

Assignment - 5

-Networking & System Administration Lab

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S2 MCA Batch A

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ASSIGNMENT 5: LAB EXCERCISES

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

1.

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

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ touch song{1..6}.mp3
kunjuzz@kunjuzz-VirtualBox:~/Lab$ ls
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
```

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

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ touch snap{1..6}.mp3
kunjuzz@kunjuzz-VirtualBox:~/Lab$ 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 (In each set, replace X with the numbers 1 through 6) .

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ touch film{1..6}.mp3
kunjuzz@kunjuzz-VirtualBox:~/Lab$ 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
kunjuzz@kunjuzz-VirtualBox:~/Lab$
```

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.

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ mv song{1..6}.mp3 /home/kunjuzz/Music
kunjuzz@kunjuzz-VirtualBox:~/Lab$ mv snap{1..6}.mp3 /home/kunjuzz/Pictures
kunjuzz@kunjuzz-VirtualBox:~/Lab$ mv film{1..6}.mp3 /home/kunjuzz/Videos
kunjuzz@kunjuzz-VirtualBox:~/Lab$ cd ..
kunjuzz@kunjuzz-VirtualBox:~$ ls Music
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
kunjuzz@kunjuzz-VirtualBox:~$ ls Pictures
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
kunjuzz@kunjuzz-VirtualBox:~$ ls Videos
film1.mp3 film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.mp3
kunjuzz@kunjuzz-VirtualBox:~$
```

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.

```
kunjuzz@kunjuzz-VirtualBox:~$ mkdir -p Lab/{friends,family,work}
kunjuzz@kunjuzz-VirtualBox:~$ ls Lab
family friends work
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ cp -i Music/* /home/kunjuzz/Lab/friends
kunjuzz@kunjuzz-VirtualBox:~$ ls Lab/friends
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
kunjuzz@kunjuzz-VirtualBox:~$ cp -i Pictures/* /home/kunjuzz/Lab/family
kunjuzz@kunjuzz-VirtualBox:~$ ls Lab/family
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ rmdir friends family
rmdir: failed to remove 'friends': Directory not empty
rmdir: failed to remove 'family': Directory not empty
kunjuzz@kunjuzz-VirtualBox:~/Lab$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~/Lab$ rm -r friends family
kunjuzz@kunjuzz-VirtualBox:~/Lab$ ls
work
kunjuzz@kunjuzz-VirtualBox:~/Lab$
```

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.

```
kunjuzz@kunjuzz-VirtualBox:~$ ls -a
.          .cache    .gnupg    Pictures  student
..         .config   Lab       .profile  .sudo_as_admin_successful
.bash_history Desktop   .local    Public    Templates
.bash_logout Documents .mozilla  snap      Videos
.bashrc    Downloads Music     .ssh
kunjuzz@kunjuzz-VirtualBox:~$ ls -a > allfiles.txt
```

```
kunjuzz@kunjuzz-VirtualBox:~$ cat allfiles.txt
.
..
allfiles.txt
.bash_history
.bash_logout
.bashrc
.cache
.config
Desktop
Documents
Downloads
.gnupg
Lab
.local
.mozilla
Music
Pictures
.profile
Public
snap
.ssh
student
.sudo_as_admin_successful
Templates
Videos
kunjuzz@kunjuzz-VirtualBox:~$
```


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

```
kunjuzz@kunjuzz-VirtualBox:~$ date "+%A %B %d %G"
Tuesday August 17 2021
kunjuzz@kunjuzz-VirtualBox:~$
```

9. Add the user Juliet.

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Juliet
[sudo] password for kunjuzz:
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ tail -5 /etc/passwd
systemd-coredump:x:999:999:systemd Core Dumper:/:usr/sbin/nologin
anjali:x:2000:1001:/:home/anjali:/bin/sh
sshd:x:127:65534:/:run/sshd:/usr/sbin/nologin
mysql:x:128:134:MySQL Server,,,:/nonexistent:/bin/false
Juliet:x:2001:2001:/:home/Juliet:/bin/sh
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo passwd Juliet
New password:
Retype new password:
passwd: password updated successfully
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo groupadd -g 30000 Shakespeare
kunjuzz@kunjuzz-VirtualBox:~$ tail -3 /etc/group
mysql:x:134:
Juliet:x:2001:
Shakespeare:x:30000:
```

13. Create a supplementary group called artists.

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo groupadd artists
kunjuzz@kunjuzz-VirtualBox:~$ tail -3 /etc/group
Juliet:x:2001:
Shakespeare:x:30000:
artists:x:30001:
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ tail -5 /etc/group
giraffe:x:1004:anjali
mysql:x:134:
Juliet:x:2001:
Shakespeare:x:30000:
artists:x:30001:
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G Shakespeare Juliet
kunjuzz@kunjuzz-VirtualBox:~$ groups Juliet
Juliet : Juliet Shakespeare
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ id Juliet
uid=2001(Juliet) gid=2001(Juliet) groups=2001(Juliet),30000(Shakespeare)
```

17. Add Romeo and Hamlet to the Shakespeare group.

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Romeo
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Hamlet
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G Shakespeare Romeo
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G Shakespeare Hamlet
kunjuzz@kunjuzz-VirtualBox:~$ tail -5 /etc/group
Juliet:x:2001:
Shakespeare:x:30000:Juliet,Romeo,Hamlet
artists:x:30001:
Romeo:x:2002:
Hamlet:x:2003:
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Reba
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Dolly
kunjuzz@kunjuzz-VirtualBox:~$ sudo useradd Elvis
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G artists Reba
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G artists Dolly
kunjuzz@kunjuzz-VirtualBox:~$ sudo usermod -G artists Elvis
kunjuzz@kunjuzz-VirtualBox:~$ tail -10 /etc/group
giraffe:x:1004:anjali
mysql:x:134:
Juliet:x:2001:
Shakespeare:x:30000:Juliet,Romeo,Hamlet
artists:x:30001:Reba,Dolly,Elvis
Romeo:x:2002:
Hamlet:x:2003:
Reba:x:2004:
Dolly:x:2005:
Elvis:x:2006:
kunjuzz@kunjuzz-VirtualBox:~$
```

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

```
kunjuzz@kunjuzz-VirtualBox:~$ tail -8 /etc/group
Juliet:x:2001:
Shakespeare:x:30000:Juliet,Romeo,Hamlet
artists:x:30001:Reba,Dolly,Elvis
Romeo:x:2002:
Hamlet:x:2003:
Reba:x:2004:
Dolly:x:2005:
Elvis:x:2006:
kunjuzz@kunjuzz-VirtualBox:~$
```

20. Attempt to remove user Dolly.

```
kunjuzz@kunjuzz-VirtualBox:~$ sudo userdel Dolly
kunjuzz@kunjuzz-VirtualBox:~$ tail -5 /etc/group
artists:x:30001:Reba,Elvis
Romeo:x:2002:
Hamlet:x:2003:
Reba:x:2004:
Elvis:x:2006:
kunjuzz@kunjuzz-VirtualBox:~$
```