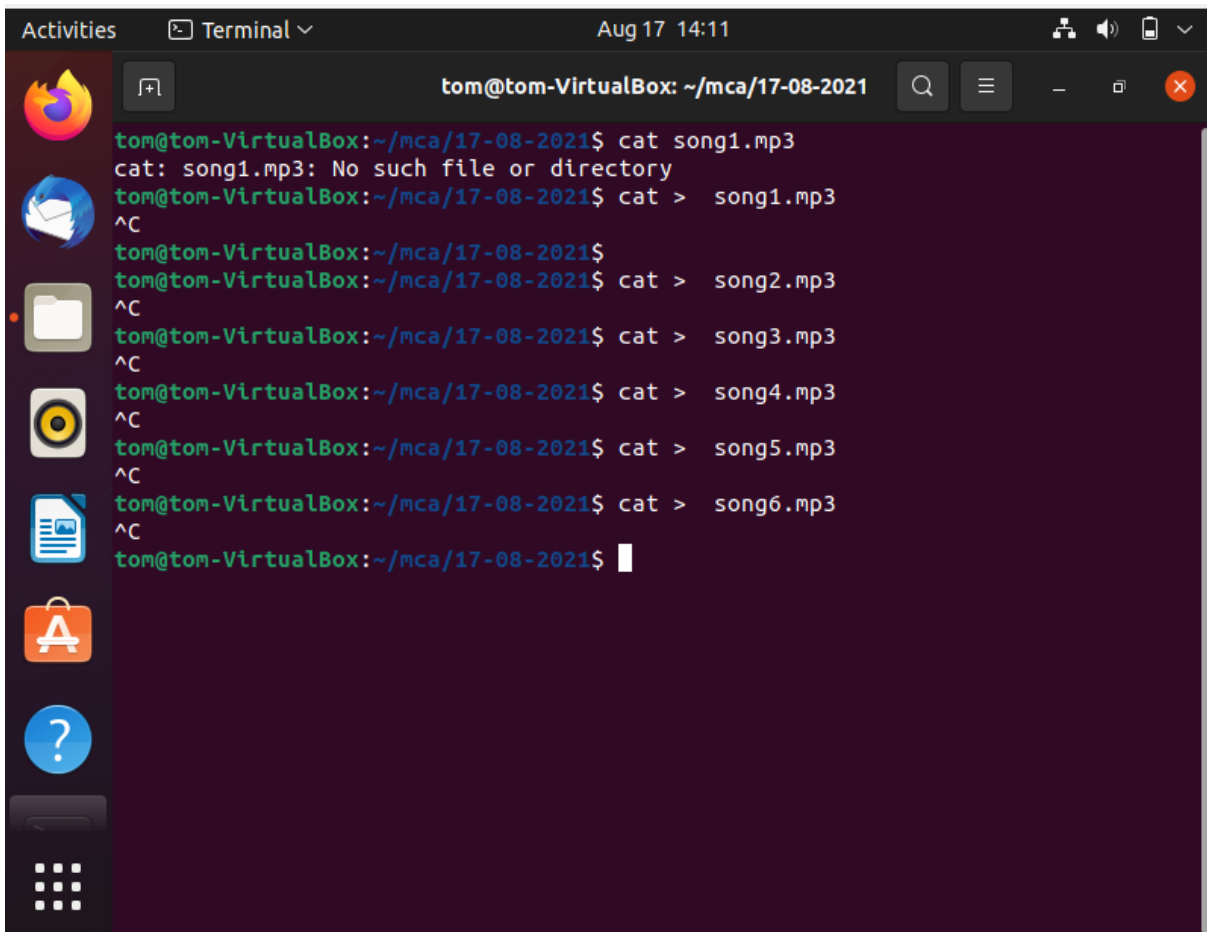


Assignment-5

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

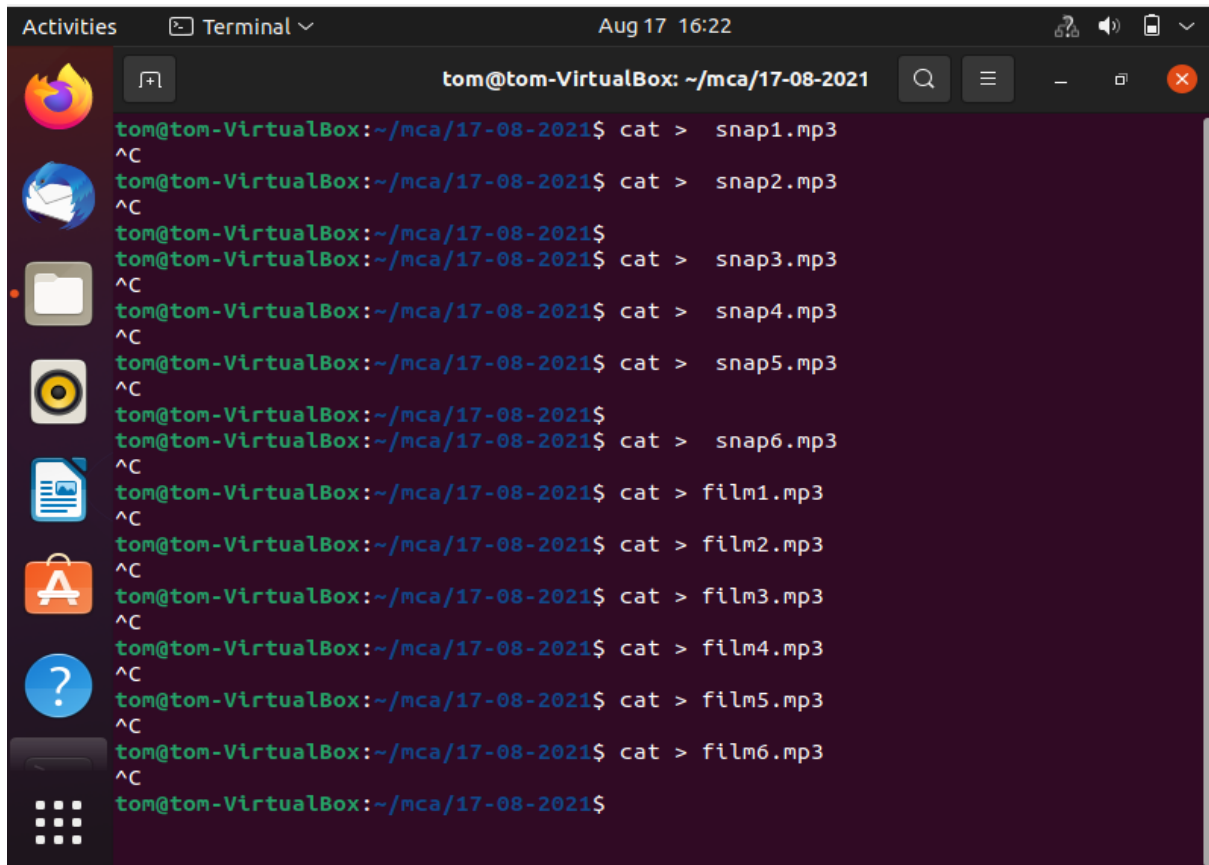
(In each set, replace X with the numbers 1 through 6)



