

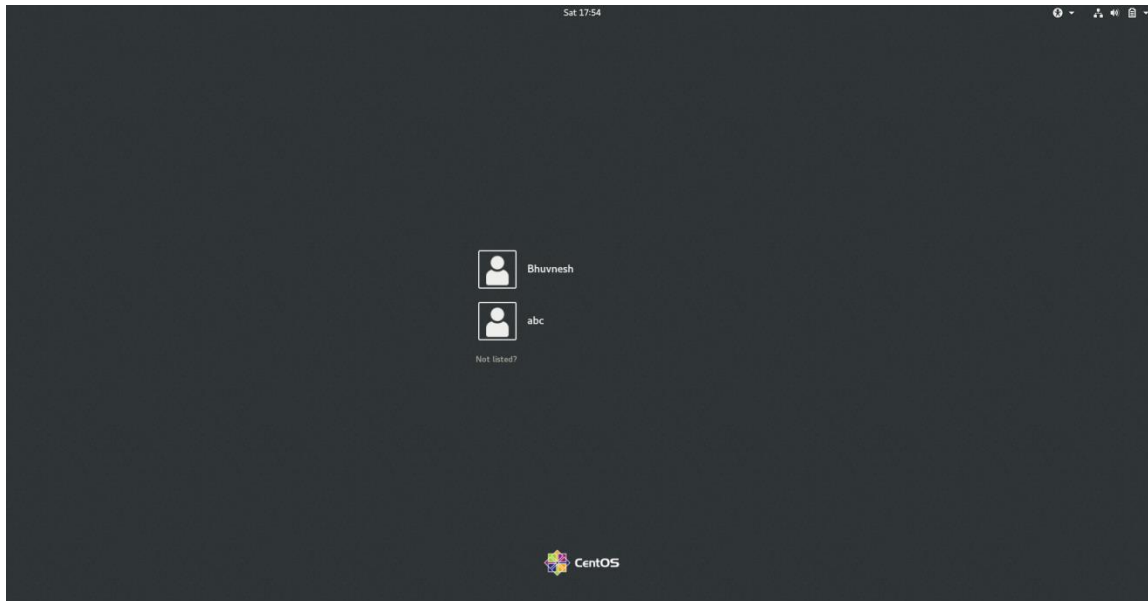
Basic Linux Commands Assignments

Assignment-1

Connect and disconnect with login Access

1. What happens when you login a non-existent users or username?

- As I entered a non-existent user I entered a fresh centos
- I entered the root user and entered the command `useradd abc` and `passwd` and I entered new user
- And I entered the command `cat /etc/passwd`



```
Applications Places Terminal
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# cat /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
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:8:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:/:/sbin/nologin
dbus:x:81:81:system message bus:/:/sbin/nologin
polkitd:x:999:999:user for polkitd:/:/sbin/nologin
libstoragemgmt:x:998:999:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
colord:x:997:999:user for colord:/var/lib/colord:/sbin/nologin
rpc:x:32:32:rpcbind:Daemon:/var/lib/rpcbind:/sbin/nologin
sane:x:996:993:SANE scanner daemon user:/usr/share/sane:/sbin/nologin
saslauthd:x:995:76:saslauthd user:/run/saslauthd:/sbin/nologin
abrt:x:173:173:/:etc/abrt:/sbin/nologin
setroubleshoot:x:994:991:/var/lib/setroubleshoot:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
chrony:x:993:988:/var/lib/chrony:/sbin/nologin
unbound:x:992:987:unbound DNS resolver:/etc/unbound:/sbin/nologin
radvd:x:75:75:radvd user:/sbin/nologin
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
geoclue:x:991:985:user for geoclue:/var/lib/geoclue:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
gluster:x:990:984:glusterFS daemons:/run/gluster:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
pcuser:x:29:29:PC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
gnome-initial-setup:x:989:983:/run/gnome-initial-setup:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
postfix:x:89:89:/var/spool/postfix:/sbin/nologin
ntp:x:38:38:/:etc/ntp:/sbin/nologin
tcpdump:x:72:72:/:/sbin/nologin
bhuvnesh:x:1000:1000:Bhuvnesh:/home/bhuvnesh:/bin/bash
vboxadd:x:988:1:/var/run/vboxadd:/bin/false
abc:x:1001:1001:/home/abc:/bin/bash
[root@localhost ~]#
```

