



## Basic Linux Commands Assignments

### Assignment-1

Connect and disconnect with login Access

- What happens when you login a non-existent users or username?
  - Provide Screenshot and What you understand, explain in short brief?

Ans. User does not exist. User name which I am trying to log in is not exist.

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# su - abcdef  
su: user abcdef does not exist  
[root@localhost ~]#
```

A terminal window titled "root@localhost:~" with a menu bar (File, Edit, View, Search, Terminal, Help). The command "su - abcdef" is entered, resulting in the message "su: user abcdef does not exist". The prompt returns to "[root@localhost ~]#".

### Assignment-2

Password changing

- Login into your account and then change password?
  - Change your password into **IneuR0n#42** and hit the **Enter** key
    - Explain what happen and give screenshot?

Ans. Password for my user omkar changed to **IneuR0n#42**.

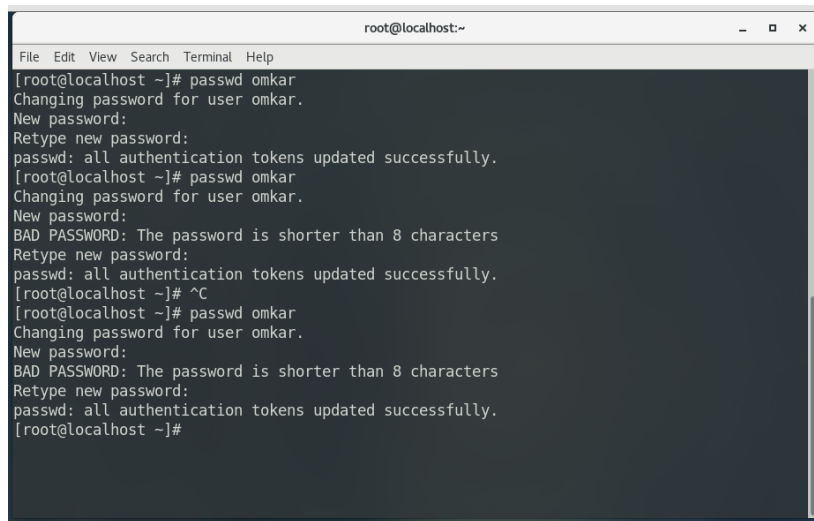
```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# passwd omkar  
Changing password for user omkar.  
New password:  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@localhost ~]#
```

A terminal window titled "root@localhost:~" with a menu bar (File, Edit, View, Search, Terminal, Help). The command "passwd omkar" is entered, resulting in the message "Changing password for user omkar." followed by prompts for "New password:" and "Retype new password:". The final message is "passwd: all authentication tokens updated successfully." and the prompt returns to "[root@localhost ~]#".

- Try again to change password but use like password **1234** or **abcd**

- Explain what happen and give screenshot?

Ans. Password changed to 1234 but with a prompt of bad password.  
(BAD PASSWORD: The password is shorter than 8 characters)

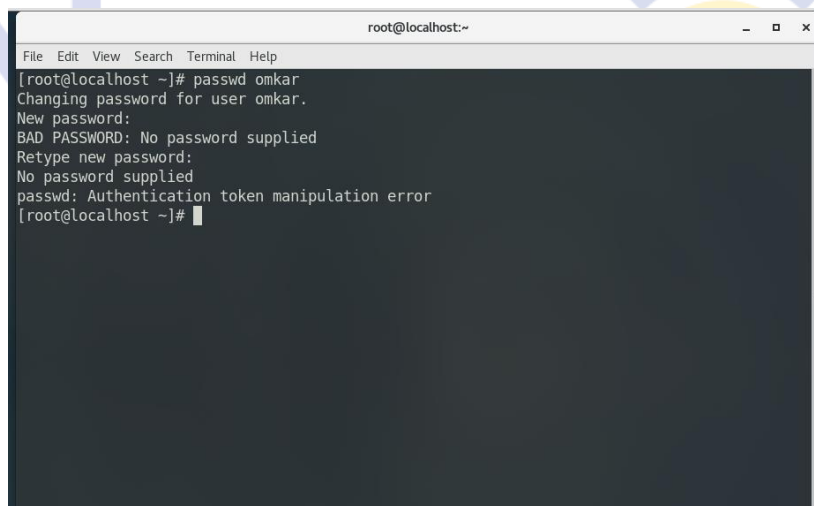


