

## Basic Linux Commands Assignments

### Assignment-1

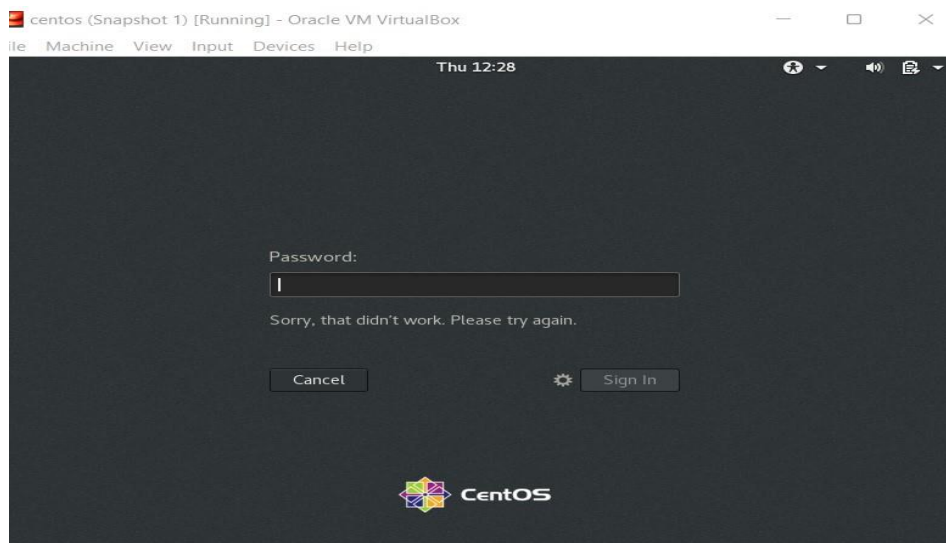
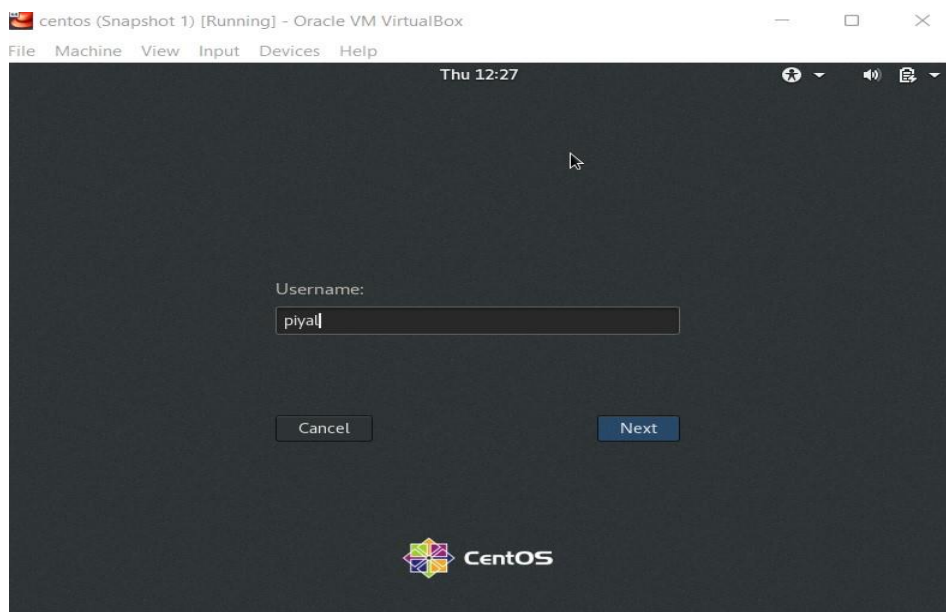
Connect and disconnect with login Access

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

#### **Solution:**

If I want to login a non-existent users or username it does not login to the centos os.

If I go to not listed ....give username .....>piyal.....next.....then I put password and press login .it comes window as given below.



