

Networking & System Administration Lab

## ASSIGNMENT 5: LAB EXERCISES

Submitted By

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Roll no: 28

S2MCA\_A

1. a. Create six files with name of the form songX.mp3

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ touch song1.mp3 song2.mp3 song3.mp3
song4.mp3 song5.mp3 song6.mp3
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
```

- b. Create six files with name of the form snapX.mp3

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ touch snap1.mp3 snap2.mp3 snap3.mp3
snap4.mp3 snap5.mp3 snap6.mp3
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
snap1.mp3 snap3.mp3 snap5.mp3 song1.mp3 song3.mp3 song5.mp3
snap2.mp3 snap4.mp3 snap6.mp3 song2.mp3 song4.mp3 song6.mp3
```

- c. Create six files with name of the form filmX.mp3

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ touch film1.mp3 film2.mp3 film3.mp3
film4.mp3 film5.mp3 film6.mp3
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
film1.mp3 film4.mp3 snap1.mp3 snap4.mp3 song1.mp3 song4.mp3
film2.mp3 film5.mp3 snap2.mp3 snap5.mp3 song2.mp3 song5.mp3
film3.mp3 film6.mp3 snap3.mp3 snap6.mp3 song3.mp3 song6.mp3
```

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

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mkdir music
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mkdir pictures
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mkdir video

ashish@ashish-VirtualBox:~/Desktop/cn_act$ mv song1.mp3 song2.mp3 song3.mp3 so
ng4.mp3 song5.mp3 song6.mp3 music
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
film1.mp3 film4.mp3 music snap2.mp3 snap5.mp3
film2.mp3 film5.mp3 pictures snap3.mp3 snap6.mp3
film3.mp3 film6.mp3 snap1.mp3 snap4.mp3 video
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mv snap1.mp3 snap2.mp3 snap3.mp3 sn
ap4.mp3 snap5.mp3 snap6.mp3 pictures
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mv film1.mp3 film2.mp3 film3.mp3 fi
lm4.mp3 film5.mp3 film6.mp3 video
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
music pictures video
```

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.

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ mkdir friends family work
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
family friends music pictures video work
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act/friends$ cp ../music/song1.mp3 ../music/song2.mp3 ../music/song3.mp3 ../music/song4.mp3 ../music/song5.mp3 ../music/song6.mp3 .
ashish@ashish-VirtualBox:~/Desktop/cn_act/friends$ ls
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
ashish@ashish-VirtualBox:~/Desktop/cn_act$ cd family/
ashish@ashish-VirtualBox:~/Desktop/cn_act/family$ cp ../pictures/snap1.mp3 ../pictures/snap2.mp3 ../pictures/snap3.mp3 ../pictures/snap4.mp3 ../pictures/snap5.mp3 ../pictures/snap6.mp3 .
ashish@ashish-VirtualBox:~/Desktop/cn_act/family$ ls
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ rmdir family friends/
rmdir: failed to remove 'family': Directory not empty
rmdir: failed to remove 'friends/': Directory not empty
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ rm -r family friends
ashish@ashish-VirtualBox:~/Desktop/cn_act$ ls
music pictures video work
```

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.

