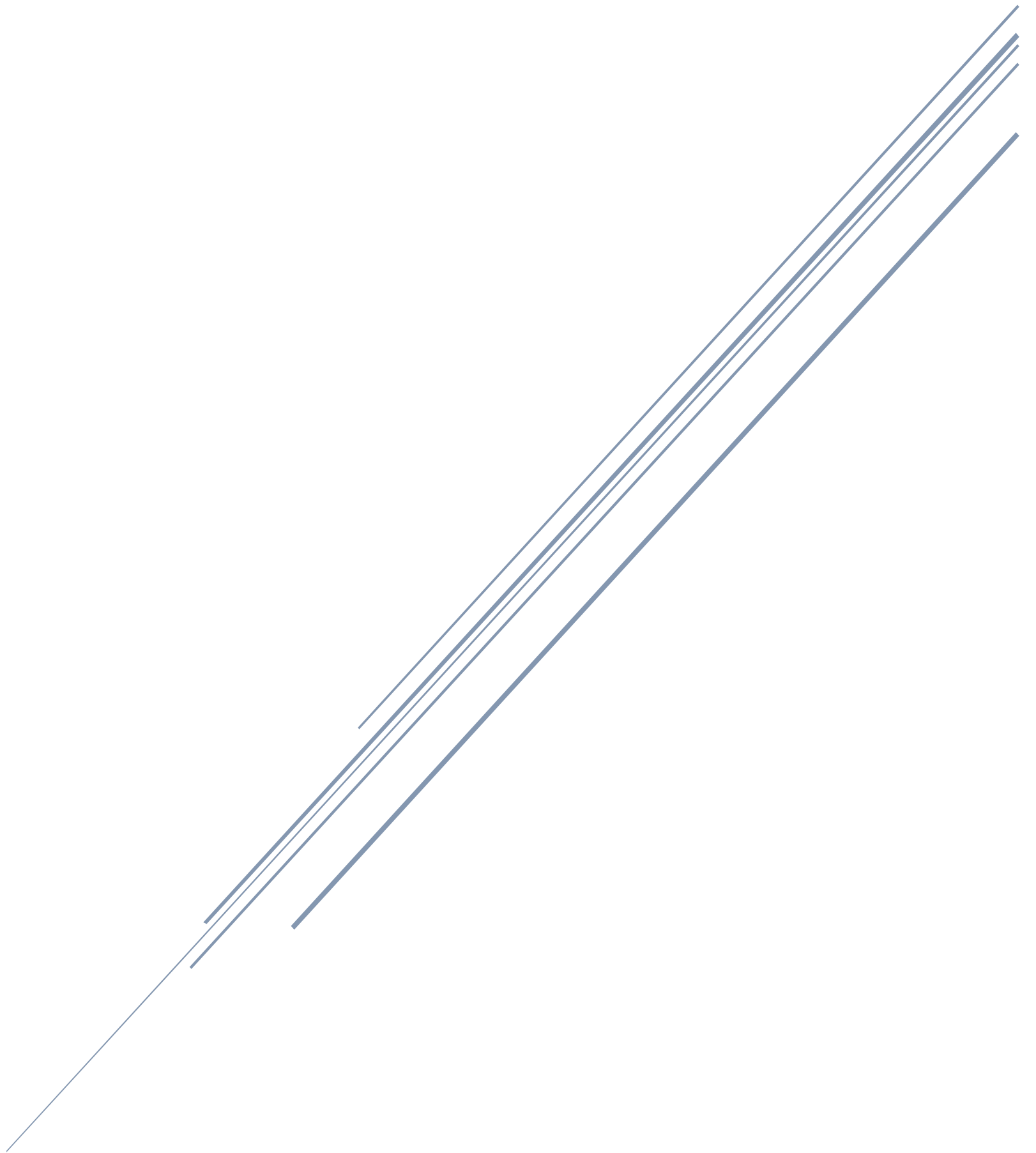# ASSIGNMENT 5: LAB EXCERCISES

20MCA136 - Networking & System Administration Lab

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Managing Files, Creating Users and Groups Using Command-line tools