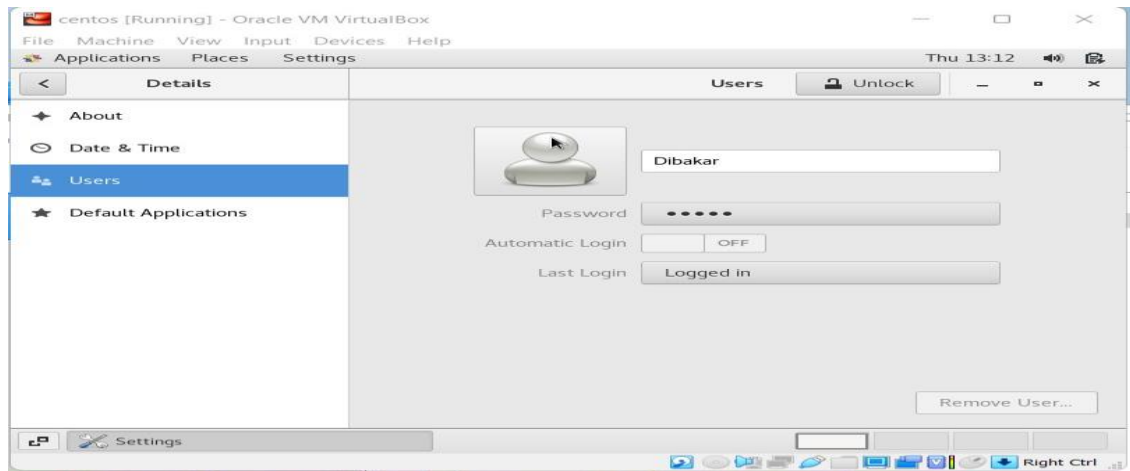
## Assignment-2

### Password changing

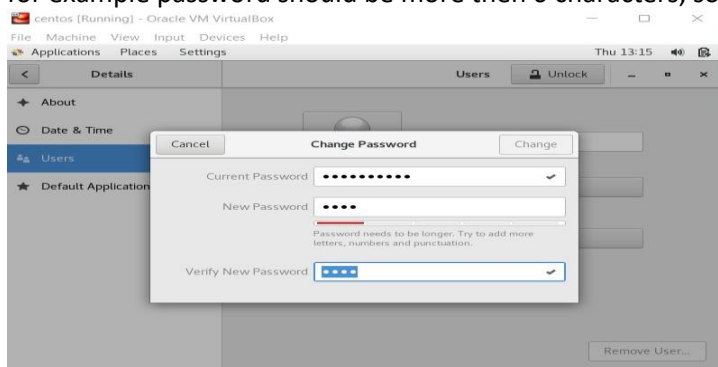
- Login into your account and then change password?
  - Change your password into **IneuRon#42** and hit the **Enter** key
    - Explain what happen and give screenshot?
  - Try again to change password but use like password **1234** or **abcd**
    - Explain what happen and give screenshot?
  - Try again to change password but now don't use any password just hit **Enter** key
    - Explain what happen and give screenshot?

### Solution:

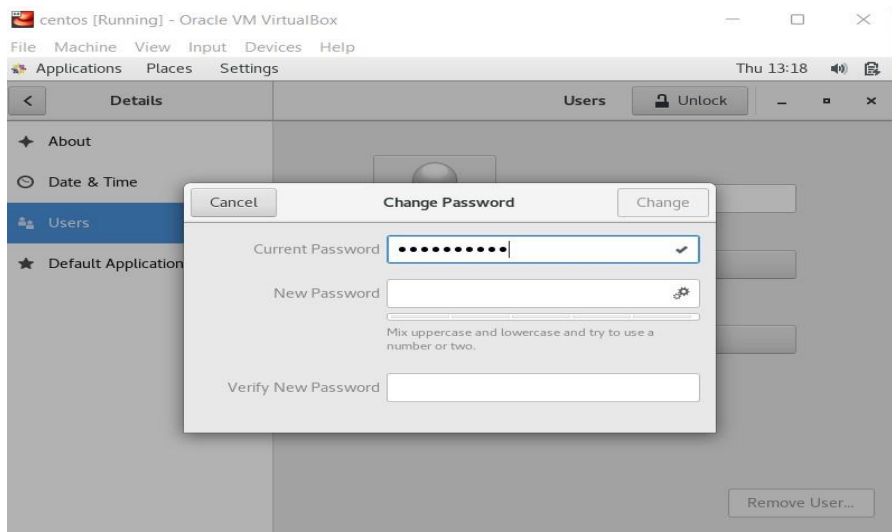
We can change password into IneuRon#42 as given below. We can click the password box and it take us to the change password window and we type the current password, type new password as IneuRon#42, verify new password and hit enter. In that way we can change the password.



2) we cannot change password like 1234 or abcd because there is some condition to give the password for example password should be more then 6 characters, some uper latter



3) If we want to change password but we don't use password it keeps current password. Screenshot given below.



