

1)What is the difference between cat and more command?

Cat: concatenate files and print on the standard output

More: is a filter for paging through text one screenful at a time

3)What is the difference between rm and rmdir using man?

Rm: remove files or directories

Rmdir: remove empty directories

4)Create the following hierarchy under your home directory:

```
nareman@nareman-Inspiron-3521:/home$ mkdir dir1
mkdir: cannot create directory 'dir1': Permission denied
nareman@nareman-Inspiron-3521:/home$ ls docs
ls: cannot access 'docs': No such file or directory
nareman@nareman-Inspiron-3521:/home$ man ls
nareman@nareman-Inspiron-3521:/home$ sudo mkdir dir1
[sudo] password for nareman:
nareman@nareman-Inspiron-3521:/home$ sudo mkdir docs
```

```
nareman@nareman-Inspiron-3521:/home$ sudo mkdir dir1/dir11
nareman@nareman-Inspiron-3521:/home$ sudo mkdir dir1/dir11/dir12
nareman@nareman-Inspiron-3521:/home$ sudo mkdir docs
```

```
nareman@nareman-Inspiron-3521:/home$ cd /home/dir1/
nareman@nareman-Inspiron-3521:/home/dir1$ mkdir dir12
mkdir: cannot create directory 'dir12': Permission denied
nareman@nareman-Inspiron-3521:/home/dir1$ sudo mkdir dir12
nareman@nareman-Inspiron-3521:/home/dir1$ sudo cat > dir11/file1
bash: dir11/file1: Permission denied
nareman@nareman-Inspiron-3521:/home/dir1$ chmod a+w dir11
chmod: changing permissions of 'dir11': Operation not permitted
nareman@nareman-Inspiron-3521:/home/dir1$ sudo chmod a+w dir11
nareman@nareman-Inspiron-3521:/home/dir1$ sudo cat > dir11/file1
nareman@nareman-Inspiron-3521:/home/dir1$ cd /home/docs
nareman@nareman-Inspiron-3521:/home/docs$ sudo chmod a+w docs
chmod: cannot access 'docs': No such file or directory
nareman@nareman-Inspiron-3521:/home/docs$ cd /home/
nareman@nareman-Inspiron-3521:/home$ sudo chmod a+w docs
nareman@nareman-Inspiron-3521:/home$ cat > docs/mycv
nareman@nareman-Inspiron-3521:/home$
```

another solution

```
nareman@nareman-Inspiron-3521:/home$ cd /home/nareman/
nareman@nareman-Inspiron-3521:~$ mkdir dir1
nareman@nareman-Inspiron-3521:~$ mkdir docs
nareman@nareman-Inspiron-3521:~$ cd dir1
nareman@nareman-Inspiron-3521:~/dir1$ mkdir dir11
nareman@nareman-Inspiron-3521:~/dir1$ mkdir dir12
nareman@nareman-Inspiron-3521:~/dir1$ cat dir11/file1
cat: dir11/file1: No such file or directory
nareman@nareman-Inspiron-3521:~/dir1$ cat dir11/
cat: dir11/: Is a directory
nareman@nareman-Inspiron-3521:~/dir1$ cat > dir11/
bash: dir11/: Is a directory
nareman@nareman-Inspiron-3521:~/dir1$ cat > dir11/file1
nareman@nareman-Inspiron-3521:~/dir1$ cd /home/nareman/docs
nareman@nareman-Inspiron-3521:~/docs$ cat mycv
cat: mycv: No such file or directory
nareman@nareman-Inspiron-3521:~/docs$ cat> mycv
nareman@nareman-Inspiron-3521:~/docs$
```

a) Remove dir11 in one step

My notice dir11 isn't empty and overcome by using -r option

```
nareman@nareman-Inspiron-3521:/home/dir1/dir11$ cd /home/dir1
nareman@nareman-Inspiron-3521:/home/dir1$ sudo rm -r dir11
nareman@nareman-Inspiron-3521:/home/dir1$ ls
```

b) Then remove dir12 using rmdir -p command. State what happened to the hierarchy (Note: you are in your home directory).