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 filmX.mp3 (In each set, replace X with the numbers 1 through 6)

```
└─# cd /

┌──(root💀kali)-[/]
└─# pwd
/

┌──(root💀kali)-[/]
└─# ls
bin  boot  dev  etc  home  initrd.img  initrd.img.old  lib  lib32  lib64  libx32  lost+found  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var  vmlinuz  vmlinuz.old

┌──(root💀kali)-[/]
└─# cd home

┌──(root💀kali)-[/home]
└─# ls
kali

┌──(root💀kali)-[/home]
└─# touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3

┌──(root💀kali)-[/home]
└─# ls
kali  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─# touch snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3

┌──(root💀kali)-[/home]
└─# ls
kali  snap1.mp3  snap2.mp3  snap3.mp3  snap4.mp3  snap5.mp3  snap6.mp3  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─# touch film1.mp3 film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.mp3

┌──(root💀kali)-[/home]
└─# ls
film1.mp3  film2.mp3  film3.mp3  film4.mp3  film5.mp3  film6.mp3  kali  snap1.mp3  snap2.mp3  snap3.mp3  snap4.mp3  snap5.mp3  snap6.mp3  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─#
```

```
┌──(root💀kali)-[/home]
└─# touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3

┌──(root💀kali)-[/home]
└─# ls
kali  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─# touch snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3

┌──(root💀kali)-[/home]
└─# ls
kali  snap1.mp3  snap2.mp3  snap3.mp3  snap4.mp3  snap5.mp3  snap6.mp3  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─# touch film1.mp3 film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.mp3

┌──(root💀kali)-[/home]
└─# ls
film1.mp3  film2.mp3  film3.mp3  film4.mp3  film5.mp3  film6.mp3  kali  snap1.mp3  snap2.mp3  snap3.mp3  snap4.mp3  snap5.mp3  snap6.mp3  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root💀kali)-[/home]
└─#
```

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.

```
┌──(root㉿kali)-[/home]
└─# mv -v song1.mp3 /root/Music
renamed 'song1.mp3' → '/root/Music/song1.mp3'

┌──(root㉿kali)-[/home]
└─# ls
film1.mp3  film2.mp3  film3.mp3  film4.mp3  film5.mp3  film6.mp3  kali  snap1.mp3  snap2.mp3  snap3.mp3  snap4.mp3  snap5.mp3  snap6.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root㉿kali)-[/home]
└─# cd /

┌──(root㉿kali)-[/]
└─# cd root

┌──(root㉿kali)-[~]
└─# cd music
cd: no such file or directory: music

┌──(root㉿kali)-[~]
└─# cd Music

┌──(root㉿kali)-[~/Music]
```

```
┌──(root㉿kali)-[/home]
└─# mv -v song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3 /root/Music
renamed 'song2.mp3' → '/root/Music/song2.mp3'
renamed 'song3.mp3' → '/root/Music/song3.mp3'
renamed 'song4.mp3' → '/root/Music/song4.mp3'
renamed 'song5.mp3' → '/root/Music/song5.mp3'
renamed 'song6.mp3' → '/root/Music/song6.mp3'

┌──(root㉿kali)-[/home]
└─# cd /

┌──(root㉿kali)-[/]
└─# cd root

┌──(root㉿kali)-[~]
└─# cd music
cd: no such file or directory: music

┌──(root㉿kali)-[~]
└─# cd Music

┌──(root㉿kali)-[~/Music]
└─# ls
college  song1.mp3  song2.mp3  song3.mp3  song4.mp3  song5.mp3  song6.mp3

┌──(root㉿kali)-[~/Music]
└─#
```

```
┌──(root㉿kali)-[/]
└─# cd home

┌──(root㉿kali)-[/home]
└─# mv -v film1.mp3 /root/Videos
renamed 'film1.mp3' → '/root/Videos/film1.mp3'

┌──(root㉿kali)-[/home]
└─# mv -v film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.mp3 root/Videos
mv: target 'root/Videos' is not a directory

┌──(root㉿kali)-[/home]
└─# mv -v film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.mp3 /root/Videos
renamed 'film2.mp3' → '/root/Videos/film2.mp3'
renamed 'film3.mp3' → '/root/Videos/film3.mp3'
renamed 'film4.mp3' → '/root/Videos/film4.mp3'
renamed 'film5.mp3' → '/root/Videos/film5.mp3'
renamed 'film6.mp3' → '/root/Videos/film6.mp3'

┌──(root㉿kali)-[/home]
└─# cd /

┌──(root㉿kali)-[/]
└─# cd root

┌──(root㉿kali)-[~]
└─# cd Videos

┌──(root㉿kali)-[~/Videos]
└─# ls
film1.mp3  film2.mp3  film3.mp3  film4.mp3  film5.mp3  film6.mp3

┌──(root㉿kali)-[~/Videos]
└─#
```

```
┌──(root💀kali)-[/home]
└─# mv -v  snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3 /root/Pictures
renamed 'snap1.mp3' → '/root/Pictures/snap1.mp3'
renamed 'snap2.mp3' → '/root/Pictures/snap2.mp3'
renamed 'snap3.mp3' → '/root/Pictures/snap3.mp3'
renamed 'snap4.mp3' → '/root/Pictures/snap4.mp3'
renamed 'snap5.mp3' → '/root/Pictures/snap5.mp3'
renamed 'snap6.mp3' → '/root/Pictures/snap6.mp3'

┌──(root💀kali)-[/home]
└─# cd /

┌──(root💀kali)-[/]
└─# cd root

┌──(root💀kali)-[~]
└─# cd Pictures

┌──(root💀kali)-[~/Pictures]
└─# ls
snap1.mp3   snap2.mp3   snap3.mp3   snap4.mp3   snap5.mp3   snap6.mp3

┌──(root💀kali)-[~/Pictures]
└─#
```

