

ASSIGNMENT ON Advanced Network Lab

Submitted to

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Q.No Questions

1. Lab Assignment 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

```
haritha@haritha-VirtualBox:~$ touch song2.mp3
haritha@haritha-VirtualBox:~$ touch song3.mp3
haritha@haritha-VirtualBox:~$ touch song4.mp3
haritha@haritha-VirtualBox:~$ touch song5.mp3
haritha@haritha-VirtualBox:~$ touch song6.mp3
haritha@haritha-VirtualBox:~$ ls
archive1.tar  Downloads  hari      Public  s2      song3.mp3  song6.mp3
Desktop      file2.txt  Music    rsa     song1.mp3 song4.mp3  Templates
Documents    file3.txt  Pictures  rsa.pub song2.mp3 song5.mp3  Videos
haritha@haritha-VirtualBox:~$
```

```
haritha@haritha-VirtualBox:~$ touch snap1.mp3
haritha@haritha-VirtualBox:~$ touch snap2.mp3
haritha@haritha-VirtualBox:~$ touch snap3.mp3
haritha@haritha-VirtualBox:~$ touch snap4.mp3
haritha@haritha-VirtualBox:~$ touch snap5.mp3
haritha@haritha-VirtualBox:~$ touch snap6.mp3
haritha@haritha-VirtualBox:~$ ls
archive1.tar  file2.txt  Pictures  s2      snap4.mp3  song2.mp3  song6.mp3
Desktop      file3.txt  Public    snap1.mp3 snap5.mp3  song3.mp3  Templates
Documents    hari      rsa       snap2.mp3 snap6.mp3  song4.mp3  Videos
Downloads    Music     rsa.pub   snap3.mp3 song1.mp3  song5.mp3
```

```
haritha@haritha-VirtualBox:~$ touch film1.mp3
haritha@haritha-VirtualBox:~$ touch film2.mp3
haritha@haritha-VirtualBox:~$ touch film3.mp3
haritha@haritha-VirtualBox:~$ touch film4.mp3
haritha@haritha-VirtualBox:~$ touch film5.mp3
haritha@haritha-VirtualBox:~$ touch film6.mp3
haritha@haritha-VirtualBox:~$ ls
archive1.tar  file3.txt  film5.mp3  Public  snap2.mp3  song1.mp3  song6.mp3
Desktop      film1.mp3  film6.mp3  rsa     snap3.mp3  song2.mp3  Templates
Documents    film2.mp3  hari      rsa.pub snap4.mp3  song3.mp3  Videos
Downloads    film3.mp3  Music     s2      snap5.mp3  song4.mp3
file2.txt    film4.mp3  Pictures   snap1.mp3 snap6.mp3  song5.mp3
haritha@haritha-VirtualBox:~$
```

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.

```

file2.txt      film4.mp3  Pictures      snap1.mp3  snap6.mp3  song5.mp3
haritha@haritha-VirtualBox:~$ mv song1.mp3 ./Music/
haritha@haritha-VirtualBox:~$ mv song2.mp3 ./Music/
haritha@haritha-VirtualBox:~$ mv song3.mp3 ./Music/
haritha@haritha-VirtualBox:~$ mv song4.mp3 ./Music/
haritha@haritha-VirtualBox:~$ mv song5.mp3 ./Music/
haritha@haritha-VirtualBox:~$ mv song6.mp3 ./Music/
haritha@haritha-VirtualBox:~$ ls -R Music
Music:
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
haritha@haritha-VirtualBox:~$ mv snap1.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ mv snap2.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ mv snap3.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ mv snap4.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ mv snap5.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ mv snap6.mp3 ./Pictures/
haritha@haritha-VirtualBox:~$ ls -R Pictures
Pictures:
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
haritha@haritha-VirtualBox:~$ mv film1.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ mv film2.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ mv film3.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ mv film4.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ mv film5.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ mv film6.mp3 ./Videos/
haritha@haritha-VirtualBox:~$ ls -R Videos
Videos:
film1.mp3 film2.mp3 film3.mp3 film4.mp3 film5.mp3 film6.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.