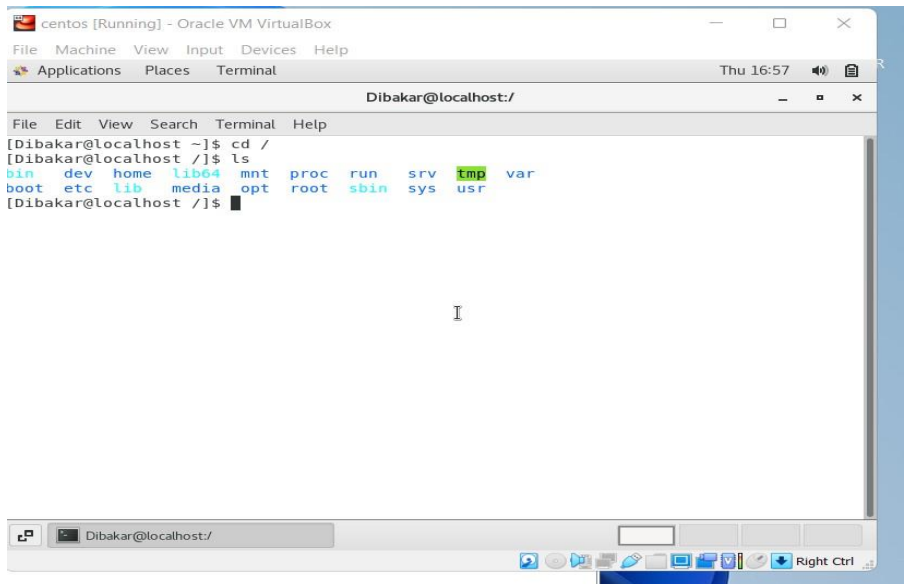
### Assignment-3

#### Working with Directories

- Enter the command **cd /** and then **ls** and then hit **Enter** key
  - Take screenshot and explain what output we got?
- Enter the command now **cd /home** and then hit **Enter** key
  - Do **ls**, provide screenshot and explain what is **/home** directory used for?
- Enter **cd ..** and hit **Enter** key [ *Note: here we have space after cd then use double dot* ]
  - Check what happen and give screenshot?
- Now enter **cd /var/www/html** and then type **cd** and hit **Enter** key
  - Explain what happen and give screenshot?
- Now type **cd /root** and then hit **Enter** key
  - Do **ls**, check any output we have on screen if yes then take screenshot?

#### Solution:

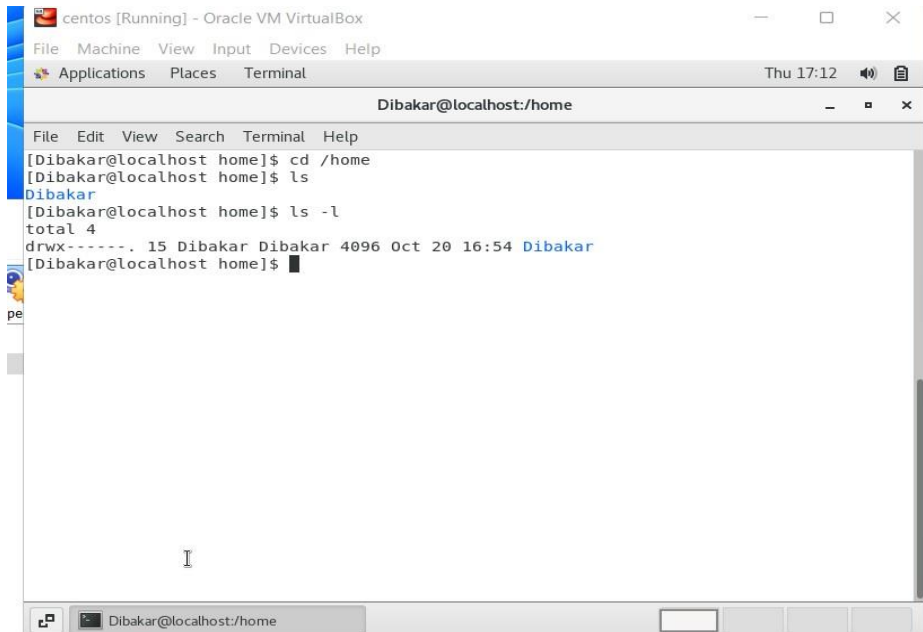
- 1) If we enter the command **cd /** then hit enter, we can enter the root directory. Then enter the command **ls** so that we can see the file and directory list of the root directory. Screenshot is given below.