```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# passwd omkar  
Changing password for user omkar.  
New password:  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@localhost ~]# passwd omkar  
Changing password for user omkar.  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@localhost ~]# ^C  
[root@localhost ~]# passwd omkar  
Changing password for user omkar.  
New password:  
BAD PASSWORD: The password is shorter than 8 characters  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@localhost ~]#
```

- Try again to change password but now don't use any password just hit **Enter** key

- Explain what happen and give screenshot?

Ans. Password for the use not changed with prompt 'No password supplied'.  
(passwd: Authentication token manipulation error)



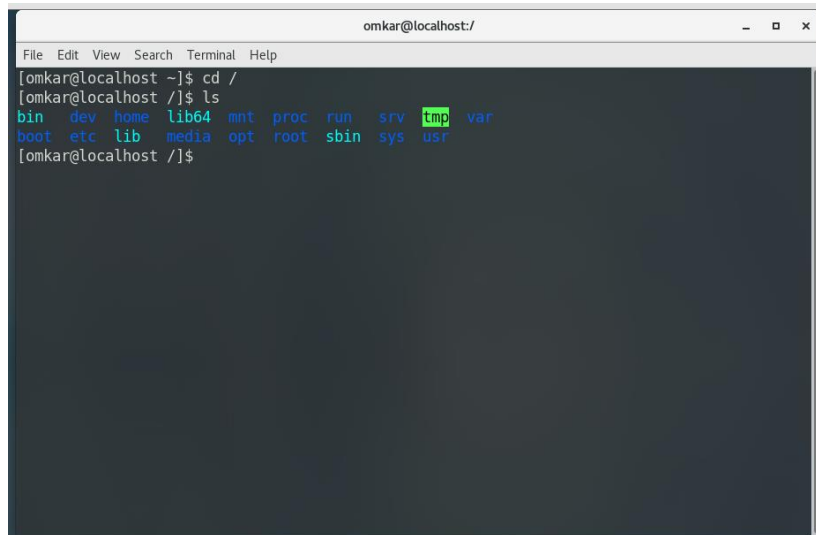
```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# passwd omkar  
Changing password for user omkar.  
New password:  
BAD PASSWORD: No password supplied  
Retype new password:  
No password supplied  
passwd: Authentication token manipulation error  
[root@localhost ~]#
```

### Assignment-3

#### Working with Directories

- Enter the command **cd /** and then **ls** and then hit **Enter** key
  - Take screenshot and explain what output we got?

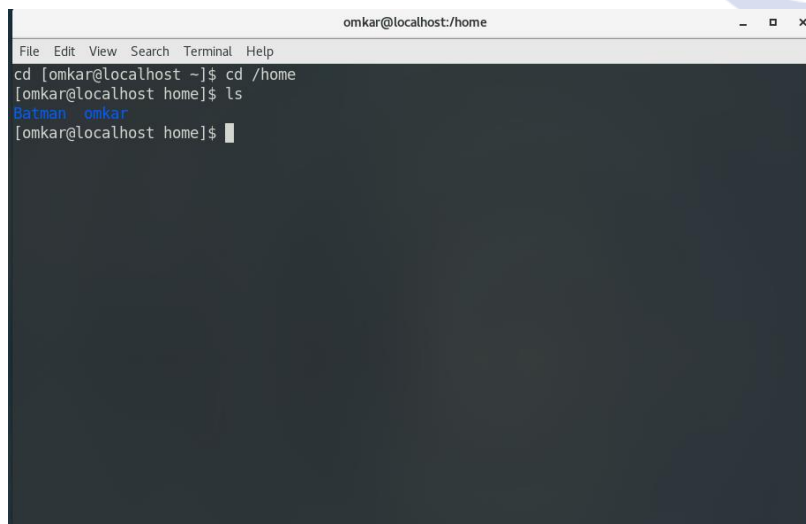
Ans. command 'cd /' changes directory to the root directory. 'ls' command shows list of files and directories inside directory.