The screenshot shows a terminal window titled "tom@tom-VirtualBox: ~/mca/17-08-2021". The terminal displays the following commands and output:

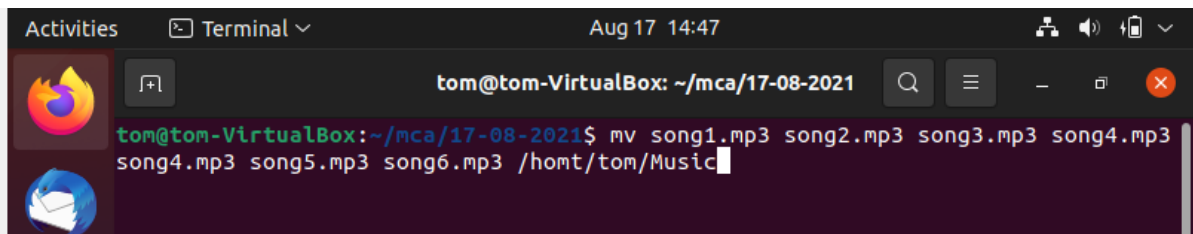
```
tom@tom-VirtualBox:~/mca/17-08-2021$ cat song1.mp3
cat: song1.mp3: No such file or directory
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song1.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ 
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song2.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song3.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song4.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song5.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > song6.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$
```

The terminal window has a dark background with a light-colored text. The left sidebar shows various application icons, including Firefox, a file manager, and a terminal icon. The top bar indicates the date and time as "Aug 17 14:11".

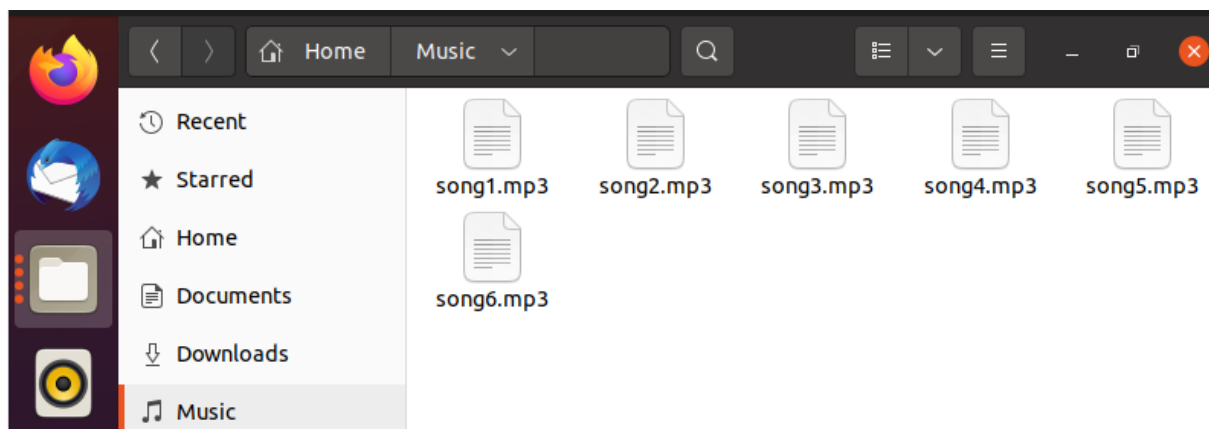
A terminal window titled 'tom@tom-VirtualBox: ~/mca/17-08-2021' with a search bar and window controls. The terminal shows a series of 'cat > filename.mp3' commands for files named snap1.mp3 through snap6.mp3 and film1.mp3 through film6.mp3. Each command is followed by a carriage return (^C) and a new prompt. The left sidebar shows application icons for Firefox, Mail, Files, Music, and a help icon.

