cotes:x:5012:5012:cotes:/home/users/cotes:/bin/bash
daniell:x:5013:5013:daniell:/home/users/daniell:/bin/bash
dawid:x:5014:5014:dawid:/home/users/dawid:/bin/bash
davenport:x:5015:5015:davenport:/home/users/davenport:/bin/bash
davidson:x:5016:5016:davidson:/home/users/davidson:/bin/bash
donaldson:x:5017:5017:donaldson:/home/users/donaldson:/bin/bash
dirac:x:5018:5018:dirac:/home/users/dirac:/bin/bash
eddingon:x:5019:5019:eddingon:/home/users/eddingon:/bin/bash
forysth:x:5020:5020:forysth:/home/users/forsyth:/bin/bash
glaisher:x:5021:5021:glaisher:/home/users/glaisher:/bin/bash
goddard:x:5022:5022:goddard:/home/users/goddard:/bin/bash
gowers:x:5023:5023:gowers:/home/users/gowers:/bin/bash
grimmett:x:5024:5024:grimmett:/home/users/grimmett:/bin/bash
gorjnowski:x:5025:5025:gorjnowski:/home/users/gorjnowski:/bin/bash
```

Desktop — ubuntu@ip-172-31-38-221: /home/users — ssh -i meaustin.pem ubuntu@18.188..

GNU nano 2.5.3

File: /etc/group

Modified

```
avahi-autoipd:x:123:
avahi:x:124:
bluetooth:x:125:
pulse:x:126:
pulse-access:x:127:
rtkit:x:128:
saned:x:129:
test:x:1007:
Austin:x:1008:
```

```
adams:x:5000:
atiyah:x:5001:
baker:x:5003:
barrow:x:5004:
birch:x:5005:
borcherds:x:5006:
cartwright:x:5007:
cayley:x:5008:
clifford:x:5009:
coates:x:5010:
conway:x:5011:
cotes:x:5012:
daniell:x:5013:
dawid:x:5014:
davenport:x:5015:
davidson:x:5016:
donaldson:x:5017:
dirac:x:5018:
eddingtion:x:5019:
forysth:x:5020:
glaisher:x:5021:
goddard:x:5022:
gowers:x:5023:
grimmnett:x:5024:
grojnowski:x:5025:
hawking:x:5026:
hitchin:x:5027:
```

ubuntu@ip-172-31-38-221:/home/users\$ ls

```
adams    barrow    cayley    cotes      dirac      glaisher  grojnowski
atiyah    birch     clifford  daniell    donaldson  goddard   hawking
babbage  borcherds coates    davenport  eddington  gowers    hitchin
baker     cartwright conway    dawid      forysth    grimmnett USERNAME
ubuntu@ip-172-31-38-221:/home/users$
```

```
cp: cannot create regular file '.profile': permission denied
ubuntu@ip-172-31-38-221:/home/users$ sudo cp /etc/skel/.profile .profile
ubuntu@ip-172-31-38-221:/home/users$ sudo cp /etc/skel/.bashrc .bashrc
ubuntu@ip-172-31-38-221:/home/users$ sudo cp /etc/skel/.bash_logout .bash_logout
ubuntu@ip-172-31-38-221:/home/users$ ls
adams    barrow    cayley    cotes     dirac      glaisher  grojnowski
atiyah   birch     clifford  daniell   donaldson  goddard   hawking
babbage  borcherds coates    davenport eddington  gowers    hitchin
baker    cartwright conway    dawid     forysth    grimmitt  USERNAME
ubuntu@ip-172-31-38-221:/home/users$ ls -a
.      baker      borcherds  conway    dirac      goddard    hitchin
..     barrow     cartwright cotes     donaldson  gowers     .profile
adams  .bash_logout cayley     daniell   eddington  grimmitt   USERNAME
atiyah .bashrc    clifford   davenport forysth    grojnowski
babbage birch      coates     dawid     glaisher   hawking
ubuntu@ip-172-31-38-221:/home/users$
```

