



Exercise 31.1 Working with Groups

1. Create two new user accounts (rocky and bullwinkle in the below) and make sure they have home directories.
2. Create two new groups, friends and bosses (with a GID of 490). Look at the `/etc/group` file. See what GID was given to each new group.
3. Add rocky to both new groups.
Add bullwinkle to group friends.
Look in the `/etc/group` file to see how it changed.
4. Login as rocky. Create a directory called `somedir` and set the group ownership to bosses. (Using `chgroup` which will be discussed in the next session.)
(You will probably need to add execute privileges for all on rocky's home directory.)
5. Login as bullwinkle and try to create a file in `/home/rocky/somedir` called `somefile` using the `touch` command.
Can you do this? No, because of the group ownership and the `chmod a+x` on the directory.
6. Add bullwinkle to the bosses group and try again. Note you will have to log out and log back in again for the new group membership to be effective. do the following:

Solution 31.1

1.

```
$ sudo useradd -m rocky
$ sudo useradd -m bullwinkle
$ sudo passwd rocky
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
$ sudo passwd bullwinkle
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
$ ls -l /home
total 12
drwxr-xr-x  2 bullwinkle bullwinkle 4096 Oct 30 09:39 bullwinkle
drwxr-xr-x  2 rocky      rocky      4096 Oct 30 09:39 rocky
drwxr-xr-x 20 student    student    4096 Oct 30 09:18 student
```
2.

```
$ sudo groupadd friends
$ sudo groupadd -g 490 bosses
$ grep -e friends -e bosses /etc/group
friends:x:1003:
bosses:x:490:
```
3.

```
$ sudo usermod -G friends,bosses rocky
$ sudo usermod -G friends bullwinkle

$ grep -e rocky -e bullwinkle /etc/group
rocky:x:1001:
bullwinkle:x:1002:
friends:x:1003:rocky,bullwinkle
bosses:x:490:rocky

$ groups rocky bullwinkle
rocky : rocky friends bosses
bullwinkle : bullwinkle friends
```

4.

```
$ ssh rocky@localhost
$ cd ~
$ mkdir somedir
$ chgrp bosses somedir
$ ls -l

total 16
-rw-r--r-- 1 rocky rocky 8980 Oct  4 2013 examples.desktop
drwxrwxr-x 2 rocky bosses 4096 Oct 30 09:53 somedir

$ chmod a+x .
```
5.

```
$ ssh bullwinkle@localhost
$ touch /home/rocky/somedir/somefile

touch: cannot touch /home/rocky/somedir/somefile: Permission denied

$ exit
```
6.

```
$ sudo usermod -a -G bosses bullwinkle
$ ssh bullwinkle@localhost
$ touch /home/rocky/somedir/somefile
$ ls -al /home/rocky/somedir
```

(note ownership of files)