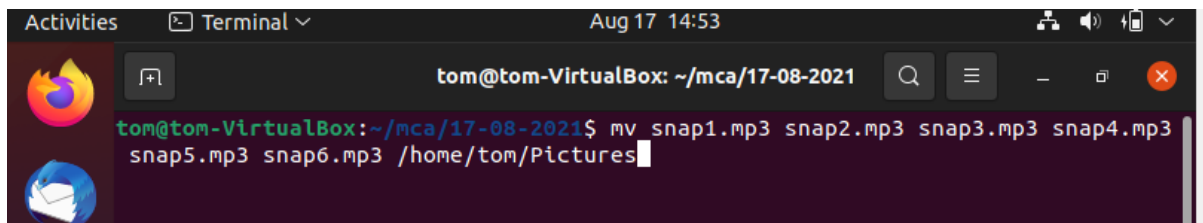
```
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap1.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap2.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap3.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap4.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap5.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > snap6.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film1.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film2.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film3.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film4.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film5.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$ cat > film6.mp3
^C
tom@tom-VirtualBox:~/mca/17-08-2021$
```

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.

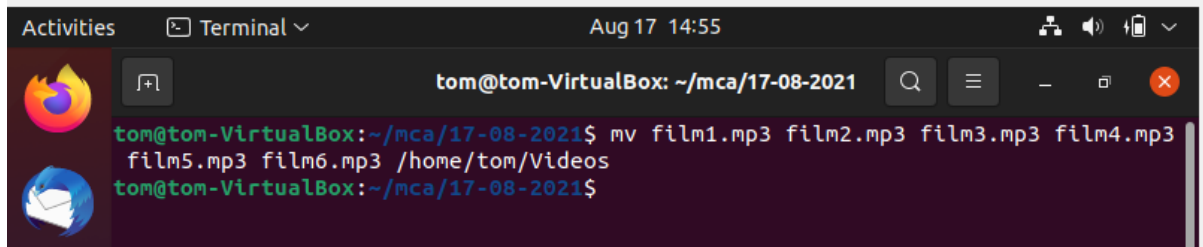
A terminal window titled 'tom@tom-VirtualBox: ~/mca/17-08-2021' showing a single 'mv' command to move six song files from the current directory to the user's music directory. The command is: mv song1.mp3 song2.mp3 song3.mp3 song4.mp3 song5.mp3 song6.mp3 /home/tom/Music.

```
tom@tom-VirtualBox:~/mca/17-08-2021$ mv song1.mp3 song2.mp3 song3.mp3 song4.mp3
song5.mp3 song6.mp3 /home/tom/Music
```



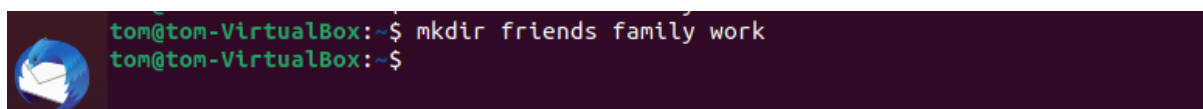


```
tom@tom-VirtualBox: ~/mca/17-08-2021
tom@tom-VirtualBox:~/mca/17-08-2021$ mv snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3
snap5.mp3 snap6.mp3 /home/tom/Pictures
```



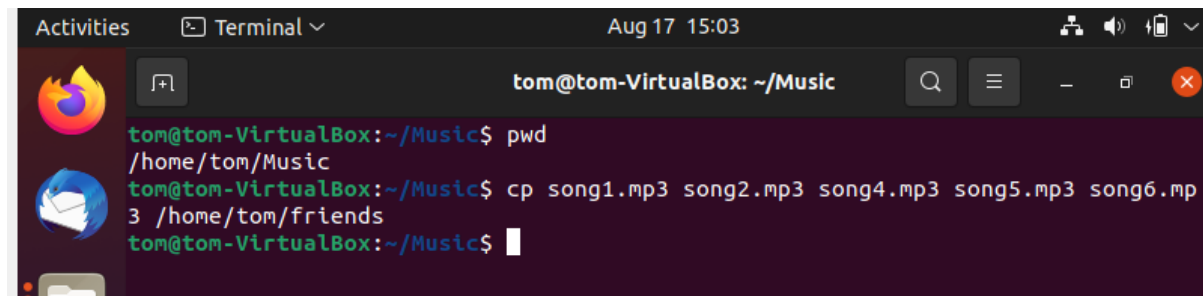
```
tom@tom-VirtualBox: ~/mca/17-08-2021
tom@tom-VirtualBox:~/mca/17-08-2021$ mv film1.mp3 film2.mp3 film3.mp3 film4.mp3
film5.mp3 film6.mp3 /home/tom/Videos
tom@tom-VirtualBox:~/mca/17-08-2021$
```

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.

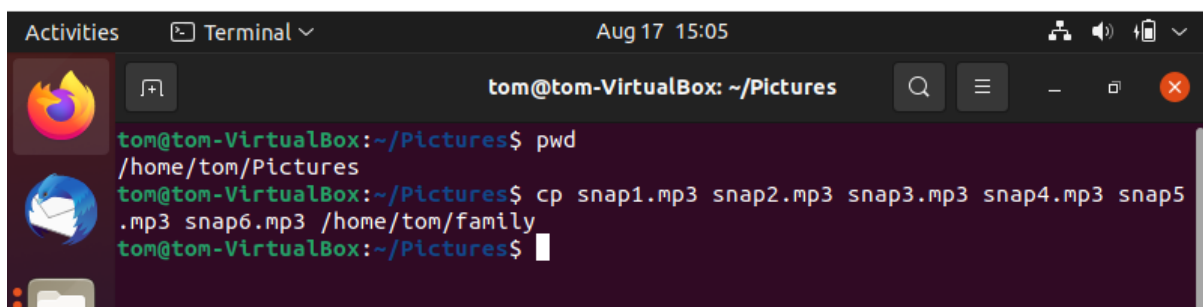


```
tom@tom-VirtualBox:~$ mkdir friends family work
tom@tom-VirtualBox:~$
```

