

ASSIGNMENT

**SUBJECT: NETWORKING AND SYSTEM ADMINISTRATION
LAB**

TOPIC: LAB EXERCISES

SUBMITTED ON:

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1. a. Create six files with name of the form songX.mp3
- b. Create six files with name of the form snapX.mp3
- c. Create six files with name of the form

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 s
ong5.mp3 song6.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ touch snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 s
nap6.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ touch filim1.mp3 filim2.mp3 filim3.mp3 filim4.mp3 filim5.
mp3 filim6.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop      filim1.mp3  filim5.mp3  Public      snap4.mp3   song2.mp3   song6.mp3
Documents    filim2.mp3  filim6.mp3  snap1.mp3   snap5.mp3   song3.mp3   Templates
Downloads    filim3.mp3  Music       snap2.mp3   snap6.mp3   song4.mp3   Videos
examples.desktop filim4.mp3  Pictures    snap3.mp3   song1.mp3   song5.mp3
```

2. From your home directory, move the song files into your music subdirectory, the snapshot files into your pictures subdirectory, and the movie files into videos subdirectory.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mv song1.mp3 song2.mp3 song4.mp3
song5.mp3 song6.mp3 ./Music/
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop      filim1.mp3  filim5.mp3  Public      snap4.mp3   Templates
Documents    filim2.mp3  filim6.mp3  snap1.mp3   snap5.mp3   Videos
Downloads    filim3.mp3  Music       snap2.mp3   snap6.mp3
examples.desktop filim4.mp3  Pictures    snap3.mp3   song3.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls -R Music
Music:
song1.mp3 song2.mp3 song4.mp3 song5.mp3 song6.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
snap5.mp3 snap6.mp3
mv: target 'snap6.mp3' is not a directory
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mv snap1.mp3 snap2.mp3 snap3.mp3
snap4.mp3 snap5.mp3 snap6.mp3 ./Pictures/
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls -R Pictures
Pictures:
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mv filim1.mp3 filim2.mp
mp3 filim4.mp3 filim5.mp3 filim6.mp3 ./Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls -R Videos
Videos:
filim1.mp3 filim2.mp3 filim3.mp3 filim4.mp3 filim5.mp3 filim6.mp3
```

3. In your home directory, create three subdirectories for organizing your files. Call these directories friends, family, and work. Create all three with one command.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir friends family work
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop      Downloads    family Music      Public  Templates work
Documents    examples.desktop friends Pictures song3.mp3 Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

4. Copy song files to the friends folder and snap files to family folder.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song1.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song2.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song3.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song4.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song5.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Music/song6.mp3 friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap1.mp3 family
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap2.mp3 family
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap3.mp3 family
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap4.mp3 family
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap5.mp3 family
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cp Pictures/snap6.mp3 family
```

5. Attempt to delete both family and friends projects with a single rmdir command

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ rm -r family friends
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Music  Public  Videos
Documents examples.desktop Pictures Templates work
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

6. Use another command that will succeed in deleting both the family and friends folder.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ rmdir family friends
rmdir: failed to remove 'family': No such file or directory
rmdir: failed to remove 'friends': No such file or directory
```

