

ASSIGNMENT-5

Networking and system Administration Lab

Submitted By:

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RMCA-S2: A

RollNo:42

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

```
jeena@jeena-VirtualBox:~$ touch snapx1.mp3 snapx2.mp3 snapx3.mp3 snapx4.mp3 snapx5.mp3 snapx6.mp3
jeena@jeena-VirtualBox:~$ touch song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
jeena@jeena-VirtualBox:~$ ls
Desktop    filesong.mp3  jeena1       snapx1.mp3  snapx6.mp3  song4.mp3    v1
Documents  friends       Music        snapx2.mp3  song1.mp3   song5.mp3    v3.txt
Downloads  J            Networklab  snapx3.mp3  song2.mp2   song6.mp3    Videos
family     jeena        Pictures     snapx4.mp3  song2.mp3   songs         work
file1      JEENA        Public      snapx5.mp3  song3.mp3   Templates
```

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.

```
jeena@jeena-VirtualBox:~$ mkdir PICTURES1
jeena@jeena-VirtualBox:~$ mkdir VIDEOS1
jeena@jeena-VirtualBox:~$ mv song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3 ./PICTURES1/
jeena@jeena-VirtualBox:~$ mv snapx1.mp3 snapx2.mp3 snapx3.mp3 snapx4.mp3 snapx5.mp3 snapx6.mp3 ./VIDEOS1/
jeena@jeena-VirtualBox:~$ ls -R PICTURES1
PICTURES1:
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
jeena@jeena-VirtualBox:~$ ls -R VIDEOS1
VIDEOS1:
snapx1.mp3 snapx2.mp3 snapx3.mp3 snapx4.mp3 snapx5.mp3 snapx6.mp3
jeena@jeena-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.

```
jeena@jeena-VirtualBox:~$ ls
Desktop    file1      jeena      Networklab  song2.mp2  v3.txt
Documents  filesong.mp3 JEENA      Pictures    songs      Videos
Downloads  friends    jeena1     PICTURES1  Templates  VIDEOS1
family     J          Music      Public     v1         work
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~$ cp PICTURES1/song1.mp3 friends
jeena@jeena-VirtualBox:~$ cp PICTURES1/song2.mp3 friends
jeena@jeena-VirtualBox:~$ cp PICTURES1/song3.mp3 friends
jeena@jeena-VirtualBox:~$ cp PICTURES1/song4.mp3 friends
jeena@jeena-VirtualBox:~$ cp PICTURES1/song5.mp3 friends
jeena@jeena-VirtualBox:~$ cp PICTURES1/song6.mp3 friends
jeena@jeena-VirtualBox:~$ ls friends
song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3
jeena@jeena-VirtualBox:~$ cp VIDEOS/snapx1.mp3 family
cp: cannot stat 'VIDEOS/snapx1.mp3': No such file or directory
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx1.mp3 family
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx2.mp3 family
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx3.mp3 family
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx4.mp3 family
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx5.mp3 family
jeena@jeena-VirtualBox:~$ cp VIDEOS1/snapx6.mp3 family
jeena@jeena-VirtualBox:~$ ls family
snapx1.mp3 snapx2.mp3 snapx3.mp3 snapx4.mp3 snapx5.mp3 snapx6.mp3
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~$ rm -r family friends
jeena@jeena-VirtualBox:~$ ls
Desktop  filesong.mp3  jeena1      PICTURES1  Templates  VIDEOS1
Documents J             Music       Public      v1          work
Downloads jeena        Networklab  song2.mp2  v3.txt
file1    JEENA       Pictures    songs      Videos
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~/songs$ rmdir FAMILY FRIENDS
jeena@jeena-VirtualBox:~/songs$
```