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



```
tom@tom-VirtualBox: ~/Music
tom@tom-VirtualBox:~/Music$ pwd
/home/tom/Music
tom@tom-VirtualBox:~/Music$ cp song1.mp3 song2.mp3 song4.mp3 song5.mp3 song6.mp3
3 /home/tom/friends
tom@tom-VirtualBox:~/Music$
```



```
tom@tom-VirtualBox: ~/Pictures
tom@tom-VirtualBox:~/Pictures$ pwd
/home/tom/Pictures
tom@tom-VirtualBox:~/Pictures$ cp snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5
.mp3 snap6.mp3 /home/tom/family
tom@tom-VirtualBox:~/Pictures$
```

```
Activities Terminal Aug 17 15:06
tom@tom-VirtualBox: ~/friends
tom@tom-VirtualBox:~/friends$ pwd
/home/tom/friends
tom@tom-VirtualBox:~/friends$ ls
song1.mp3 song2.mp3 song4.mp3 song5.mp3 song6.mp3
tom@tom-VirtualBox:~/friends$
```

```
Activities Terminal Aug 17 15:07
tom@tom-VirtualBox: ~/family
tom@tom-VirtualBox:~/family$ pwd
/home/tom/family
tom@tom-VirtualBox:~/family$ ls
snap1.mp3 snap2.mp3 snap3.mp3 snap4.mp3 snap5.mp3 snap6.mp3
tom@tom-VirtualBox:~/family$
```

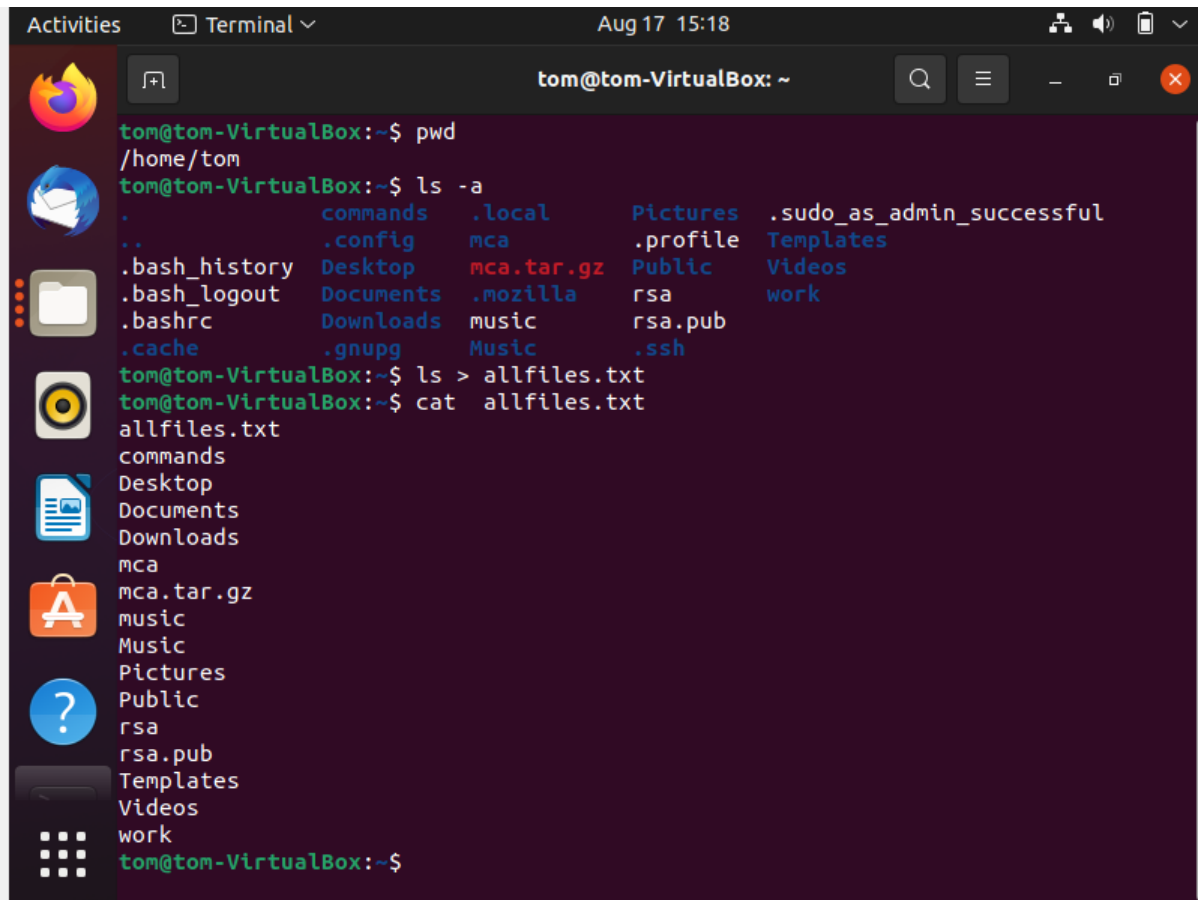
5). Attempt to delete both family and friends projects with a single rmdir command.