```

haritha@haritha-VirtualBox:~$ mkdir {friends,family,work}
haritha@haritha-VirtualBox:~$ ls
archive1.tar  Downloads  file3.txt  Music      rsa      Templates
Desktop       family     friends    Pictures   rsa.pub  Videos
Documents     file2.txt  hari       Public     s2       work

```

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


```

haritha@haritha-VirtualBox:~$ mkdir {friends,family,work}
haritha@haritha-VirtualBox:~$ ls
archive1.tar  Downloads  file3.txt  Music      rsa        Templates
Desktop       family     friends    Pictures    rsa.pub    Videos
Documents     file2.txt  hari       Public      s2         work
haritha@haritha-VirtualBox:~$ cp Music/song1.mp3 friends
haritha@haritha-VirtualBox:~$ cp Music/song2.mp3 friends
haritha@haritha-VirtualBox:~$ cp Music/song3.mp3 friends
haritha@haritha-VirtualBox:~$ cp Music/song4.mp3 friends
haritha@haritha-VirtualBox:~$ cp Music/song5.mp3 friends
haritha@haritha-VirtualBox:~$ cp Music/song6.mp3 friends
haritha@haritha-VirtualBox:~$ ls -R friends
friends:
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
haritha@haritha-VirtualBox:~$

```

```

haritha@haritha-VirtualBox:~$ cp Pictures/snap1.mp3 family
haritha@haritha-VirtualBox:~$ cp Pictures/snap2.mp3 family
haritha@haritha-VirtualBox:~$ cp Pictures/snap3.mp3 family
haritha@haritha-VirtualBox:~$ cp Pictures/snap4.mp3 family
haritha@haritha-VirtualBox:~$ cp Pictures/snap5.mp3 family
haritha@haritha-VirtualBox:~$ cp Pictures/snap6.mp3 family
haritha@haritha-VirtualBox:~$ ls -R family
family:
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
haritha@haritha-VirtualBox:~$

```

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

```

haritha@haritha-VirtualBox:~$ rmdir {family,friends}
rmdir: failed to remove 'family': Directory not empty
rmdir: failed to remove 'friends': Directory not empty
haritha@haritha-VirtualBox:~$ rmdir family,friends
rmdir: failed to remove 'family,friends': No such file or directory
haritha@haritha-VirtualBox:~$

```

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

```

haritha@haritha-VirtualBox:~$ rm -r family friends
haritha@haritha-VirtualBox:~$ ls
archive1.tar  Downloads  hari       Public  s2        work
Desktop       file2.txt  Music      rsa     Templates
Documents     file3.txt  Pictures    rsa.pub Videos
haritha@haritha-VirtualBox:~$

```

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

```

haritha@haritha-VirtualBox:~$ ls -al>allfiles.txt
haritha@haritha-VirtualBox:~$ ls
allfiles.txt  Documents  file3.txt  Pictures  rsa.pub  Videos
archive1.tar  Downloads  hari       Public    s2       work
Desktop       file2.txt  Music     rsa       Templates
haritha@haritha-VirtualBox:~$ ls -al
total 120
drwxr-xr-x 18 haritha haritha 4096 Aug 17 16:19 .
drwxr-xr-x  3 root    root   4096 Jun 13 23:06 ..
-rw-rw-r--  1 haritha haritha 1678 Aug 17 16:19 allfiles.txt
-rw-rw-r--  1 haritha haritha 10240 Aug 12 19:30 archive1.tar
-rw-----  1 haritha haritha 1195 Jun 21 22:04 .bash_history
-rw-r--r--  1 haritha haritha  220 Jun 13 23:06 .bash_logout
-rw-r--r--  1 haritha haritha 3771 Jun 13 23:06 .bashrc
drwx----- 11 haritha haritha 4096 Jun 13 23:42 .cache
drwx----- 14 haritha haritha 4096 Aug 12 20:04 .config
drwxr-xr-x  3 haritha haritha 4096 Jun 21 20:24 Desktop
drwxr-xr-x  2 haritha haritha 4096 Jun 13 23:39 Documents
drwxr-xr-x  2 haritha haritha 4096 Jun 13 23:39 Downloads
-rw-rw-r--  1 haritha haritha  65 Jun 13 14:41 file2.txt

```

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