```
jeena@jeena-VirtualBox:~$ rmdir family friends
rmdir: failed to remove 'family': No such file or directory
rmdir: failed to remove 'friends': No such file or directory
jeena@jeena-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.

```
jeena@jeena-VirtualBox:~$ ls -al > allfiles.txt
jeena@jeena-VirtualBox:~$ ls
allfiles.txt  Desktop  Downloads  file1      J         JEENA  Music  Pictures  Public  songs  v1  Videos  work
jeena@jeena-VirtualBox:~$ cat allfiles.txt
cat: allfiles.txt: No such file or directory
jeena@jeena-VirtualBox:~$ ls -al
total 128
drwxr-xr-x 25 jeena group1 4096 Aug 17 20:35 .
drwxr-xr-x  3 root  root   4096 Jun 12 14:23 ..
-rw-r--r--  1 jeena group1   0 Aug 17 20:41 allfiles.txt
-rw-r--r--  1 jeena group1 2821 Aug 17 20:30 .bash_history
-rw-r--r--  1 jeena group1 220 Jun 12 14:23 .bash_logout
-rw-r--r--  1 jeena group1 3771 Jun 12 14:23 .bashrc
drwxr--r-- 12 jeena group1 4096 Jun 12 14:28 .cache
drwxr--r-- 12 jeena group1 4096 Aug 17 20:32 .config
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Desktop
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Documents
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Downloads
drwxrwxr-x  2 jeena group1 4096 Jun 13 22:32 file1
-rw-r--r--  1 jeena group1   33 Aug 17 20:03 filesong.mp3
drwxr--r--  3 jeena group1 4096 Jun 22 10:47 .gnupg
drwxr-xr-x  2 root  root   4096 Aug 13 10:28 J
drwxrwxr-x  2 jeena group1 4096 Jun 13 22:52 JEENA
drwxrwxr-x  2 jeena group1 4096 Aug 17 19:26 JEENA
-rw-rw-r--  1 jeena group1   11 Jun 22 11:12 jeena1
drwxr--r--  3 jeena group1 4096 Jun 12 14:27 .local
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Music
drwxrwxr-x  2 jeena group1 4096 Aug 13 21:32 Networklab
drwxr-xr-x  2 jeena group1 4096 Jun 13 22:06 Pictures
drwxr-xr-x  2 jeena group1 4096 Aug 17 20:14 PICTURES1
-rw-r--r--  1 jeena group1  807 Jun 12 14:23 .profile
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Public
-rw-r--r--  1 jeena group1   0 Aug 17 20:09 song2.mp2
drwxr-xr-x  6 jeena group1 4096 Aug 17 20:27 songs
drwxr--r--  2 jeena group1 4096 Aug 13 21:14 .ssh
-rw-r--r--  1 jeena group1   0 Aug 13 10:22 .sudo_as_admin_successful
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Templates
drwxrwxr-x  2 jeena group1 4096 Jun 22 10:53 v1
-rw-rw-r--  1 jeena group1   26 Jun 22 10:55 v3.txt
drwxr-xr-x  2 jeena group1 4096 Jun 12 14:27 Videos
drwxr-xr-x  2 jeena group1 4096 Aug 17 20:15 VIDEOS1
drwxr-xr-x  2 jeena group1 4096 Aug 17 19:53 work
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~$ date
Tuesday 17 August 2021 08:43:53 PM IST
jeena@jeena-VirtualBox:~$
```

9. Add the user Juliet .

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

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

```
jeena@jeena-VirtualBox:~$ sudo useradd juliet
[sudo] password for jeena:
jeena@jeena-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
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:106:/:nonexistent:/usr/sbin/nologin
syslog:x:104:110:/:home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:nonexistent:/usr/sbin/nologin
tss:x:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false
uuidd:x:107:114:/:run/uuidd:/usr/sbin/nologin
tcpdump:x:108:115:/:nonexistent:/usr/sbin/nologin
avahi-autoipd:x:109:116:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:x:110:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
rtkit:x:111:117:RealtimeKit,,,:/proc:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
cups-pk-helper:x:113:120:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
speech-dispatcher:x:114:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
avahi:x:115:121:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/usr/sbin/nologin
kernoops:x:116:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
saned:x:117:123:/:var/lib/saned:/usr/sbin/nologin
nm-openvpn:x:118:124:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
hplip:x:119:7:HPLIP system user,,,:/run/hplip:/bin/false
whoopsie:x:120:125:/:nonexistent:/bin/false
colord:x:121:126:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:122:127:/:var/lib/geoclue:/usr/sbin/nologin
pulse:x:123:128:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:124:65534:/:run/gnome-initial-setup:/bin/false
gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false
jeena:x:1000:1000:Jeena Mathew,,,:/home/jeena:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper:/:usr/sbin/nologin
juliet:x:1001:1001:/:home/juliet:/bin/sh
```

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

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

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

```
jeena@jeena-VirtualBox:~$ sudo groupadd -g 3000 Shakespeare
jeena@jeena-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
floppy:x:25:
tape:x:26:
sudo:x:27:jeena
audio:x:29:pulse
dip:x:30:jeena
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
irc:x:39:
src:x:40:
gnats:x:41:
shadow:x:42:
utmp:x:43:
video:x:44:
sasl:x:45:
plugdev:x:46:jeena
staff:x:50:
games:x:60:
users:x:100:
nogroup:x:65534:
systemd-journal:x:101:
systemd-network:x:102:
systemd-resolve:x:103:
systemd-timesync:x:104:
crontab:x:105:
messagebus:x:106:
input:x:107:
kvm:x:108:
render:x:109:
syslog:x:110:
tss:x:111:
```

```
avahi-autoipd:x:116:
rtkit:x:117:
ssh:x:118:
netdev:x:119:
lpadmin:x:120:jeena
avahi:x:121:
scanner:x:122:saned
saned:x:123:
nm-openvpn:x:124:
whoopsie:x:125:
colord:x:126:
geoclue:x:127:
pulse:x:128:
pulse-access:x:129:
gdm:x:130:
xdm:x:131:jeena
smbshare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:
jeena@jeena-VirtualBox:~$
```