```
adams@ip-172-31-38-221:/home/users$ cd adams
adams@ip-172-31-38-221:~$ ls -a
.  .. .bash_logout .bashrc .profile
adams@ip-172-31-38-221:~$
```



adams	barrow	cayley	cotes	dirac	glaisher	grojnowski
atiyah	birch	clifford	daniell	donaldson	goddard	hawking
babbage	borcherds	coates	davenport	eddingon	gowers	hitchin
baker	cartwright	conway	dawid	forysth	grimmatt	USERNAME

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd adams
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd barrow
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd cayley
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd cotes
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd dirac
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd glaisher
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd gorjnowski
```

```
passwd: user 'gorjnowski' does not exist
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd grojnowski
```

```
Enter new UNIX password:
```

```
Retype new UNIX password:
```

```
passwd: password updated successfully
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo passwd atiyah
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R atiyah:atiyah ~atiyah
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R adams:adams ~adams
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R babbage:babbage ~babbage
```

```
chown: invalid group: 'babbage:babbage'
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R babbage:babbage ~babbage
```

```
chown: invalid group: 'babbage:babbage'
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R baker:baker ~baker
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R barrow:barrow ~barrow
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R birch:birch ~birch
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R borcherds:borcherds ~borcherds
```

```
ubuntu@ip-172-31-38-221:/home/users$ sudo chown -R cartwright:cartwright ~cartwright
```

```
ubuntu@ip-172-31-38-221:/home/users$ su adams
Password:
adams@ip-172-31-38-221:/home/users$ su barrow
Password:
barrow@ip-172-31-38-221:/home/users$ su cayley
Password:
cayley@ip-172-31-38-221:/home/users$ su cotes
Password:
cotes@ip-172-31-38-221:/home/users$ su dirac
Password:
dirac@ip-172-31-38-221:/home/users$ su glaisher
Password:
glaisher@ip-172-31-38-221:/home/users$ su grojnowski
```

```
adams@ip-172-31-38-221:/home/users$ sudo vipw
[sudo] password for adams:
adams is not in the sudoers file. This incident will be reported.
adams@ip-172-31-38-221:/home/users$
```

```
adams@ip-172-31-38-221:/home$ groups
adams
adams@ip-172-31-38-221:/home$
```

3. Similar to the step 2, please add a new user named “myadmin”. Besides, add this user to the /etc/sudoer file and make sure that this user has root privilege, so this user can use “*sudo*”. Try to use the “*su myadmin*” command to verify that this user can log in and run some commands which requires root privilege such as *\$sudo less /etc/shadow*. (25 points)

commands used:

*sudo useradd myadmin*

*sudo passwd myadmin*

*sudo usermod -aG sudo myadmin*

```
myadmin@ip-172-31-38-221:/etc$ groups
myadmin sudo
myadmin@ip-172-31-38-221:/etc$ █
```

4. Create a /CIS356/USERNAME/ directory for each user, and make sure that it is owned by the correct user and has the correct group number. (25 points)

commands used:

I su'd into every user and used the commands manually:

mkdir CIS356

cd CIS356

mkdir USERNAME

used command groups

```
ubuntu@ip-172-31-38-221:/home/users/adams$ cd CIS356
ubuntu@ip-172-31-38-221:/home/users/adams/CIS356$ ls
adams
ubuntu@ip-172-31-38-221:/home/users/adams/CIS356$ cd ..
ubuntu@ip-172-31-38-221:/home/users/adams$ cd ..
ubuntu@ip-172-31-38-221:/home/users$ cd birch
ubuntu@ip-172-31-38-221:/home/users/birch$ ls
CIS356
ubuntu@ip-172-31-38-221:/home/users/birch$ cd CIS256
-bash: cd: CIS256: No such file or directory
ubuntu@ip-172-31-38-221:/home/users/birch$ cd CIS356
ubuntu@ip-172-31-38-221:/home/users/birch/CIS356$ ls
birch
ubuntu@ip-172-31-38-221:/home/users/birch/CIS356$ cd birch
ubuntu@ip-172-31-38-221:/home/users/birch/CIS356/birch$ cd ..
ubuntu@ip-172-31-38-221:/home/users/birch/CIS356$ cd ..
ubuntu@ip-172-31-38-221:/home/users/birch$ cd ..
ubuntu@ip-172-31-38-221:/home/users$ cd davenport
ubuntu@ip-172-31-38-221:/home/users/davenport$ ls
CIS356
ubuntu@ip-172-31-38-221:/home/users/davenport$ cd CIS356
ubuntu@ip-172-31-38-221:/home/users/davenport/CIS356$ ls
davenport
ubuntu@ip-172-31-38-221:/home/users/davenport/CIS356$ cd davenport
```