

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

a) rm to remove files or directories even if it contains files

-b) rmdir to removes empty directories only.

4. Create the following hierarchy under your home directory:

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ pwd
/home/ibrahim
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ mkdir dir1
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ ls
Desktop  dir1  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ mkdir docs
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ ls
Desktop  docs  Downloads  Pictures  snap  Videos
dir1     Documents  Music  Public  Templates
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ cd docs
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/docs$ touch mycv
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/docs$ ls
mycv
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/home$ cd ibrahim
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ ls
Desktop  docs  Downloads  Pictures  snap  Videos
dir1     Documents  Music  Public  Templates
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ cd dir1
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ mkdir dir11
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ mkdir dir12
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ ls
dir11  dir12
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ cd dir11
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1/dir11$ touch file1
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1/dir11$ ls
file1
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1/dir11$
```

5. Remove dir11 in one-step. What did you notice? And how did you overcome that?

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ rm -r dir11
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ ls
dir12
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$
```

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

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ rmdir -p dir12
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$ ls
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/dir1$
```

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

A) The absolute path is `/home/user/dir1/dir11/docs/mycv`

B) The relative path is `dir1/dir11/docs/mycv`

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

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ man -a passwd
```

NAME

`passwd` - change user password

SYNOPSIS

`passwd` [options] [LOGIN]

DESCRIPTION

The `passwd` command changes passwords for user accounts. A normal user may only change the password for their own account, while the superuser may change the password for any account. `passwd` also changes the account or associated password validity period.

Password Changes

The user is first prompted for their old password, if one is present. This password is then encrypted and compared against the stored password. The user has only one chance to enter the correct password. The superuser is permitted to bypass this step so that forgotten passwords may be changed.

After the password has been entered, password aging information is checked to see if the user is permitted to change the password at this time. If not, `passwd` refuses to change the password and exits.

The user is then prompted twice for a replacement password. The second entry is compared against the first and both are required to match in order for the password to be changed.

Then, the password is tested for complexity. As a general guideline, passwords should consist of 6 to 8 characters including one or more characters from each of the following sets:

- lower case alphabets
- digits 0 thru 9
- punctuation marks

Manual page passwd(1) line 1 (press h for help or q to quit)

15.Display the man page of the passwd file.

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ man -s 5 passwd
```

```
PASSWD(5)                                File Formats and Conversions                                PASSWD(5)

NAME
    passwd - the password file

DESCRIPTION
    /etc/passwd contains one line for each user account, with seven fields delimited by colons (":").
    These fields are:

    • login name

    • optional encrypted password

    • numerical user ID

    • numerical group ID

    • user name or comment field

    • user home directory

    • optional user command interpreter

    If the password field is a lower-case "x", then the encrypted password is actually stored in the
    shadow(5) file instead; there must be a corresponding line in the /etc/shadow file, or else the user
    account is invalid.

    The encrypted password field may be empty, in which case no password is required to authenticate as
    the specified login name. However, some applications which read the /etc/passwd file may decide not to
    permit any access at all if the password field is blank.

    A password field which starts with an exclamation mark means that the password is locked. The
    remaining characters on the line represent the password field before the password was locked.

    Refer to crypt(3) for details on how this string is interpreted.

    If the password field contains some string that is not a valid result of crypt(3), for instance ! or
    Manual page passwd(5) line 1 (press h for help or q to quit)
```

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

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~$ man -k passwd
chgpaswd (8)      - update group passwords in batch mode
chpaswd (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)    - OpenSSL application commands
passwd (5)       - the password file
update-passwd (8) - safely update /etc/passwd, /etc/shadow and /etc/group
```