The screenshot shows a terminal window titled "centos [Running] - Oracle VM VirtualBox". The terminal prompt is "Dibakar@localhost:/". The user has entered the command "cd /" and then "ls". The output of the "ls" command is a long listing of the root directory contents, including "bin", "dev", "home", "lib64", "mnt", "proc", "run", "srv", "tmp", "var", "boot", "etc", "lib", "media", "opt", "root", "sbin", "sys", and "usr".

```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 16:57
Dibakar@localhost:/
File Edit View Search Terminal Help
[Dibakar@localhost ~]$ cd /
[Dibakar@localhost ~]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[Dibakar@localhost ~]$
```

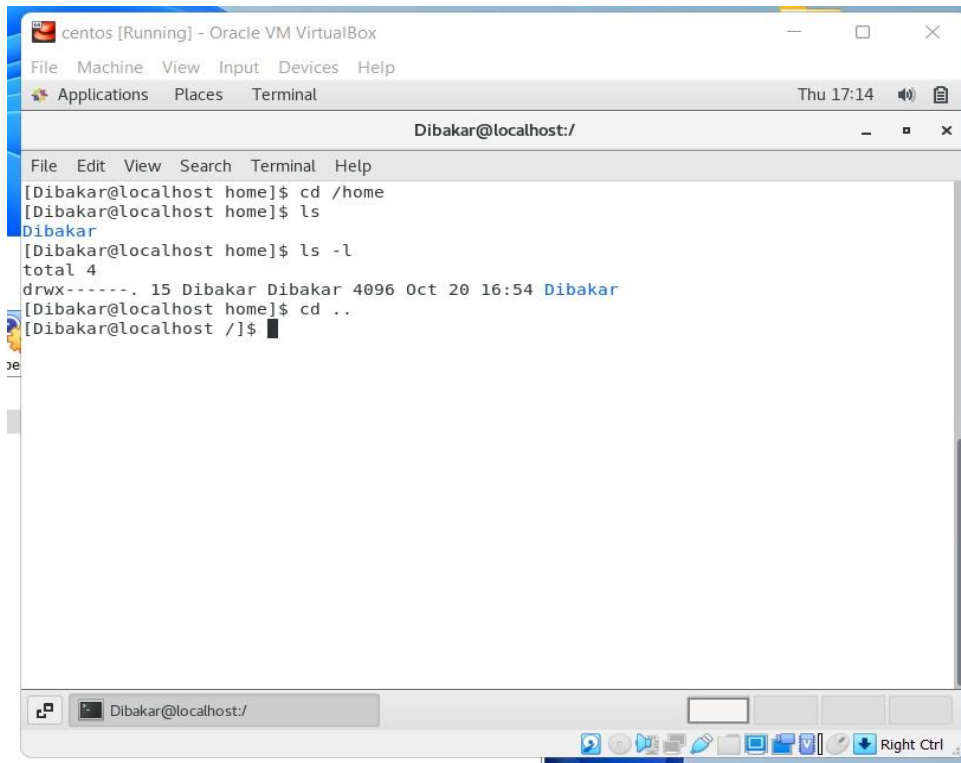
2) If we enter the command now **cd /home** and then hit **Enter** key, we can enter the home directory. After that we do **ls** so that we can see the all-directory list of home directories. The home directory is used for to keep file or directory of a user of the system. Screenshot is given below.



The screenshot shows a terminal window titled "centos [Running] - Oracle VM VirtualBox". The terminal prompt is "Dibakar@localhost:/home". The user has entered the command "cd /home" and then "ls". The output of the "ls" command is a long listing of the home directory contents, including "total 4", "drwx-----", "15", "Dibakar", "Dibakar", "4096", "Oct 20 16:54", and "Dibakar".

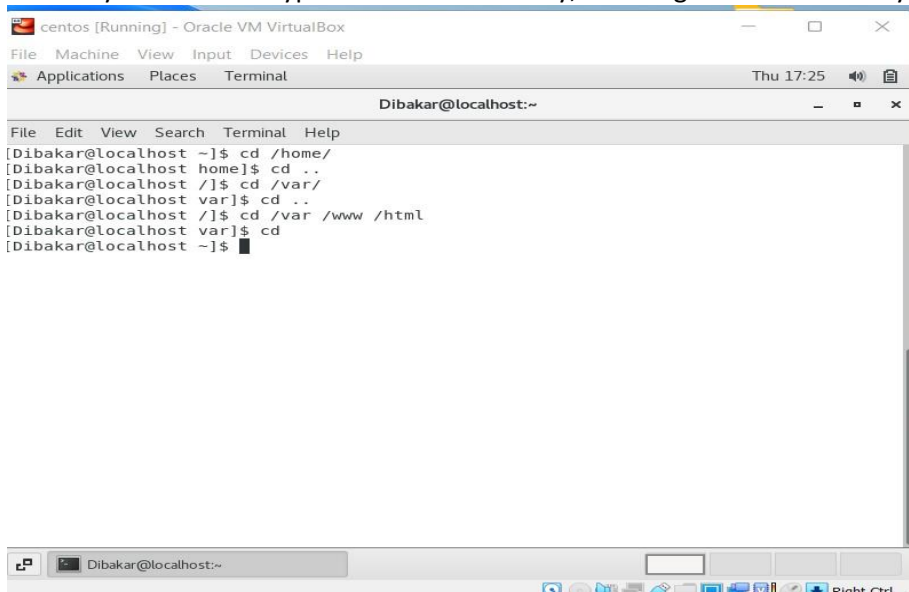
```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 17:12
Dibakar@localhost:/home
File Edit View Search Terminal Help
[Dibakar@localhost ~]$ cd /home
[Dibakar@localhost ~]$ ls
Dibakar
[Dibakar@localhost ~]$ ls -l
total 4
drwx----- 15 Dibakar Dibakar 4096 Oct 20 16:54 Dibakar
[Dibakar@localhost ~]$
```

