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LAB 1: Linux

1- Redhat installed successfully.

2- Cat and more are used for the same task of showing content of a file but there is a difference when showing a larger file. Cat shows the whole file scrolling off the screen or terminal but more shows output screenful at a time on terminal with a percentage of how much of file is displayed.

```
[kerolosyoussef@localhost etc]$ cat passwd
[kerolosyoussef@localhost etc]$ more passwd
```

3- Rm command to remove files or directories whereas rmdir command to remove empty directories.

```
[kerolosyoussef@localhost ~]$ man rm
[kerolosyoussef@localhost ~]$ man rmdir
```

4- Make directory of dir1 and dir11 categorized from home.

```
[kerolosyoussef@localhost ~]$ mkdir dir1
[kerolosyoussef@localhost ~]$ cd home/kerolosyoussef/dir1
bash: cd: home/kerolosyoussef/dir1: No such file or directory
[kerolosyoussef@localhost ~]$ cd /home/kerolosyoussef/dir1
[kerolosyoussef@localhost dir1]$ mkdir dir11
```

Then make directory of dir12 categorized from dir1 and create myfile inside dir12.

```
[kerolosyoussef@localhost dir1]$ cd /home/kerolosyoussef/dir1/dir11
[kerolosyoussef@localhost dir11]$ pwd
/home/kerolosyoussef/dir1/dir11
[kerolosyoussef@localhost dir11]$ cd ../
[kerolosyoussef@localhost dir1]$ mkdir dir12
[kerolosyoussef@localhost dir1]$ cd /home/kerolosyoussef/dir1/dir12
[kerolosyoussef@localhost dir12]$ pwd
/home/kerolosyoussef/dir1/dir12
[kerolosyoussef@localhost dir12]$ cd ../dir11
[kerolosyoussef@localhost dir11]$ pwd
/home/kerolosyoussef/dir1/dir11
[kerolosyoussef@localhost dir11]$ touch myfile
[kerolosyoussef@localhost dir11]$ ls
myfile
```

Then make directory of docs and create mycv inside it.

```
[kerolosyoussef@localhost dir11]$ cd ../../
[kerolosyoussef@localhost ~]$ pwd
/home/kerolosyoussef
[kerolosyoussef@localhost ~]$ mkdir docs
[kerolosyoussef@localhost ~]$ cd /home/kerolosyoussef/docs
[kerolosyoussef@localhost docs]$ pwd
/home/kerolosyoussef/docs
[kerolosyoussef@localhost docs]$ touch mycv
[kerolosyoussef@localhost docs]$ ls
mycv
```

a) use command rm -r to remove full directory instead of rmdir

```
[kerolosyoussef@localhost docs]$ rmdir /home/kerolosyoussef/dir1/dir11
rmdir: failed to remove '/home/kerolosyoussef/dir1/dir11': Directory not empty
[kerolosyoussef@localhost docs]$ rm  /home/kerolosyoussef/dir1/dir11
rm: cannot remove '/home/kerolosyoussef/dir1/dir11': Is a directory
[kerolosyoussef@localhost docs]$ rm -r  /home/kerolosyoussef/dir1/dir11
```

b) rmdir -p remove file with its parents except for home directory.

```
[kerolosyoussef@localhost docs]$ cd /home/kerolosyoussef/dir1/dir12
[kerolosyoussef@localhost dir12]$
[kerolosyoussef@localhost dir12]$ cd ../
[kerolosyoussef@localhost dir1]$ rmdir -p /home/kerolosyoussef/dir1/dir12
rmdir: failed to remove directory '/home/kerolosyoussef': Permission denied
```

c) Absolute path : cd /home/kerolosyoussef/docs
   Relative path : cd ./docs

```
[kerolosyoussef@localhost ~]$ pwd
/home/kerolosyoussef
[kerolosyoussef@localhost ~]$ cd /home/kerolos/docs
bash: cd: /home/kerolos/docs: No such file or directory
[kerolosyoussef@localhost ~]$ cd /home/kerolosyoussef/docs
[kerolosyoussef@localhost docs]$ ls
mycv
[kerolosyoussef@localhost docs]$ cd ../
[kerolosyoussef@localhost ~]$ cd ./docs
[kerolosyoussef@localhost docs]$ ls
mycv
```