```

haritha@haritha-VirtualBox:~$ date
Tuesday 17 August 2021 04:32:37 PM IST
haritha@haritha-VirtualBox:~$

```

9. Add the user Juliet

```

haritha@haritha-VirtualBox:~$ sudo useradd juliet
[sudo] password for haritha:
haritha@haritha-VirtualBox:~$

```

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


```

haritha@haritha-VirtualBox:~$ cat/etc/passwd
bash: cat/etc/passwd: No such file or directory
haritha@haritha-VirtualBox:~$ 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
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
haritha:x:1000:1000:haritha,,,:/home/haritha:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
juliet:x:1001:1002:/:/home/juliet:/bin/sh
haritha@haritha-VirtualBox:~$

```

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

```

haritha@haritha-VirtualBox:~$ sudo passwd juliet
New password:
Retype new password:
passwd: password updated successfully
haritha@haritha-VirtualBox:~$

```

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

```

haritha@haritha-VirtualBox:~$ sudo groupadd -g 30000 shakespeare
haritha@haritha-VirtualBox:~$

```

13. Create a supplementary group called artists.

```

haritha@haritha-VirtualBox:~$ sudo groupadd -g 50000 artists
haritha@haritha-VirtualBox:~$ cat /etc/groups
cat: /etc/groups: No such file or directory
haritha@haritha-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,haritha
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:

```

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

```

haritha@haritha-VirtualBox:~$ sudo groupadd -g 50000 artists
haritha@haritha-VirtualBox:~$ cat /etc/groups
cat: /etc/groups: No such file or directory
haritha@haritha-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,haritha
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
gdm:x:130:
lxd:x:131:haritha
haritha:x:1000:
sambashare:x:132:haritha
systemd-coredump:x:999:
student2:x:1001:
juliet:x:1002:
shakespeare:x:30000:
artists:x:50000:
haritha@haritha-VirtualBox:~$

```

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

```
haritha@haritha-VirtualBox:~$ sudo usermod -a -G shakespeare juliet
haritha@haritha-VirtualBox:~$ groups juliet
juliet : juliet shakespeare
haritha@haritha-VirtualBox:~$
```

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

```
haritha@haritha-VirtualBox:~$ id juliet
uid=1001(juliet) gid=1002(juliet) groups=1002(juliet),30000(shakespeare)
haritha@haritha-VirtualBox:~$
```

17. Add Romeo and Hamlet to the Shakespeare group

```
haritha@haritha-VirtualBox:~$ sudo usermod -a -G shakespeare Romeo
haritha@haritha-VirtualBox:~$ sudo usermod -a -G shakespeare Halmet
usermod: user 'Halmet' does not exist
haritha@haritha-VirtualBox:~$ sudo usermod -a -G shakespeare Hamlet
haritha@haritha-VirtualBox:~$ groups Romeo
Romeo : Romeo shakespeare
haritha@haritha-VirtualBox:~$ groups Hamlet
Hamlet : Hamlet shakespeare
haritha@haritha-VirtualBox:~$
```

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

```
hamlet : hamlet shakespeare
haritha@haritha-VirtualBox:~$ sudo useradd Reba
haritha@haritha-VirtualBox:~$ sudo useradd Dolly
haritha@haritha-VirtualBox:~$ sudo usermod -a -G artists Reba
haritha@haritha-VirtualBox:~$ sudo usermod -a -G artists Dolly
haritha@haritha-VirtualBox:~$ groups Reba
Reba : Reba artists
haritha@haritha-VirtualBox:~$ groups Dolly
Dolly : Dolly artists
haritha@haritha-VirtualBox:~$
```

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


```
Dolly : Dolly artists
haritha@haritha-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,haritha
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
```

20. Attempt to remove user Dolly.

```
geoclue:x:127:
pulse:x:128:
pulse-access:x:129:
gdm:x:130:
lxd:x:131:haritha
haritha:x:1000:
smbashare:x:132:haritha
systemd-coredump:x:999:
student2:x:1001:
juliet:x:1002:
shakespeare:x:30000:juliet,Romeo,Hamlet
artists:x:50000:Reba,Dolly
Romeo:x:50001:
Hamlet:x:1003:
Reba:x:1004:
Dolly:x:1005:
haritha@haritha-VirtualBox:~$
```