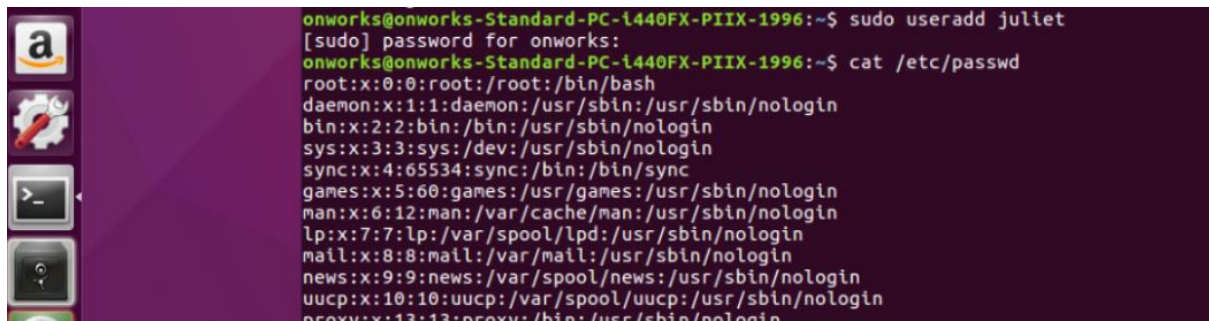
7. Redirect a long listing of all home directory files, including hidden, into a file named allfiles.txt. Confirm that the file contains the listing.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat allfiles.txt
total 112
drwxr-xr-x 17 onworks onworks 4096 Aug 17 17:34 .
drwxr-xr-x  3 root    root    4096 Mai  5 2019 ..
-rw-rw-r--  1 onworks onworks   0 Aug 17 17:34 allfiles.txt
-rw-r--r--  1 onworks onworks  94 Mai 31 2019 .bash_history
-rw-r--r--  1 onworks onworks 220 Mai  5 2019 .bash_logout
-rw-r--r--  1 onworks onworks 3771 Mai  5 2019 .bashrc
drwx----- 11 onworks onworks 4096 Mai  5 2019 .cache
drwx-----  3 onworks onworks 4096 Mai  5 2019 .compiz
drwx----- 14 onworks onworks 4096 Mai  5 2019 .config
drwxr-xr-x  2 onworks onworks 4096 Mai  5 2019 Desktop
drwxr-xr-x  2 onworks onworks 4096 Mai  5 2019 Documents
drwxr-xr-x  2 onworks onworks 4096 Mai  5 2019 Downloads
-rw-r--r--  1 onworks onworks 8980 Mai  5 2019 examples.desktop
drwx-----  2 onworks onworks 4096 Mai  5 2019 .gconf
drwx-----  3 onworks onworks 4096 Aug 30 2019 .gnupg
-rw-r--r--  1 onworks onworks 3496 Aug 30 2019 .ICEauthority
drwx-----  3 onworks onworks 4096 Mai  5 2019 .local
drwxr-xr-x  2 onworks onworks 4096 Aug 17 17:22 Music
drwxr-xr-x  2 onworks onworks 4096 Aug 17 17:24 Pictures
-rw-r--r--  1 onworks onworks  655 Mai  5 2019 .profile
drwxr-xr-x  2 onworks onworks 4096 Mai  5 2019 Public
-rw-r--r--  1 onworks onworks   0 Mai  5 2019 .sudo_as_admin_successful
drwxr-xr-x  2 onworks onworks 4096 Mai  5 2019 Templates
drwxr-xr-x  2 onworks onworks 4096 Aug 17 17:25 Videos
drwxrwxr-x  2 onworks onworks 4096 Aug 17 17:26 work
-rw-r--r--  1 onworks onworks  81 Aug 30 2019 .Xauthority
-rw-r--r--  1 onworks onworks  82 Aug 30 2019 .xsession-errors
-rw-r--r--  1 onworks onworks  82 Mai 31 2019 .xsession-errors.old