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

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

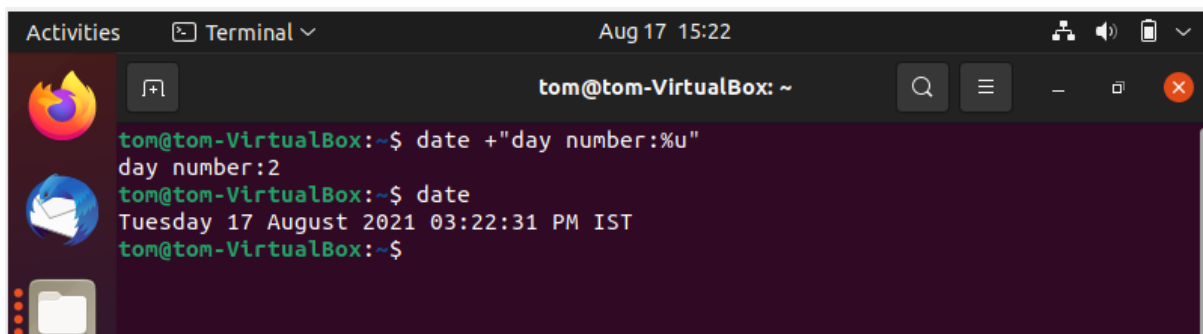
```
Activities Terminal Aug 17 15:11
tom@tom-VirtualBox: ~
tom@tom-VirtualBox:~$ ls
commands Downloads mca Music rsa Videos
Desktop family mca.tar.gz Pictures rsa.pub work
Documents friends music Public Templates
tom@tom-VirtualBox:~$ rm friends family
rm: cannot remove 'friends': Is a directory
rm: cannot remove 'family': Is a directory
tom@tom-VirtualBox:~$ rm -r friends family
tom@tom-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.

A terminal window titled 'tom@tom-VirtualBox: ~' with a search bar and window controls. The user runs 'pwd' showing '/home/tom', then 'ls -a' showing a long listing of files and directories including hidden ones like .bash_history and .cache. Finally, they run 'ls > allfiles.txt' and 'cat allfiles.txt' to verify the contents of the new file.

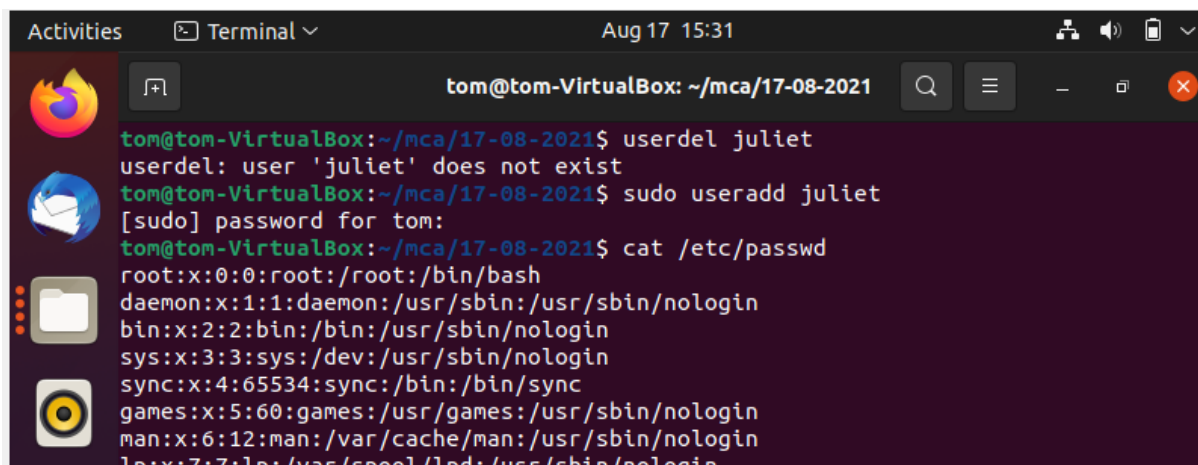
```
tom@tom-VirtualBox:~$ pwd
/home/tom
tom@tom-VirtualBox:~$ ls -a
.          commands  .local    Pictures  .sudo_as_admin_successful
..         .config   mca       .profile  Templates
.bash_history Desktop  mca.tar.gz Public     Videos
.bash_logout Documents .mozilla  rsa       work
.bashrc    Downloads music     rsa.pub
.cache     .gnupg   Music     .ssh
tom@tom-VirtualBox:~$ ls > allfiles.txt
tom@tom-VirtualBox:~$ cat allfiles.txt
allfiles.txt
commands
Desktop
Documents
Downloads
mca
mca.tar.gz
music
Music
Pictures
Public
rsa
rsa.pub
Templates
Videos
work
tom@tom-VirtualBox:~$
```

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

A terminal window titled 'tom@tom-VirtualBox: ~' with a search bar and window controls. The user runs 'date +"day number:%u"' showing 'day number:2', and then 'date' showing the full date and time: 'Tuesday 17 August 2021 03:22:31 PM IST'.

```
tom@tom-VirtualBox:~$ date +"day number:%u"
day number:2
tom@tom-VirtualBox:~$ date
Tuesday 17 August 2021 03:22:31 PM IST
tom@tom-VirtualBox:~$
```

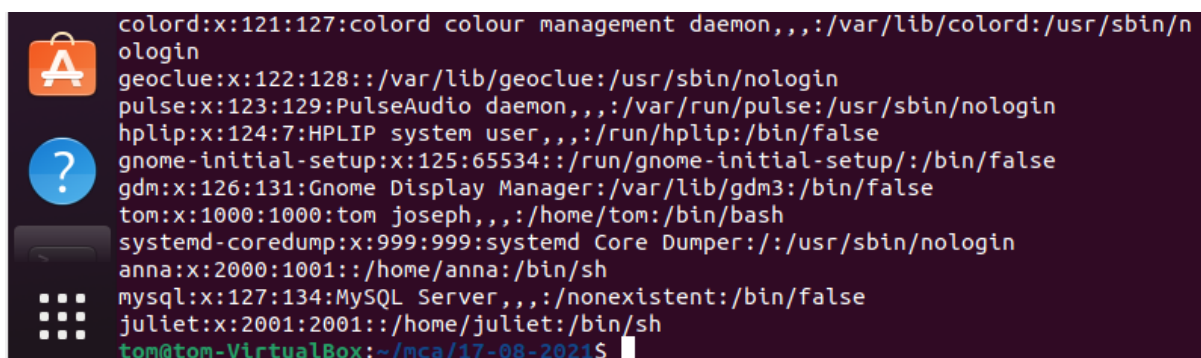
9). Add the user Juliet



A terminal window titled 'tom@tom-VirtualBox: ~/mca/17-08-2021' with a search bar and window controls. The terminal shows the following commands and output:

```
tom@tom-VirtualBox:~/mca/17-08-2021$ userdel juliet
userdel: user 'juliet' does not exist
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd juliet
[sudo] password for tom:
tom@tom-VirtualBox:~/mca/17-08-2021$ 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
```

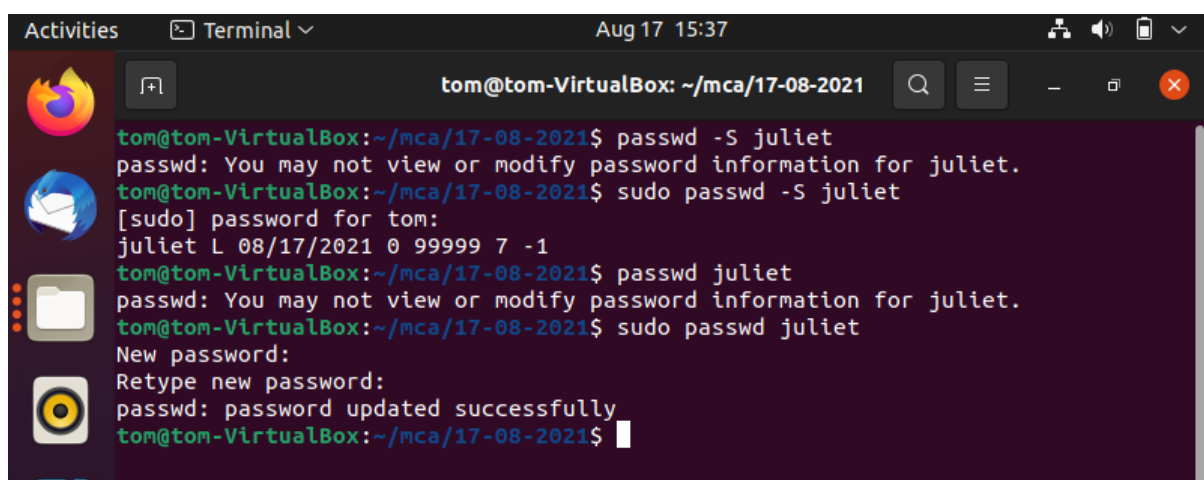
10). Confirm that Juliet has been added by examining the /etc/passwd file



A terminal window showing the contents of the /etc/passwd file. The output lists system users and regular users, including the newly added 'juliet'.