```
omkar@localhost: /  
File Edit View Search Terminal Help  
[omkar@localhost ~]$ cd /  
[omkar@localhost /]$ ls  
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var  
boot  etc  lib  media  opt  root  sbin  sys  usr  
[omkar@localhost /]$
```

- Enter the command now **cd /home** and then hit **Enter** key
  - Do **ls**, provide screenshot and explain what is **/home** directory used for?

Ans. Home directory contains user's personal files and information. Each user has its own directory.



```
omkar@localhost: /home  
File Edit View Search Terminal Help  
cd [omkar@localhost ~]$ cd /home  
[omkar@localhost home]$ ls  
Batman  omkar  
[omkar@localhost home]$
```

- Enter **cd ..** and hit **Enter** key [ *Note: here we have space after cd then use double dot* ]
  - Check what happen and give screenshot?

Ans. Command used to move one directory up from current directory. Again we are in root directory.

```
omkar@localhost: /  
File Edit View Search Terminal Help  
cd [omkar@localhost ~]$ cd /home  
[omkar@localhost home]$ ls  
Batman omkar  
[omkar@localhost home]$ pwd  
/home  
[omkar@localhost home]$ cd ..  
[omkar@localhost /]$ pwd  
/  
[omkar@localhost /]$
```

- Now enter **cd /var/www/html** and then type **cd** and hit **Enter** key
  - Explain what happen and give screenshot?

Ans. Directory does not exist at given path.