3)**cd ..** is used for to go one directory back. Screenshot is given below.



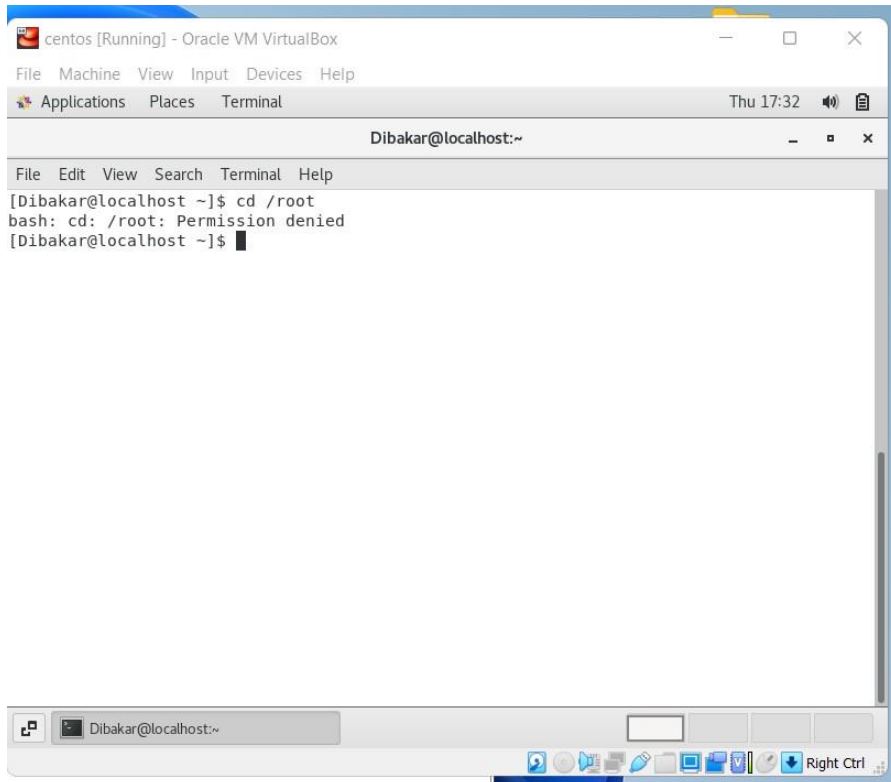
```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Thu 17:14
Dibakar@localhost:/
File Edit View Search Terminal Help
[Dibakar@localhost home]$ cd /home
[Dibakar@localhost home]$ ls
Dibakar
[Dibakar@localhost home]$ ls -l
total 4
drwx----- 15 Dibakar Dibakar 4096 Oct 20 16:54 Dibakar
[Dibakar@localhost home]$ cd ..
[Dibakar@localhost /]$
```

4) Now we write the command **cd /var/www/html** and hit **Enter** key, we can go inside the var directory. Then if we type **cd** and hit **Enter** key, we will go to root directory.



```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal Thu 17:25
Dibakar@localhost:~
File Edit View Search Terminal Help
[Dibakar@localhost ~]$ cd /home/
[Dibakar@localhost home]$ cd ..
[Dibakar@localhost /]$ cd /var/
[Dibakar@localhost var]$ cd ..
[Dibakar@localhost /]$ cd /var /www /html
[Dibakar@localhost var]$ cd
[Dibakar@localhost ~]$
```

5) Now type **cd /root** and hit **Enter** key, we see that permission denied because I am not a root user. Screenshot is given below.