```

8. In the command window, display today's date with day of the week, month, date and year

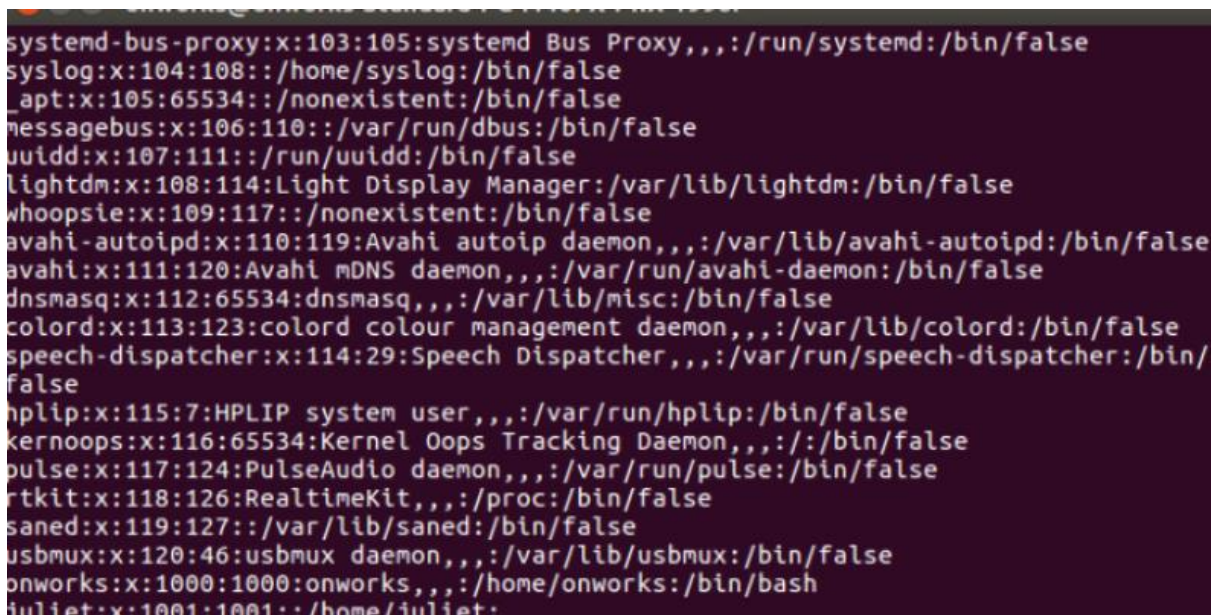
```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ date
Di 17. Aug 17:36:03 CEST 2021
```

9. Add the user Juliet



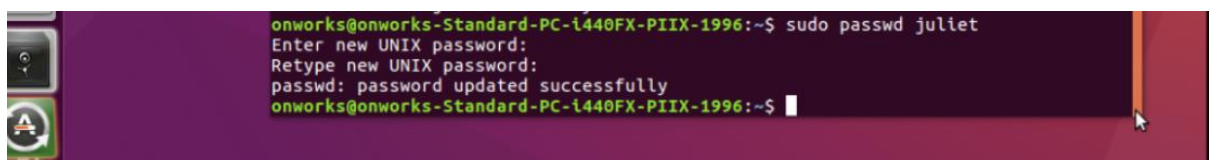
```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd juliet
[sudo] password for onworks:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
```

10. Confirm that Juliet has been added by examining the /etc/passwd file



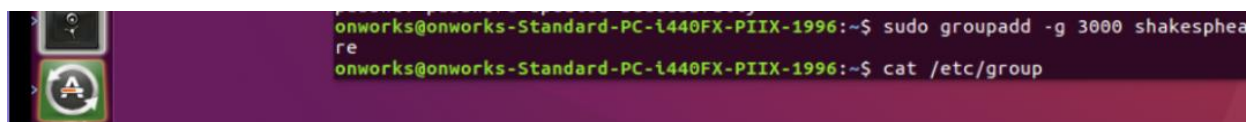
```
systemd-bus-proxy:x:103:105:systemd Bus Proxy,,,:/run/systemd:/bin/false
syslog:x:104:108:/:/home/syslog:/bin/false
apt:x:105:65534:/:/nonexistent:/bin/false
messagebus:x:106:110:/:/var/run/dbus:/bin/false
uiddd:x:107:111:/:/run/uiddd:/bin/false
lightdm:x:108:114:Light Display Manager:/var/lib/lightdm:/bin/false
whoopsie:x:109:117:/:/nonexistent:/bin/false
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/bin/false
avahi:x:111:120:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/bin/false
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/bin/false
colord:x:113:123:colord colour management daemon,,,:/var/lib/colord:/bin/false
speech-dispatcher:x:114:29:Speech Dispatcher,,,:/var/run/speech-dispatcher:/bin/false
hplip:x:115:7:HPLIP system user,,,:/var/run/hplip:/bin/false
kernoops:x:116:65534:Kernel Oops Tracking Daemon,,,:/bin/false
pulse:x:117:124:PulseAudio daemon,,,:/var/run/pulse:/bin/false
rtkit:x:118:126:RealtimeKit,,,:/proc:/bin/false
saned:x:119:127:/:/var/lib/saned:/bin/false
usbmux:x:120:46:usbmux daemon,,,:/var/lib/usbmux:/bin/false
onworks:x:1000:1000:onworks,,,:/home/onworks:/bin/bash
juliet:x:1001:1001:/:/home/juliet:
```

11. Use the passwd command to initialize Juliet's password