```
omkar@localhost: /var  
File Edit View Search Terminal Help  
[omkar@localhost ~]$ cd /  
[omkar@localhost /]$ ls  
bin dev home lib64 mnt proc run srv tmp var  
boot etc lib media opt root sbin sys usr  
[omkar@localhost /]$ cd /home  
[omkar@localhost home]$ ls  
Batman omkar  
[omkar@localhost home]$ cd ..  
[omkar@localhost /]$ ls  
bin dev home lib64 mnt proc run srv tmp var  
boot etc lib media opt root sbin sys usr  
[omkar@localhost /]$ cd /var/www/html  
bash: cd: /var/www/html: No such file or directory  
[omkar@localhost /]$  
[omkar@localhost /]$ cd var  
[omkar@localhost var]$ ls  
account cache db games kerberos local log nis preserve spool yp  
adm crash empty gopher lib lock mail opt run tmp  
[omkar@localhost var]$ ls -la  
. account cache db games kerberos local log nis preserve spool .updated  
.. adm crash empty gopher lib lock mail opt run tmp yp  
[omkar@localhost var]$
```

- Now type **cd /root** and then hit **Enter** key
  - Do **ls**, check any output we have on screen if yes then take screenshot?

Ans.

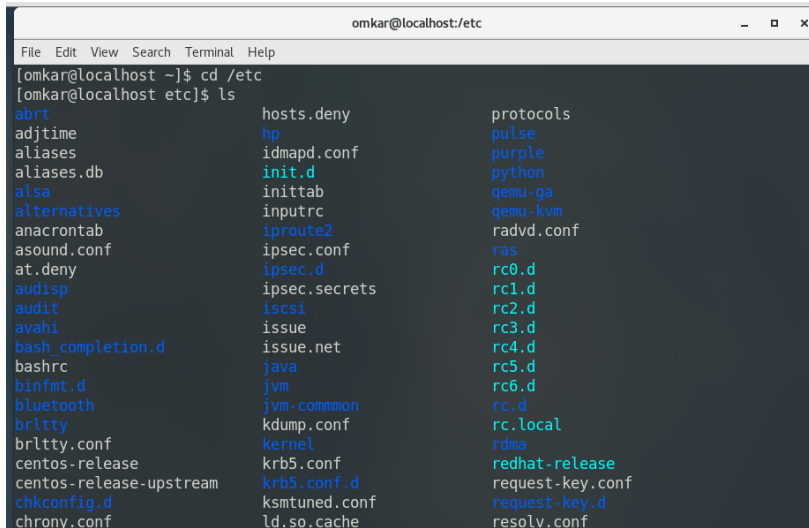
```
omkar@localhost: ~  
File Edit View Search Terminal Help  
[omkar@localhost var]$ sudo cd /root  
[sudo] password for omkar:  
omkar is not in the sudoers file. This incident will be reported.  
[omkar@localhost var]$ su root  
Password:  
su: Authentication failure  
[omkar@localhost var]$ su root  
Password:  
[root@localhost var]# cd /root  
[root@localhost ~]# ls  
anaconda-ks.cfg initial-setup-ks.cfg  
[root@localhost ~]#
```

## Assignment-4

### Working with File Listing

- Go to **cd /etc** and type **ls**
  - Take screenshot and explain what files you have seeing?
  - Take screenshot and explain what different output you found compare to previous command you used?

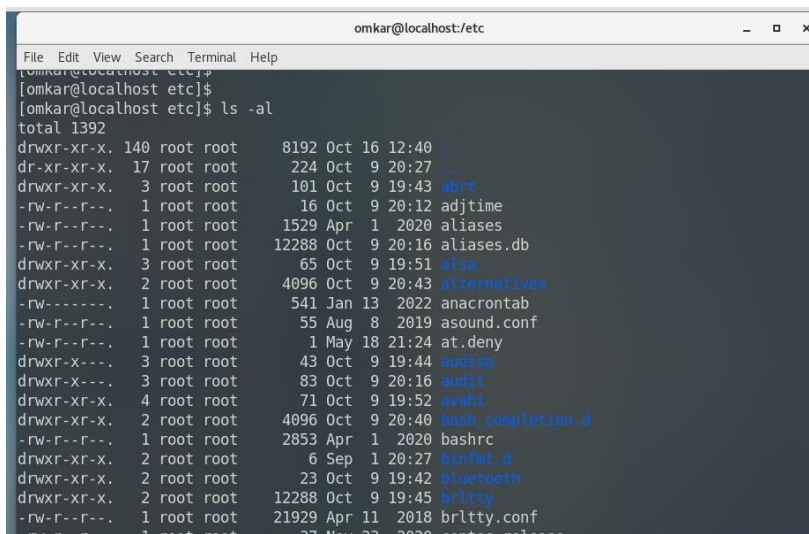
Ans. etc folder contains system's configuration files.



```
omkar@localhost:/etc
File Edit View Search Terminal Help
[omkar@localhost ~]$ cd /etc
[omkar@localhost etc]$ ls
abrt                  hosts.deny            protocols
adjtime              hp                    pulse
aliases              idmapd.conf           purple
aliases.db           init.d                python
alsa                 inittab               qemu-ga
alternatives         inputrc               qemu-kvm
anacrontab           iproute2              radvd.conf
asound.conf          ipsec.conf            ras
at.deny              ipsec.d               rc0.d
audisp               ipsec.secrets         rc1.d
audit               iscsi                 rc2.d
avahi                issue                 rc3.d
bash_completion.d   issue.net             rc4.d
bashrc               java                  rc5.d
binfmt.d             jvm                   rc6.d
bluetooth            jvm-common            rc.d
brlty                kdump.conf           rc.local
brlty.conf           kernel                rdma
centos-release       krb5.conf             redhat-release
centos-release-upstream krb5.conf.d          request-key.conf
chkconfig.d          ksmtuned.conf         request-key.d
chrony.conf          ld.so.cache           resolv.conf
```

- Then type **ls -al** and hit **Enter** key
  - Take screenshot and explain what new file or directory you found?

Ans. '-al' show list of hidden files starting with . symbol and column wise details including file permissions, number of links to the file, owner and group information, size of file in bytes, date and time, file or directory name.