```
colord:x:121:127:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:122:128::/var/lib/geoclue:/usr/sbin/nologin
pulse:x:123:129:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
hplip:x:124:7:HPLIP system user,,,:/run/hplip:/bin/false
gnome-initial-setup:x:125:65534::/run/gnome-initial-setup:/bin/false
gdm:x:126:131:Gnome Display Manager:/var/lib/gdm3:/bin/false
tom:x:1000:1000:tom joseph,,,:/home/tom:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
anna:x:2000:1001::/home/anna:/bin/sh
mysql:x:127:134:MySQL Server,,,:/nonexistent:/bin/false
juliet:x:2001:2001::/home/juliet:/bin/sh
tom@tom-VirtualBox:~/mca/17-08-2021$
```

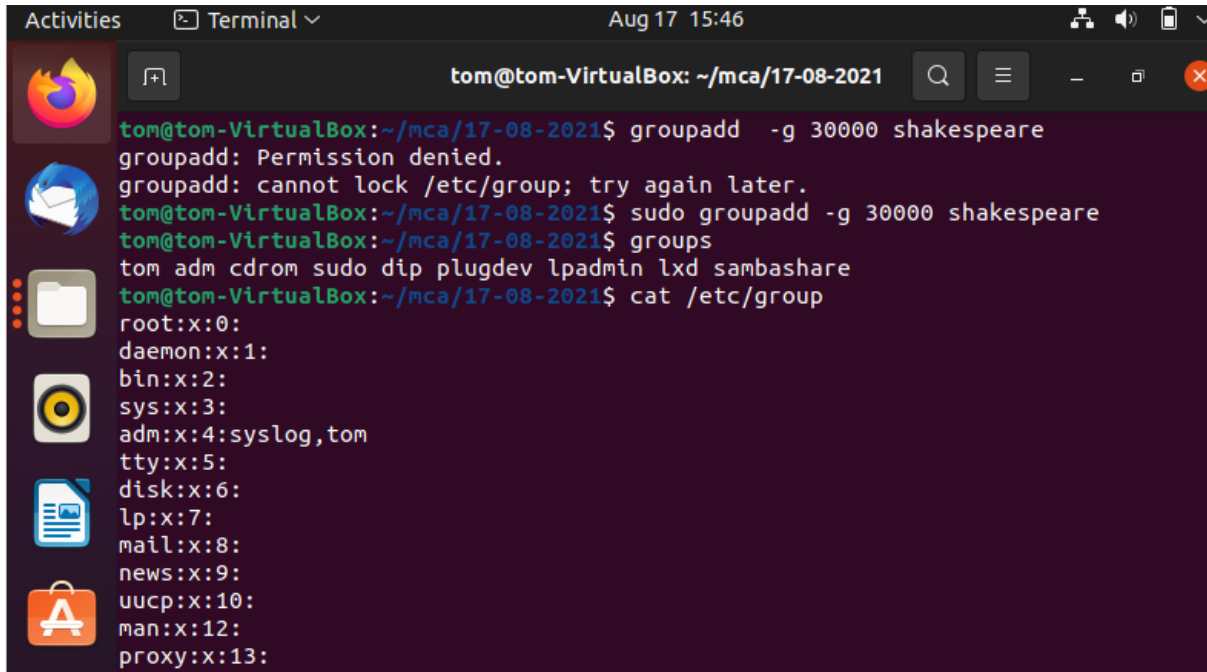
11). Use the passwd command to initialize Juliet's password



A terminal window showing the process of setting a password for the 'juliet' user using the 'passwd' command.

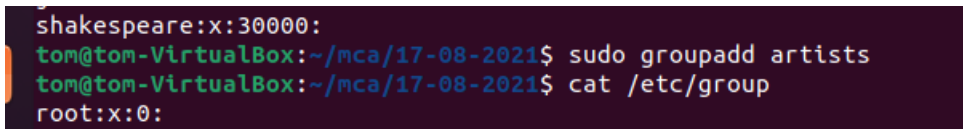
```
tom@tom-VirtualBox:~/mca/17-08-2021$ passwd -S juliet
passwd: You may not view or modify password information for juliet.
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo passwd -S juliet
[sudo] password for tom:
juliet L 08/17/2021 0 99999 7 -1
tom@tom-VirtualBox:~/mca/17-08-2021$ passwd juliet
passwd: You may not view or modify password information for juliet.
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo passwd juliet
New password:
Retype new password:
passwd: password updated successfully
tom@tom-VirtualBox:~/mca/17-08-2021$
```

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

A terminal window titled 'tom@tom-VirtualBox: ~/mca/17-08-2021' with a search bar and window controls. The terminal shows the user 'tom' attempting to create a group named 'shakespeare' with ID 30000. The first attempt fails with 'Permission denied' and 'cannot lock /etc/group; try again later.' The second attempt, using 'sudo', succeeds. The user then runs 'groups' and 'cat /etc/group' to verify the system's group configuration.

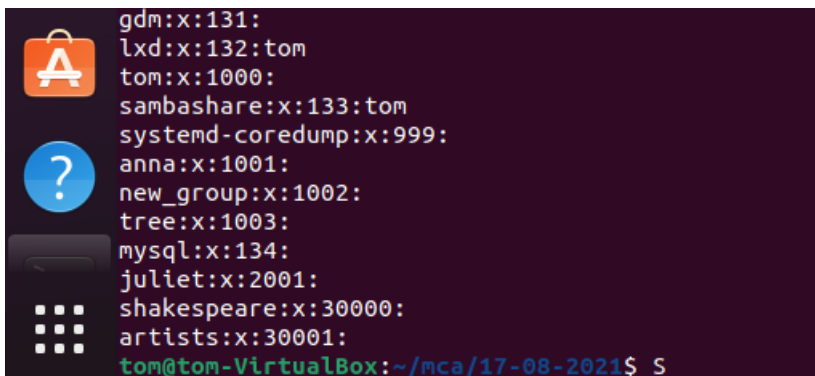
```
tom@tom-VirtualBox:~/mca/17-08-2021$ groupadd -g 30000 shakespeare
groupadd: Permission denied.
groupadd: cannot lock /etc/group; try again later.
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo groupadd -g 30000 shakespeare
tom@tom-VirtualBox:~/mca/17-08-2021$ groups
tom adm cdrom sudo dip plugdev lpadmin lxd sambashare
tom@tom-VirtualBox:~/mca/17-08-2021$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,tom
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
```

13). Create a supplementary group called artists.

A terminal window showing the user 'tom' creating a group named 'artists' with ID 30001 using 'sudo groupadd'. The user then runs 'cat /etc/group' to verify the system's group configuration.

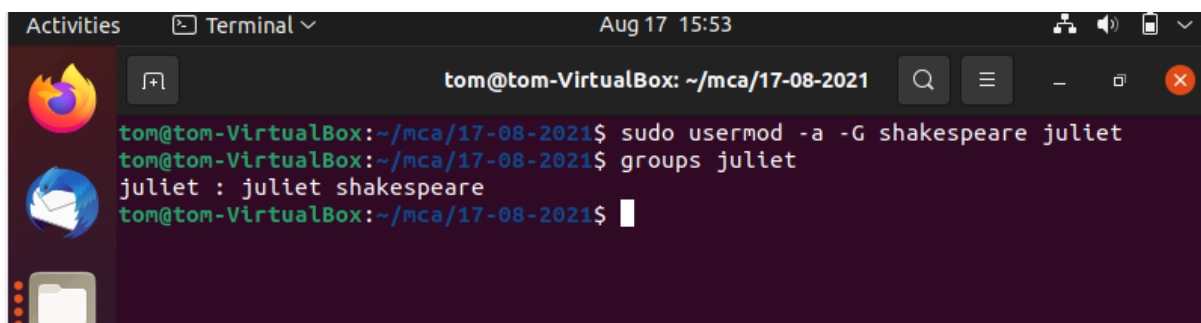
```
shakespeare:x:30000:
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo groupadd artists
tom@tom-VirtualBox:~/mca/17-08-2021$ cat /etc/group
root:x:0:
```

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

A terminal window showing the contents of the /etc/group file. The user runs 'cat /etc/group' and the output lists various system groups, including 'shakespeare:x:30000:' and 'artists:x:30001:'. The terminal prompt shows the user 'tom' is ready to execute another command.

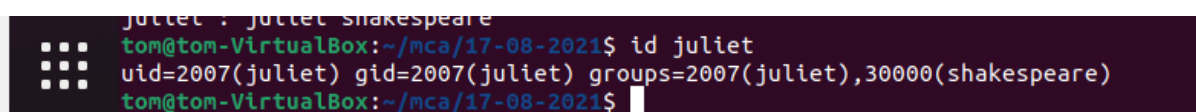
```
gdm:x:131:
lxd:x:132:tom
tom:x:1000:
sambashare:x:133:tom
systemd-coredump:x:999:
anna:x:1001:
new_group:x:1002:
tree:x:1003:
mysql:x:134:
juliet:x:2001:
shakespeare:x:30000:
artists:x:30001:
tom@tom-VirtualBox:~/mca/17-08-2021$ S
```


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