Answer

remove DIRECTORY and its ancestors parent

c) The output of the command pwd was /home/user. Write the absolute and relative path for the file mycv

```
nareman@nareman-Inspiron-3521:/home/docs$ pwd mycv
/home/docs
```

```
nareman@nareman-Inspiron-3521:/home/docs$ ls
mycv
```

5. copy the /etc/passwd file to your home directory making its name is mypasswd.

```
nareman@nareman-Inspiron-3521:/home$ sudo cp etc/passwd mypasswd
[sudo] password for nareman:
cp: cannot stat 'etc/passwd': No such file or directory
nareman@nareman-Inspiron-3521:/home$ sudo cp /etc/passwd mypasswd
nareman@nareman-Inspiron-3521:/home$ ls /home
docs mypasswd nareman
```

6. Rename this new file to be oldpasswd.

```
nareman@nareman-Inspiron-3521:/home$ ls
docs mypasswd nareman
nareman@nareman-Inspiron-3521:/home$ sudo mv mypasswd oldpasswd
nareman@nareman-Inspiron-3521:/home$ ls
docs nareman oldpasswd
nareman@nareman-Inspiron-3521:/home$
```

7. You are in /usr/bin, list four ways to go to your home directory

1st

```
nareman@nareman-Inspiron-3521:/home$ cd /usr/bin
nareman@nareman-Inspiron-3521:/usr/bin$ cd /home
nareman@nareman-Inspiron-3521:/home$
```

2nd

desktop way

3rd  
when searching in activities

8. List Linux commands in /usr/bin that start with letter w

```
nareman@nareman-Inspiron-3521:/usr/bin$ ls -d w*  
w      watch      wc      wget      whereis  whiptail  whoami  whoopsie-preferences  wpa_passphrase  write  
wall   watchgnupg  wdctl  whatis  which    who       whoopsie  word-list-compress  w.procps  
nareman@nareman-Inspiron-3521:/usr/bin$
```

9. Display the first 4 lines of /etc/passwd

```
nareman@nareman-Inspiron-3521:/etc$ sed -n "1,4p" /etc/passwd |cat -n  
1 root:x:0:0:root:/root:/bin/bash  
2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin  
3 bin:x:2:2:bin:/bin:/usr/sbin/nologin  
4 sys:x:3:3:sys:/dev:/usr/sbin/nologin  
nareman@nareman-Inspiron-3521:/etc$
```

10. Display the last 7 lines of /etc/passwd

```
nareman@nareman-Inspiron-3521:/etc$ tail -7 /etc/passwd  
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  
sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin  
nareman:x:1000:1000:nareman,,,:/home/nareman:/bin/bash  
systemd-coredump:x:999:999:systemd Core Dumper:./usr/sbin/nologin  
fwupd-refresh:x:127:134:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
```

11. Display the man pages of passwd the command and the file sequentially in one command.

```
nareman@nareman-Inspiron-3521:/etc$ man passwd;cat passwd  
root:x:0:0:root:/root:/bin/bash
```

12. Display the man page of the passwd file.

Man passwd

13. Display a list of all the commands that contain the keyword passwd in their man page.

```
nareman@nareman-Inspiron-3521:/etc$ man -k passwd
chgpaswd (8)          - update group passwords in batch mode
chpasswd (8)          - update passwords in batch mode
gpaswd (1)            - administer /etc/group and /etc/gshadow
grub-mkpasswd-pbkdf2 (1) - generate hashed password for GRUB
ldappaswd (1)         - change the password of an LDAP entry
openssl-paswd (1ssl)  - compute password hashes
pam_localuser (8)     - require users to be listed in /etc/passwd
passwd (1)            - change user password
passwd (1ssl)         - compute password hashes
passwd (5)            - the password file
update-paswd (8)      - safely update /etc/passwd, /etc/shadow and /etc/group
```