```
omkar@localhost:/etc
File Edit View Search Terminal Help
[omkar@localhost etc]$
[omkar@localhost etc]$ ls -al
total 1392
drwxr-xr-x. 140 root root    8192 Oct 16 12:40 .
dr-xr-xr-x.  17 root root    224 Oct  9 20:27 ..
drwxr-xr-x.   3 root root    101 Oct  9 19:43 abrt
-rw-r--r--.   1 root root     16 Oct  9 20:12 adjtime
-rw-r--r--.   1 root root   1529 Apr  1 2020 aliases
-rw-r--r--.   1 root root  12288 Oct  9 20:16 aliases.db
drwxr-xr-x.   3 root root     65 Oct  9 19:51 alsa
drwxr-xr-x.   2 root root   4096 Oct  9 20:43 alternatives
-rw-r-----.  1 root root    541 Jan 13 2022 anacrontab
-rw-r--r--.   1 root root     55 Aug  8 2019 asound.conf
-rw-r--r--.   1 root root      1 May 18 21:24 at.deny
drwxr-xr-x.   3 root root    43 Oct  9 19:44 audisp
drwxr-xr-x.   3 root root    83 Oct  9 20:16 audit
drwxr-xr-x.   4 root root    71 Oct  9 19:52 avahi
drwxr-xr-x.   2 root root   4096 Oct  9 20:40 bash_completion.d
-rw-r--r--.   1 root root   2853 Apr  1 2020 bashrc
drwxr-xr-x.   2 root root      6 Sep  1 20:27 binfmt.d
drwxr-xr-x.   2 root root    23 Oct  9 19:42 bluetooth
drwxr-xr-x.   2 root root  12288 Oct  9 19:45 brlty
-rw-r--r--.   1 root root  21929 Apr 11 2018 brlty.conf
-rw-r--r--.   1 root root      37 Nov 23 2020 centos-release
```

- Then use **ls -li** and hit **Enter** key
  - Now see what different output its shows and take screenshot?

Ans. Prints index number of each file.

```
omkar@localhost:/etc
File Edit View Search Terminal Help
[omkar@localhost etc]$
[omkar@localhost etc]$ ls -li
34489888 abrt 17554819 mke2fs.conf
17747424 adjtime 34377456 modprobe.d
16778449 aliases 50931816 modules-load.d
18559014 aliases.db 16778463 motd
18084552 alsa 16777284 mtab
33887329 alternatives 17007714 mtools.conf
17855441 anacrontab 51192093 multipath
17447425 asound.conf 17005523 my.cnf
17490812 at.deny 1303890 my.cnf.d
1820758 audisp 18617847 nanorc
34549135 audit 1660998 ndctl
2767896 avahi 17554838 netconfig
78055 bash_completion.d 17747413 NetworkManager
16778450 bashrc 17562199 networks
34377460 binfmt.d 17724278 nfs.conf
17697161 bluetooth 17747444 nfsmount.conf
18068096 britty 17562625 nsswitch.conf
18068125 brltty.conf 16904514 nsswitch.conf.bak
16777343 centos-release 51589011 ntp
16778434 centos-release-upstream 17820947 numad.conf
50442672 chkconfig.d 18019730 oddjob
18068087 chrony.conf 18019731 oddjobd.conf
```

- Then use **ls --help** and see other options about **ls** command
  - Explore it and try with other attribute we can use with **ls** command

```
omkar@localhost:/etc
File Edit View Search Terminal Help
[omkar@localhost etc]$
[omkar@localhost etc]$
[omkar@localhost etc]$ ls -help
ls: invalid option -- 'e'
Try 'ls --help' for more information.
[omkar@localhost etc]$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