13. Create a supplementary group called artists.

```
jeena@jeena-VirtualBox:~$ sudo groupadd Artists
jeena@jeena-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
floppy:x:25:
tape:x:26:
sudo:x:27:jeena
audio:x:29:pulse
dip:x:30:jeena
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
irc:x:39:
src:x:40:
```

```
nm-openvpn:x:124:
whoopsie:x:125:
colord:x:126:
geoclue:x:127:
pulse:x:128:
pulse-access:x:129:
gdm:x:130:
lxd:x:131:jeena
smbshare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:
Artists:x:3001:
jeena@jeena-VirtualBox:~$
```

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

```
nm-openvpn:x:124:
whoopsie:x:125:
colord:x:126:
geoclue:x:127:
pulse:x:128:
pulse-access:x:129:
gdm:x:130:
lxd:x:131:jeena
smbashare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:
Artists:x:3001:
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~$ sudo usermod -G Shakespeare juliet
jeena@jeena-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
floppy:x:25:
tape:x:26:
sudo:x:27:jeena
audio:x:29:pulse
dip:x:30:jeena
www-data:x:33:
backup:x:34:
operator:x:37:
lxd:x:131:jeena
smbashare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:juliet
Artists:x:3001:
jeena@jeena-VirtualBox:~$
```

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


```
jeena@jeena-VirtualBox:~$ id -u juliet
1001
jeena@jeena-VirtualBox:~$ id -g juliet
3000
```

17. Add Romeo and Hamlet to the Shakespeare group.

```
jeena@jeena-VirtualBox:~$ sudo useradd Romeo
jeena@jeena-VirtualBox:~$ sudo useradd Hamlet
jeena@jeena-VirtualBox:~$ sudo usermod -G Shakespeare Romeo
jeena@jeena-VirtualBox:~$ sudo usermod -G Shakespeare Hamlet
jeena@jeena-VirtualBox:~$ cat /etc/group
```

```
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
floppy:x:25:
tape:x:26:
sudo:x:27:jeena
audio:x:29:pulse
dri:x:30:jeena
```

```
sambashare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:juliet,Romeo,Hamlet
Artists:x:3001:
Romeo:x:3002:
Romeo:x:1002:
Hamlet:x:1003:
jeena@jeena-VirtualBox:~$
```

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

```
jeena@jeena-VirtualBox:~$ sudo useradd Reba
jeena@jeena-VirtualBox:~$ sudo useradd Dolly
jeena@jeena-VirtualBox:~$ Elvis
Elvis: command not found
jeena@jeena-VirtualBox:~$ sudo useradd Elvis
jeena@jeena-VirtualBox:~$ sudo usermod -G Artists Reba
jeena@jeena-VirtualBox:~$ sudo usermod -G Artists Dolly
jeena@jeena-VirtualBox:~$ sudo usermod -G Artists Elvis
jeena@jeena-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
floppy:x:25:
tape:x:26:
juliet:x:1001:
Shakespeare:x:3000:juliet,Romeoo,Hamlet
Artists:x:3001:Reba,Dolly,Elvis
Romeo:x:3002:
Romeoo:x:1002:
Hamlet:x:1003:
Reba:x:1004:
Dolly:x:1005:
Elvis:x:1006:
jeena@jeena-VirtualBox:~$
```

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

```

juliet:x:1001:
Shakespeare:x:3000:juliet,Romeoo,Hamlet
Artists:x:3001:Reba,Dolly,Elvis
Romeo:x:3002:
Romeoo:x:1002:
Hamlet:x:1003:
Reba:x:1004:
Dolly:x:1005:
Elvis:x:1006:
jeena@jeena-VirtualBox:~$

```

20. Attempt to remove user Dolly.

```
jeena@jeena-VirtualBox:~$ sudo userdel Dolly
jeena@jeena-VirtualBox:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,jeena
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:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:jeena
```

```
sambashare:x:132:jeena
systemd-coredump:x:999:
group1:x:1000:
juliet:x:1001:
Shakespeare:x:3000:juliet,Romeo,Hamlet
Artists:x:3001:Reba,Elvis
Romeo:x:3002:
Romeoo:x:1002:
Hamlet:x:1003:
Reba:x:1004:
Elvis:x:1006:
jeena@jeena-VirtualBox:~$
```