```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo passwd juliet
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

12. Create a supplementary group called Shakespeare with a group id of 30000



```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo groupadd -g 30000 shakespeare
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat /etc/group
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
systemd-bus-proxy:x:105:
input:x:106:
crontab:x:107:
syslog:x:108:
netdev:x:109:
messagebus:x:110:
uuidd:x:111:
ssl-cert:x:112:
lpadmin:x:113:onworks
lightdm:x:114:
nopasswdlogin:x:115:
ssh:x:116:
whoopsie:x:117:
mlocate:x:118:
avahi-autoipd:x:119:
avahi:x:120:
bluetooth:x:121:
scanner:x:122:saned
colord:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
onworks:x:1000:
smbashare:x:128:onworks
juliet:x:1001:
shakespeare:x:3000:
```

13. Create a supplementary group called artists.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo groupadd artists
[sudo] password for onworks:
Sorry, try again.
```

14. Confirm that Shakespeare and artists have been added by examining the /etc/group file.

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
onworks:x:1000:
smbashare:x:128:onworks
juliet:x:1001:
shakespeare:x:3000:juliet
artists:x:3001:
```

15. Add the Juliet user to the Shakespeare group as a supplementary group.

```
artists:x:3001:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G shakespeare juliet
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat /etc/group
```

16. Confirm that Juliet has been added using the id command.

```
artists:x:3001:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ id -u juliet
1001
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ id -g juliet
1001
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G romeo
```

17. Add Romeo and Hamlet to the Shakespeare group.

```
useradd: user 'romeo' does not exist
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd romeo
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G shakespeare rom
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd hamlet
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G shakespeare hamlet
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
syslog:x:108:
netdev:x:109:
messagebus:x:110:
uidd:x:111:
ssl-cert:x:112:
lpadmin:x:113:onworks
lightdm:x:114:
nopasswdlogin:x:115:
ssh:x:116:
whoopsie:x:117:
mlocate:x:118:
avahi-autoipd:x:119:
avahi:x:120:
bluetooth:x:121:
scanner:x:122:saned
colord:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
onworks:x:1000:
sambashare:x:128:onworks
juliet:x:1001:
shakespeare:x:3000:juliet,romeo,hamlet
artists:x:3001:
romeo:x:1002:
hamlet:x:1003:
```

18. Add Reba, Dolly and Elvis to the artists group

```
[sudo] password for onworks:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd reba
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd dolly
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G artists reba
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G artists dolly
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo useradd elvis
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo usermod -G artists elvis
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat /etc/group
```

19. Verify the supplemental group memberships by examining the /etc/group file.


```

uidd:x:111:
ssl-cert:x:112:
lpadmin:x:113:onworks
lightdm:x:114:
nopasswdlogin:x:115:
ssh:x:116:
whoopsie:x:117:
mlocate:x:118:
avahi-autoipd:x:119:
avahi:x:120:
bluetooth:x:121:
scanner:x:122:saned
colord:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
onworks:x:1000:
smbashare:x:128:onworks
artists:x:1001:reba,dolly,elvis
reba:x:1002:
dolly:x:1003:
elvis:x:1004:

```

20. Attempt to remove user Dolly.

```

onworks:x:1000:
smbashare:x:128:onworks
artists:x:1001:reba,dolly,elvis
reba:x:1002:
dolly:x:1003:
elvis:x:1004:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ sudo userdel dolly

```

```

Terminal
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
messagebus:x:110:
uidd:x:111:
ssl-cert:x:112:
lpadmin:x:113:onworks
lightdm:x:114:
nopasswdlogin:x:115:
ssh:x:116:
whoopsie:x:117:
mlocate:x:118:
avahi-autoipd:x:119:
avahi:x:120:
bluetooth:x:121:
scanner:x:122:saned
colord:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
onworks:x:1000:
smbashare:x:128:onworks
artists:x:1001:reba,elvis
reba:x:1002:
elvis:x:1004:
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$

```