```
tom@tom-VirtualBox: ~/mca/17-08-2021
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo usermod -a -G shakespeare juliet
tom@tom-VirtualBox:~/mca/17-08-2021$ groups juliet
juliet : juliet shakespeare
tom@tom-VirtualBox:~/mca/17-08-2021$
```

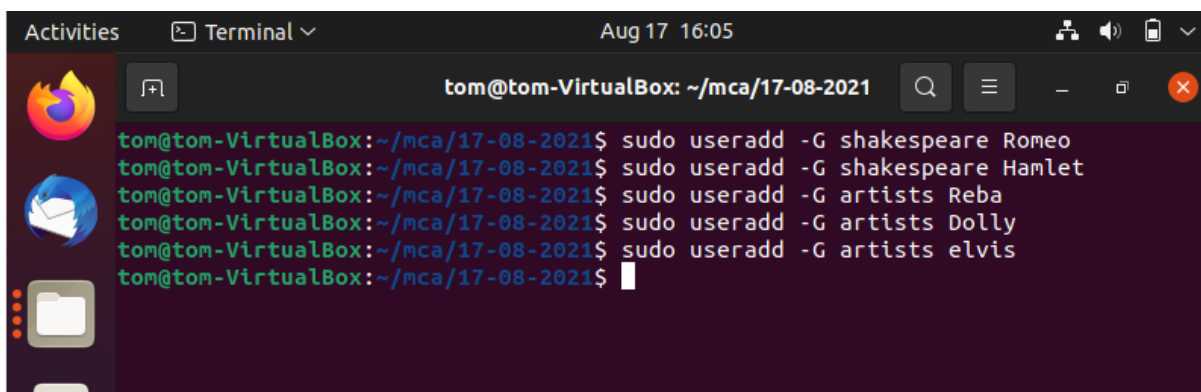
16). Confirm that Juliet has been added using the id command.



```
tom@tom-VirtualBox:~/mca/17-08-2021$ id juliet
uid=2007(juliet) gid=2007(juliet) groups=2007(juliet),30000(shakespeare)
tom@tom-VirtualBox:~/mca/17-08-2021$
```

17). Add Romeo and Hamlet to the Shakespeare group.

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

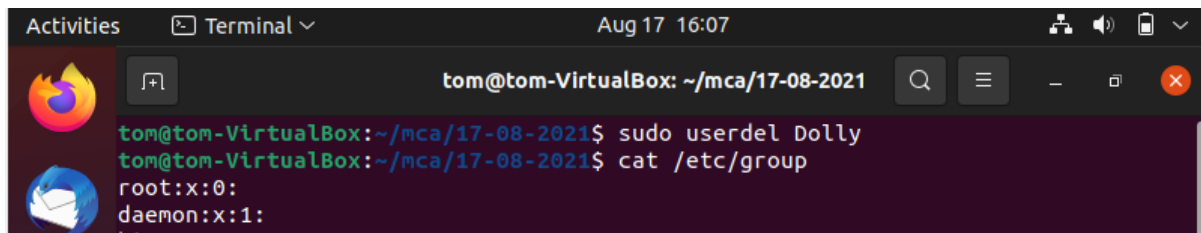


```
tom@tom-VirtualBox: ~/mca/17-08-2021
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd -G shakespeare Romeo
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd -G shakespeare Hamlet
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd -G artists Reba
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd -G artists Dolly
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo useradd -G artists elvis
tom@tom-VirtualBox:~/mca/17-08-2021$
```


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

```
systemd-coredump:x:999:
anna:x:1001:
new_group:x:1002:
tree:x:1003:
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:
tom@tom-VirtualBox:~/mca/17-08-2021$
```

20). Attempt to remove user Dolly.

A terminal window titled "tom@tom-VirtualBox: ~/mca/17-08-2021" with a search bar and window controls. The terminal shows the command "sudo userdel Dolly" being executed, followed by "cat /etc/group". The output of "cat /etc/group" is visible, showing the same group information as in the previous block, but with "Dolly" removed from the "artists" group.

```
tom@tom-VirtualBox:~/mca/17-08-2021$ sudo userdel Dolly
tom@tom-VirtualBox:~/mca/17-08-2021$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
systemd-coredump:x:999:
anna:x:1001:
new_group:x:1002:
tree:x:1003:
mysql:x:134:
juliet:x:2001:
shakespeare:x:30000:juliet,Romeo,Hamlet
artists:x:30001:Reba,elvis
Romeo:x:2002:
Hamlet:x:2003:
Reba:x:2004:
elvis:x:2006:
tom@tom-VirtualBox:~/mca/17-08-2021$
```

```
anna:x:1001:
new_group:x:1002:
tree:x:1003:
mysql:x:134:
juliet:x:2001:
shakespeare:x:30000:juliet,Romeo,Hamlet
artists:x:30001:Reba,elvis
Romeo:x:2002:
Hamlet:x:2003:
Reba:x:2004:
elvis:x:2006:
tom@tom-VirtualBox:~/mca/17-08-2021$
```