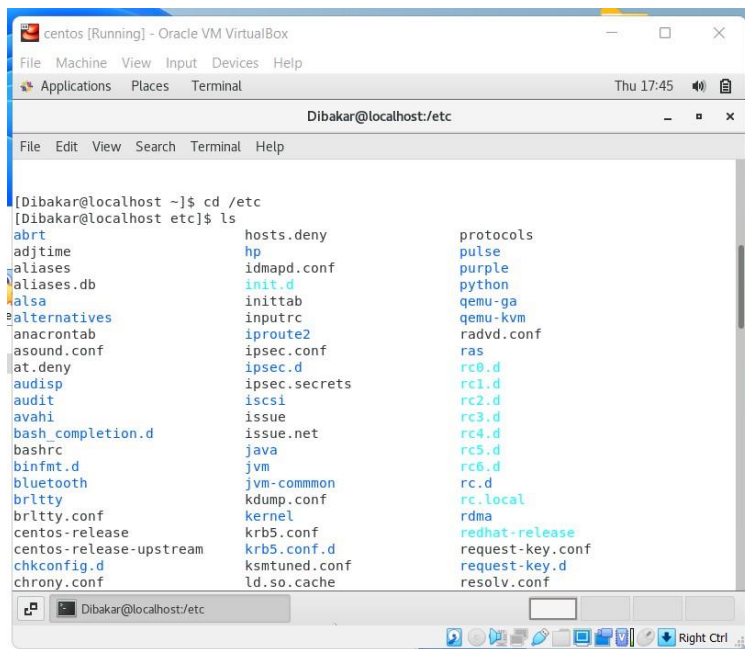
## Assignment-4

### Working with File Listing

- Go to **cd /etc** and type **ls**
  - Take screenshot and explain what files you have seen?
  - Take screenshot and explain what different output you found compare to previous command you used?
- Then type **ls -al** and hit **Enter** key
  - Take screenshot and explain what new file or directory you found?
- Then use **ls -i** and hit **Enter** key
  - Now see what different output it shows and take screenshot?
- Then use **ls --help** and see other options about **ls** command
  - Explore it and try with other attributes we can use with **ls** command

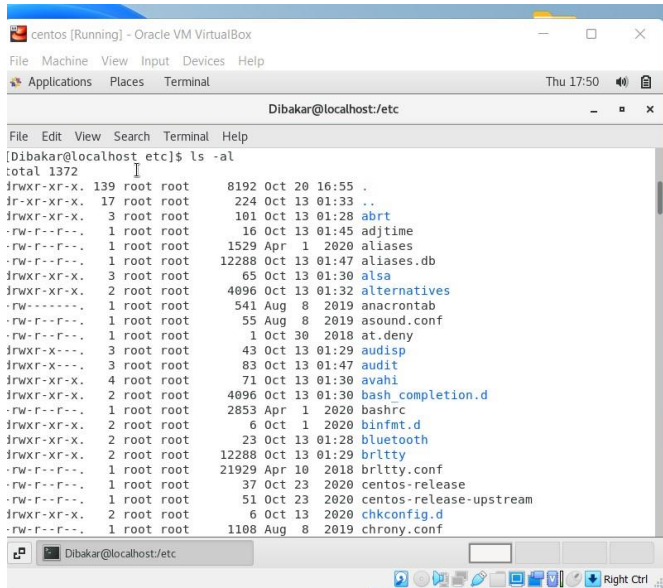
### Solution:

1) **cd /etc** command to change the directory to etc. then we do **ls** for seeing all directories and files of etc directory. We see all kinds of system files or root files. The difference between **cd /root** and **cd /etc** is that though both are the root directory or system directory, but we must be the root user to access the **cd /root** directory. On the other hand, for accessing **cd /etc** directory we don't need to be root user. Screenshot is given below.



The screenshot shows a terminal window titled "centos [Running] - Oracle VM VirtualBox". The user is logged in as "Dibakar@localhost:etc". The terminal shows the command `ls` being executed in the `/etc` directory. The output lists various files and directories in a long format, including `abrt`, `adjtime`, `aliases`, `aliases.db`, `alsa`, `alternatives`, `anacrontab`, `asound.conf`, `at.deny`, `audisp`, `audit`, `avahi`, `bash_completion.d`, `bashrc`, `binfmt.d`, `bluetooth`, `brlty`, `brlty.conf`, `centos-release`, `centos-release-upstream`, `chkconfig.d`, `chrony.conf`, `hosts.deny`, `hp`, `idmapd.conf`, `init.d`, `inittab`, `inputrc`, `iproute2`, `ipsec.conf`, `ipsec.d`, `ipsec.secrets`, `iscsi`, `issue`, `issue.net`, `java`, `jvm`, `jvm-common`, `kdump.conf`, `kernel`, `krb5.conf`, `krb5.conf.d`, `kstuned.conf`, `ld.so.cache`, `protocols`, `pulse`, `purple`, `python`, `qemu-ga`, `qemu-kvm`, `radvd.conf`, `ras`, `rc0.d`, `rc1.d`, `rc2.d`, `rc3.d`, `rc4.d`, `rc5.d`, `rc6.d`, `rc.d`, `rc.local`, `rdma`, `redhat-release`, `request-key.conf`, `request-key.d`, and `resolv.conf`.