```
ashish@ashish-VirtualBox:~/Desktop$ cd
ashish@ashish-VirtualBox:~$ ls -al>allfiles.txt
ashish@ashish-VirtualBox:~$ cat allfiles.txt
total 4400
drwxr-xr-x 21 ashish ashish 4096 Aug 17 18:29 .
drwxr-xr-x 3 root root 4096 Jun 1 16:02 ..
-rw-rw-r-- 1 ashish ashish 0 Aug 17 18:29 allfiles.txt
drwxrwxr-x 2 ashish ashish 4096 Aug 6 15:07 allfloder
-rw-rw-r-- 1 ashish ashish 10240 Aug 6 14:58 all.tar
drwxrwxr-x 3 ashish ashish 4096 Aug 6 15:23 ash
drwxrwxr-x 3 ashish ashish 4096 Aug 13 12:12 backup1
-rw-r--r-- 1 ashish ashish 8576 Aug 17 17:33 .bash_history
-rw-r--r-- 1 ashish ashish 220 Jun 1 16:02 .bash_logout
-rw-r--r-- 1 ashish ashish 3771 Jun 1 16:02 .bashrc
drwxr-xrwx 2 ashish ashish 4096 Aug 6 09:57 Books
drwx----- 16 ashish ashish 4096 Jun 21 19:21 .cache
-rw-rw-r-- 1 ashish ashish 50 Aug 6 14:45 class1.txt
-rw-rw-r-- 1 ashish ashish 16 Aug 6 14:44 class.txt
drwxrwxr-x 2 ashish ashish 4096 Jun 21 19:25 cn
drwx----- 15 ashish ashish 4096 Aug 6 12:06 .config
drwxr-xr-x 5 ashish ashish 4096 Aug 17 14:14 Desktop
drwxr-xr-x 3 ashish ashish 4096 Jun 21 19:26 Documents
drwxr-xr-x 2 ashish ashish 4096 Jun 1 16:23 Downloads
drwx----- 3 ashish ashish 4096 Aug 10 15:36 .gnupg
-rw-rw-r-- 1 ashish ashish 0 Jun 20 19:24 h.txt
drwx----- 3 ashish ashish 4096 Jun 1 16:22 .local
-rw-r--r-- 1 root root 1043016 Aug 6 15:20 mcareg1.tar.xz
-rw-r--r-- 1 root root 1043016 Aug 6 15:16 mcareg.tar.bz2
-rw-r--r-- 1 root root 1043016 Aug 6 15:16 mcareg.tar.bz2
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ date "+%A %B %d %Y"  
Tuesday August 17 2021
```

9. Add the user Juliet

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ sudo useradd Juliet  
[sudo] password for ashish:
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ cat /etc/passwd  
root:x:0:0:root:/bin:/usr/sbin/rlogind  
mysql:x:127:134:MySQL Server,,,:/nonexistent:/bin/false  
Juliet:x:3001:3001:~/home/Juliet:/bin/sh
```

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

```
ashish@ashish-VirtualBox:~/Desktop$ sudo passwd juliet  
New password:  
Retype new password:  
passwd: password updated successfully
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ sudo groupadd -g 30000 Shakespeare
```

13. Create a supplementary group called artists.

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ sudo groupadd artists
```

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

```
ashish@ashish-VirtualBox:~/Desktop/cn_act$ less /etc/group  
Shakespeare:x:30000:  
artists:x:30001:
```

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

```
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G shakespeare juliet
```

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

```
ashish@ashish-VirtualBox:~/Desktop$ id juliet  
uid=3002(juliet) gid=3002(juliet) groups=3002(juliet),3000(shakespeare)
```

17. Add Romeo and Hamlet to the Shakespeare group.

```
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G shakespeare romeo
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G shakespeare hamlet
ashish@ashish-VirtualBox:~/Desktop$ id hamlet
uid=3004(hamlet) gid=3004(hamlet) groups=3004(hamlet),3000(shakespeare)
ashish@ashish-VirtualBox:~/Desktop$ id romeo
uid=3003(romeo) gid=3003(romeo) groups=3003(romeo),3000(shakespeare)
```

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

```
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G artist reba
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G artist dolly
ashish@ashish-VirtualBox:~/Desktop$ sudo usermod -G artist elvis
```

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

```
ashish@ashish-VirtualBox:~/Desktop$ tail -5 /etc/group
hamlet:x:3004:
reba:x:3005:
dolly:x:3006:
elvis:x:3007:
artist:x:30002:reba,dolly,elvis
```

20. Attempt to remove user Dolly.

```
ashish@ashish-VirtualBox:~/Desktop$ sudo userdel dolly
```