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

```
┌──(root💀kali)-[~/Pictures]
└─# cd /

┌──(root💀kali)-[/]
└─# cd home

┌──(root💀kali)-[/home]
└─# ls
kali

┌──(root💀kali)-[/home]
└─# mkdir friends family work

┌──(root💀kali)-[/home]
└─# ls
family   friends   kali   work

┌──(root💀kali)-[/home]
└─#
```

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

```
┌──(root💀kali)-[~/Music]
└─# cp song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3 /home/friends

┌──(root💀kali)-[~/Music]
└─# cd /

┌──(root💀kali)-[/]
└─# cd home

┌──(root💀kali)-[/home]
└─# cd friends

┌──(root💀kali)-[/home/friends]
└─# ls
song1.mp3   song2.mp3   song3.mp3   song4.mp3   song5.mp3   song6.mp3

┌──(root💀kali)-[/home/friends]
└─#
```

```
┌──(root💀kali)-[~/Pictures]
└─# cp  snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3 /home/family

┌──(root💀kali)-[~/Pictures]
└─# cd /

┌──(root💀kali)-[/]
└─# cd home

┌──(root💀kali)-[/home]
└─# cd family

┌──(root💀kali)-[/home/family]
└─# ls
snap1.mp3   snap2.mp3   snap3.mp3   snap4.mp3   snap5.mp3   snap6.mp3

┌──(root💀kali)-[/home/family]
└─#
```

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

```
┌──(root💀kali)-[/home]
└─# rmdir friends family

┌──(root💀kali)-[/home]
└─# ls
allfiles.txt  kali  song1.mp3  work

┌──(root💀kali)-[/home]
└─#
```

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

```
┌──(root💀kali)-[/home]
└─# rm -r friends family

┌──(root💀kali)-[/home]
└─# ls
kali  song1.mp3  work

┌──(root💀kali)-[/home]
└─#
```

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.

```
┌──(root💀kali)-[/home]
└─# ls -a > allfiles.txt

┌──(root💀kali)-[/home]
└─# ls
allfiles.txt  family  friends  kali  song1.mp3  work

┌──(root💀kali)-[/home]
```

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

```
┌──(root💀kali)-[/home]
└─# date
Tue 17 Aug 2021 07:27:57 AM EDT

┌──(root💀kali)-[/home]
└─#
```

9. Add the user Juliet

```
┌──(root💀kali)-[/home]
└─# useradd Juliet

┌──(root💀kali)-[/home]
└─# passwd Juliet
New password:
Retype new password:
passwd: password updated successfully

┌──(root💀kali)-[/home]
└─#
```