2) **ls -al** and hit **Enter** key is used for to display the contents of the current directory in a long listed format, line begin with file permission, owner and group name, file size, and date and time.



The screenshot shows a terminal window titled "centos [Running] - Oracle VM VirtualBox". The user is logged in as "Dibakar@localhost:etc". The terminal shows the command `ls -al` being executed in the `/etc` directory. The output displays a long list of files and directories with their permissions, owner, group, size, and modification date. The first line shows the total size of the directory: `total 1372`. The files listed include `abrt`, `adjtime`, `aliases`, `aliases.db`, `alsa`, `alternatives`, `anacrontab`, `asound.conf`, `at.deny`, `audisp`, `audit`, `avahi`, `bash_completion.d`, `bashrc`, `binfmt.d`, `bluetooth`, `brlty`, `brlty.conf`, `centos-release`, `centos-release-upstream`, `chkconfig.d`, `chrony.conf`, `hosts.deny`, `hp`, `idmapd.conf`, `init.d`, `inittab`, `inputrc`, `iproute2`, `ipsec.conf`, `ipsec.d`, `ipsec.secrets`, `iscsi`, `issue`, `issue.net`, `java`, `jvm`, `jvm-common`, `kdump.conf`, `kernel`, `krb5.conf`, `krb5.conf.d`, `kstuned.conf`, `ld.so.cache`, `protocols`, `pulse`, `purple`, `python`, `qemu-ga`, `qemu-kvm`, `radvd.conf`, `ras`, `rc0.d`, `rc1.d`, `rc2.d`, `rc3.d`, `rc4.d`, `rc5.d`, `rc6.d`, `rc.d`, `rc.local`, `rdma`, `redhat-release`, `request-key.conf`, `request-key.d`, and `resolv.conf`.

2) **ls -i** and hit **Enter** key is used for to know the index number of a file.

```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Thu 17:52

Dibakar@localhost:/etc

[Dibakar@localhost etc]$ ls -l
total 160
-rw-r--r-- 1 root root 12292 Aug 14 17:52 abrt
-rw-r--r-- 1 root root 17778 Aug 14 17:52 adjtime
-rw-r--r-- 1 root root 17515 Aug 14 17:52 aliases
-rw-r--r-- 1 root root 16420 Aug 14 17:52 alternatives
-rw-r--r-- 1 root root 17470 Aug 14 17:52 anacrontab
-rw-r--r-- 1 root root 17176 Aug 14 17:52 asound.conf
-rw-r--r-- 1 root root 18829 Aug 14 17:52 at.deny
-rw-r--r-- 1 root root 51853 Aug 14 17:52 audit
-rw-r--r-- 1 root root 17574 Aug 14 17:52 avahi
-rw-r--r-- 1 root root 77924 Aug 14 17:52 bash_completion.d
-rw-r--r-- 1 root root 16778 Aug 14 17:52 bashrc
-rw-r--r-- 1 root root 58894 Aug 14 17:52 binfmt.d
-rw-r--r-- 1 root root 58977 Aug 14 17:52 bluetooth
-rw-r--r-- 1 root root 17669 Aug 14 17:52 brltty
-rw-r--r-- 1 root root 17669 Aug 14 17:52 brltty.conf
-rw-r--r-- 1 root root 16777 Aug 14 17:52 centos-release
-rw-r--r-- 1 root root 16777 Aug 14 17:52 centos-release-upstream
-rw-r--r-- 1 root root 50353 Aug 14 17:52 chkconfig.d
-rw-r--r-- 1 root root 17595 Aug 14 17:52 chrony.conf
-rw-r--r-- 1 root root 17595 Aug 14 17:52 chrony.keys
-rw-r--r-- 1 root root 51801 Aug 14 17:52 cifs-utils
-rw-r--r-- 1 root root 34547 Aug 14 17:52 cron.d
-rw-r--r-- 1 root root 28943 Aug 14 17:52 mcelog
-rw-r--r-- 1 root root 17223 Aug 14 17:52 mke2fs.conf
-rw-r--r-- 1 root root 17424 Aug 14 17:52 modprobe.d
-rw-r--r-- 1 root root 11219 Aug 14 17:52 modules-load.d
-rw-r--r-- 1 root root 16778 Aug 14 17:52 mtd
-rw-r--r-- 1 root root 16777 Aug 14 17:52 ntab
-rw-r--r-- 1 root root 17031 Aug 14 17:52 mtools.conf
-rw-r--r-- 1 root root 17669 Aug 14 17:52 multipath
-rw-r--r-- 1 root root 17464 Aug 14 17:52 my.cnf
-rw-r--r-- 1 root root 17464 Aug 14 17:52 my.cnf.d
-rw-r--r-- 1 root root 18839 Aug 14 17:52 nanorc
-rw-r--r-- 1 root root 34624 Aug 14 17:52 ndctl
-rw-r--r-- 1 root root 17223 Aug 14 17:52 netconfig
-rw-r--r-- 1 root root 34547 Aug 14 17:52 NetworkManager
-rw-r--r-- 1 root root 17471 Aug 14 17:52 networks
-rw-r--r-- 1 root root 17691 Aug 14 17:52 nfs.conf
-rw-r--r-- 1 root root 17691 Aug 14 17:52 nfs.mount.conf
-rw-r--r-- 1 root root 17432 Aug 14 17:52 nsswitch.conf
-rw-r--r-- 1 root root 16880 Aug 14 17:52 nsswitch.conf.bak
-rw-r--r-- 1 root root 51809 Aug 14 17:52 ntp
-rw-r--r-- 1 root root 17541 Aug 14 17:52 numad.conf
-rw-r--r-- 1 root root 51853 Aug 14 17:52 oddjob
-rw-r--r-- 1 root root 17574 Aug 14 17:52 oddjob.conf
-rw-r--r-- 1 root root 15849 Aug 14 17:52 oddjobd.conf.d
-rw-r--r-- 1 root root 17318 Aug 14 17:52 openldap
```