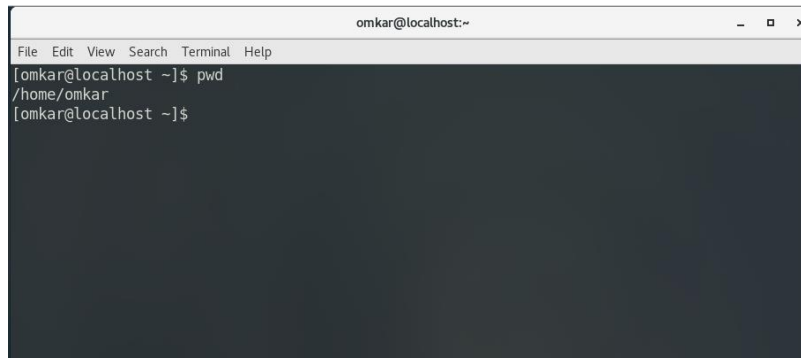
Mandatory arguments to long options are mandatory for short options too.
-a, --all do not ignore entries starting with .
-A, --almost-all do not list implied . and ..
--author with -l, print the author of each file
-b, --escape print C-style escapes for nongraphic characters
--block-size=SIZE scale sizes by SIZE before printing them; e.g.,
'--block-size=M' prints sizes in units of
1,048,576 bytes; see SIZE format below
-B, --ignore-backups do not list implied entries ending with ~
-c with -lt: sort by, and show, ctime (time of last
modification of file status information);
with -l: show ctime and sort by name;
otherwise: sort by ctime, newest first
-C list entries by columns
```

## Assignment-5

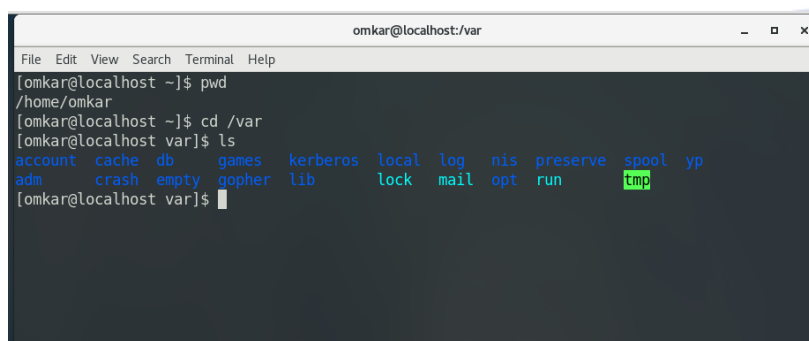
Know where you are and where you working

Here we use **pwd**, **cd** and **ls** as combine task to understand where you working on terminal and how you can switch from one directory to another one.

- Open terminal after restart the linux
  - Check which location you working, type **pwd** and take screenshot

A terminal window titled 'omkar@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is '[omkar@localhost ~]\$'. The user has entered 'pwd' and the output is '/home/omkar'. The prompt is now '[omkar@localhost ~]\$'.

- Now use **cd /var** and hit **Enter** key
  - Do **ls**, and see what output comes, give screenshot?

A terminal window titled 'omkar@localhost:/var' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is '[omkar@localhost ~]\$'. The user enters 'pwd' and the output is '/home/omkar'. The prompt is '[omkar@localhost ~]\$'. The user enters 'cd /var' and the prompt changes to '[omkar@localhost var]\$'. The user enters 'ls' and the output is a list of directories: 'account cache db games kerberos local log nis preserve spool yp' on the first line and 'adm crash empty gopher lib lock mail opt run tmp' on the second line. The prompt is '[omkar@localhost var]\$'.

- Do explore other help options of each command to learn more other things we can do with these commands

ls	Command show list of files and directories without any detail information.
ls -r	List files in reverse order.
ls -t	shows files by last modified, last edited file shows first here.
ls -l	shows one file per line.
ls -l	list of files and directories with detail information including file permission, number of links, file size, file owner, group, last modified date and time.
ls -ld	works same as ls -l command but shows details of particular single file only. Ex. Ls -ld /var
ls -a	shows all the files including hidden files starting with . or ..
ls -i	shows inode number of file. It is unique to every file and can not be same for other file in same file system.