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

```
┌──(root💀kali)-[~]
└─# cat /etc/passwd | grep Juliet
Juliet:x:1003:1005::/home/Juliet:/bin/sh
```

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

```
┌──(root💀kali)-[/home]
└─# useradd Juliet

┌──(root💀kali)-[/home]
└─# passwd Juliet
New password:
Retype new password:
passwd: password updated successfully

┌──(root💀kali)-[/home]
└─#
```

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

```
┌──(root💀kali)-[~]
└─# groupadd -g 30000 Shakespheare

┌──(root💀kali)-[~]
└─#
```

13. Create a supplementary group called artists.

```
┌──(root💀kali)-[~]
└─# groupadd artists
```

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

```
┌──(root💀kali)-[~]
└─# less /etc/group

zsh: suspended  less /etc/group
```

```
kali-trusted:x:122:
postgres:x:123:
i2c:x:124:
avahi:x:125:
stunnel4:x:126:
Debian-snmp:x:127:
sslh:x:128:
nm-openvpn:x:129:
nm-openconnect:x:130:
pulse:x:131:
pulse-access:x:132:
scanner:x:133:saned,kali
saned:x:134:
sambashare:x:135:
inetsim:x:136:
colord:x:137:
geoclue:x:138:
lightdm:x:139:
kpadmins:x:140:
kali:x:1000:
vboxsf:x:141:
kaboxer:x:142:kali,root
systemd-coredump:x:999:
nibin:x:1001:
test_user:x:1002:
groupname:x:1003:
usrgrp:x:1004:
Juliet:x:1005:
Shakespheare:x:30000:
artists:x:30001:
(END)
```

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

```
  ┌──(root💀kali)-[~]
  └─# usermod -G Shakespheare Juliet
```

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

```
  ┌──(root💀kali)-[~]
  └─# id Juliet
uid=1003(Juliet) gid=1005(Juliet) groups=1005(Juliet),30000(Shakespheare)

  ┌──(root💀kali)-[~]
  └─#
```

17. Add Romeo and Hamlet to the Shakespeare group.

```
  ┌──(root💀kali)-[~]
  └─# useradd Romeo

  ┌──(root💀kali)-[~]
  └─# useradd hamlet

  ┌──(root💀kali)-[~]
  └─# usermod -G Shakespheare Romeo

  ┌──(root💀kali)-[~]
  └─# usermod -G Shakespheare Hamlet
usermod: user 'Hamlet' does not exist

  ┌──(root💀kali)-[~]
  └─# usermod -G Shakespheare hamlet

  ┌──(root💀kali)-[~]
  └─#
```

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

```
┌──(root💀kali)-[~]
└─# useradd Reba

┌──(root💀kali)-[~]
└─# useradd Dolly

┌──(root💀kali)-[~]
└─# useradd Elvis

┌──(root💀kali)-[~]
└─# usermod -G artists Reba

┌──(root💀kali)-[~]
└─# usermod -G artists Dolly

┌──(root💀kali)-[~]
└─# usermod -G artists Elvis

┌──(root💀kali)-[~]
└─#
```

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

```
┌──(root💀kali)-[~]
└─# less /etc/group

zsh: suspended  less /etc/group
```

```
usrgrp:x:1004:
Juliet:x:1005:
Shakespheare:x:30000:Juliet,Romeo,hamlet
artists:x:30001:Reba,Dolly,Elvis
Romeo:x:30002:
hamlet:x:30003:
Reba:x:1006:
Dolly:x:1007:
Elvis:x:1008:
(END)
```

20. Attempt to remove user Dolly.

```
┌──(root💀kali)-[~]
└─# userdel Dolly

┌──(root💀kali)-[~]
└─# less /etc/group

zsh: suspended  less /etc/group

┌──(root💀kali)-[~]
└─#
```

```
usrgrp:x:1004:
Juliet:x:1005:
Shakespheare:x:30000:Juliet,Romeo,hamlet
artists:x:30001:Reba,Elvis
Romeo:x:30002:
hamlet:x:30003:
Reba:x:1006:
Elvis:x:1008:
```