4) **ls --help** command is used for knowing more command associate with ls – command. Here I use ls -version command to see the version of centos.

```
centos [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Fri 00:33

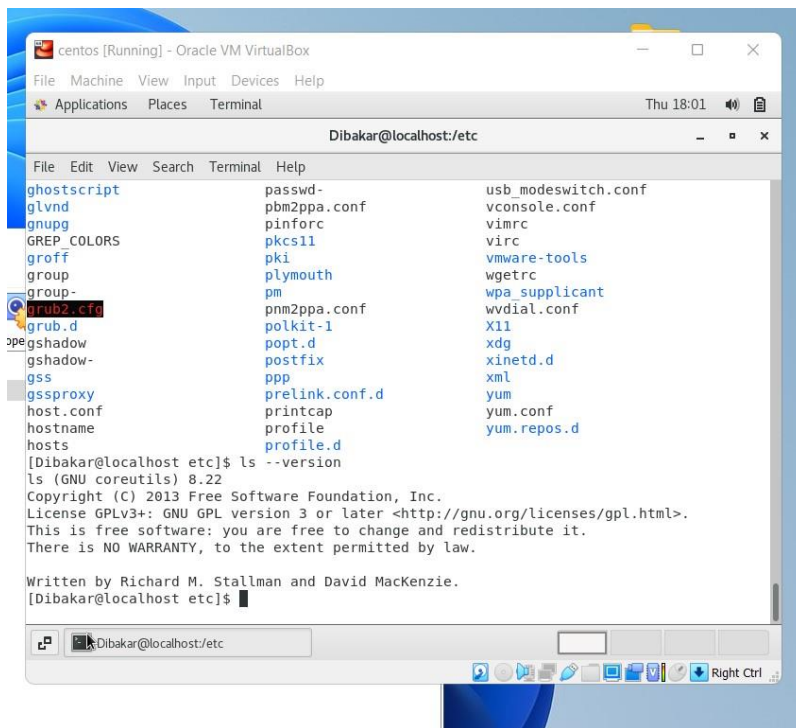
Dibakar@localhost:~

[Dibakar@localhost ~]$ 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
      --color[=WHEN]            colorize the output; WHEN can be 'never', 'auto',
                                or 'always' (the default); more info below
  -d, --directory               list directories themselves, not their contents
  -D, --dired                   generate output designed for Emacs' dired mode
  -f                             do not sort, enable -aU, disable -ls --color
  -F, --classify                append indicator (one of */=>@|) to entries
                                likewise, except do not append '*'

[Dibakar@localhost ~]$ ls --version
ls (GNU coreutils) 0.70
Copyright (C) 2012 Free Software Foundation, Inc.
Written by Richard M. Stallman.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
```





## 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
- Now use **cd /var** and hit **Enter** key
  - Do **ls**, and see what output comes, give screenshot?
- Do explore other help options of each command to learn more other things we can do with these

## Solution:

Pwd is used for knowing present working directory and cd is used for changing the present working directory as well as ls for list of present directories.