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```
[kerolosyoussef@localhost docs]$ cp /etc/passwd /home/kerolosyoussef
```

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```
[kerolosyoussef@localhost docs]$ mv /home/kerolosyoussef/passwd /home/kerolosyou
ssef/oldpasswd
[kerolosyoussef@localhost docs]$ cd ../
[kerolosyoussef@localhost ~]$ ls
Desktop    Documents   Music        Pictures    Templates
docs       Downloads   oldpasswd    Public      Videos
```

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```
[kerolosyoussef@localhost ~]$ cd /usr/bin
[kerolosyoussef@localhost bin]$ cd /home/kerolosyoussef
[kerolosyoussef@localhost ~]$ cd /usr/bin
[kerolosyoussef@localhost bin]$ cd ../..
[kerolosyoussef@localhost /]$ cd /usr/bin
[kerolosyoussef@localhost bin]$ cd -
/
[kerolosyoussef@localhost /]$ cd /usr/bin
[kerolosyoussef@localhost bin]$ cd ~
[kerolosyoussef@localhost ~]$
```

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```
[kerolosyoussef@localhost ~]$ head -4 /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
```

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```
[kerolosyoussef@localhost ~]$ tail -7 /etc/passwd
colord:x:977:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42::/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:976:975::/run/gnome-initial-setup/:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
tcpdump:x:72:72::/:/sbin/nologin
kerolosyoussef:x:1000:1000:Kerolos Youssef:/home/kerolosyoussef:/bin/bash
```

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```
[kerolosyoussef@localhost ~]$ man -a passwd
--Man-- next: passwd(5) [ view (return) | skip (Ctrl-D) | quit (Ctrl-C) ]
^C
```

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```
[kerolosyoussef@localhost ~]$ man -s 5 passwd
```

```
PASSWD(5)                    Linux Programmer's Manual                    PASSWD(5)

NAME
       passwd - password file

DESCRIPTION
       The  /etc/passwd file is a text file that describes user login accounts
       for the system.  It should have read permission allowed for  all  users
       (many  utilities,  like ls(1) use it to map user IDs to usernames), but
       write access only for the superuser.

       In the good old days there was no great problem with this general  read
       permission.   Everybody  could  read  the  encrypted passwords, but the
       hardware was too slow to crack a well-chosen password, and moreover the
       basic  assumption  used to be that of a friendly user-community.  These
       days many people run some version of the shadow password  suite,  where
       /etc/passwd  has  an  'x'  character  in  the  password  field, and the
       encrypted passwords are in /etc/shadow, which is readable by the  supe-
       ruser only.

       If the encrypted password, whether in /etc/passwd or in /etc/shadow, is
       an empty string, login is allowed without even asking for  a  password.
       Note  that this functionality may be intentionally disabled in applica-
 Manual page passwd(5) line 1 (press h for help or q to quit)
```

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```
[kerolosyoussef@localhost ~]$ man -k passwd
chgpasswd (8)            - update group passwords in batch mode
chpasswd (8)             - update passwords in batch mode
fgetpwent_r (3)          - get passwd file entry reentrantly
getpwent_r (3)           - get passwd file entry reentrantly
gpasswd (1)              - administer /etc/group and /etc/gshadow
grub2-mkpasswd-pbkdf2 (1) - Generate a PBKDF2 password hash.
lpasswd (1)              - Change group or user password
openssl-passwd (1ssl) - compute password hashes
pam_localuser (8)       - require users to be listed in /etc/passwd
passwd (1)              - update user's authentication tokens
passwd (5)              - password file
passwd2des (3)          - RFS password encryption
pwhistory_helper (8) - Helper binary that transfers password hashes from pass...
saslpasswd2 (8)         - set a user's sasl password
smbpasswd (5)           - The Samba encrypted password file
sslpasswd (1ssl)        - compute password hashes
userpasswd (1)          - A graphical tool to allow users to change their passwo...
vncpasswd (1)           - change the VNC password
```