Assignment-2

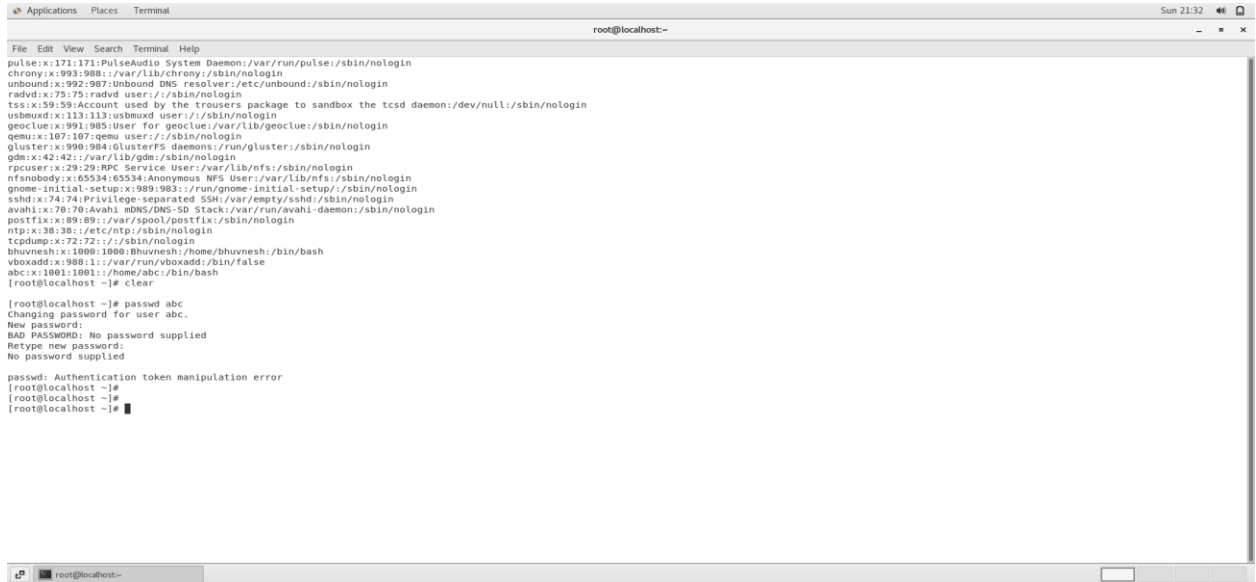
Password changing

1. Login into your account and then change password?
Change your password into **IneuR0n#42** and hit the **Enter** key

- I entered the root user and entered the command `passwd abc`
- 1.its asked me for new pass I entered it
2.then I re entered the pass and it was changed successfully

```
Applications Places Terminal
root@localhost:~
File Edit View Search Terminal Help
[bhuvnesh@localhost ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[bhuvnesh@localhost ~]$ change password
bash: change: command not found...
[bhuvnesh@localhost ~]$ su -
[sudo] password for bhuvnesh:
bhuvnesh is not in the sudoers file. This incident will be reported.
[bhuvnesh@localhost ~]$ su -
Password:
Last login: Mon Oct 10 23:29:54 IST 2022 on pts/0
[root@localhost ~]# passwd root
Changing password for user root.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# passwd root
Changing password for user root.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]#
```

2. Try again to change password but use like password **1234** or **abcd**
 - Like previously it was changed successfully
3. Try again to change password but now don't use any password just hit **Enter** key



The screenshot shows a terminal window with the following content:

```
File Edit View Search Terminal Help
root@localhost:~
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
chrony:x:993:988::/var/lib/chrony:/sbin/nologin
unbound:x:992:987:unbound DNS resolver:/etc/unbound:/sbin/nologin
radius:x:75:75:radius user:/sbin/nologin
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
geoclue:x:981:985:user for geoclue:/var/lib/geoclue:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
gluster:x:990:984:glusterFS daemons:/run/gluster:/sbin/nologin
gdm:x:42:42::/var/lib/gdm:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
gnome-initial-setup:x:989:983::/run/gnome-initial-setup:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
postfix:x:89:89::/var/spool/postfix:/sbin/nologin
ntp:x:38:38:/etc/ntp:/sbin/nologin
tcpdump:x:72:72::/sbin/nologin
bhuvnesh:x:1000:1000:Bhuvnesh:/home/bhuvnesh:/bin/bash
vboxadd:x:988:1::/var/run/vboxadd:/bin/false
abc:x:1001:1001:/home/abc:/bin/bash
[root@localhost ~]# clear

[root@localhost ~]# passwd abc
Changing password for user abc.
New password:
BAD PASSWORD: No password supplied
Retype new password:
No password supplied

passwd: Authentication token manipulation error
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
```

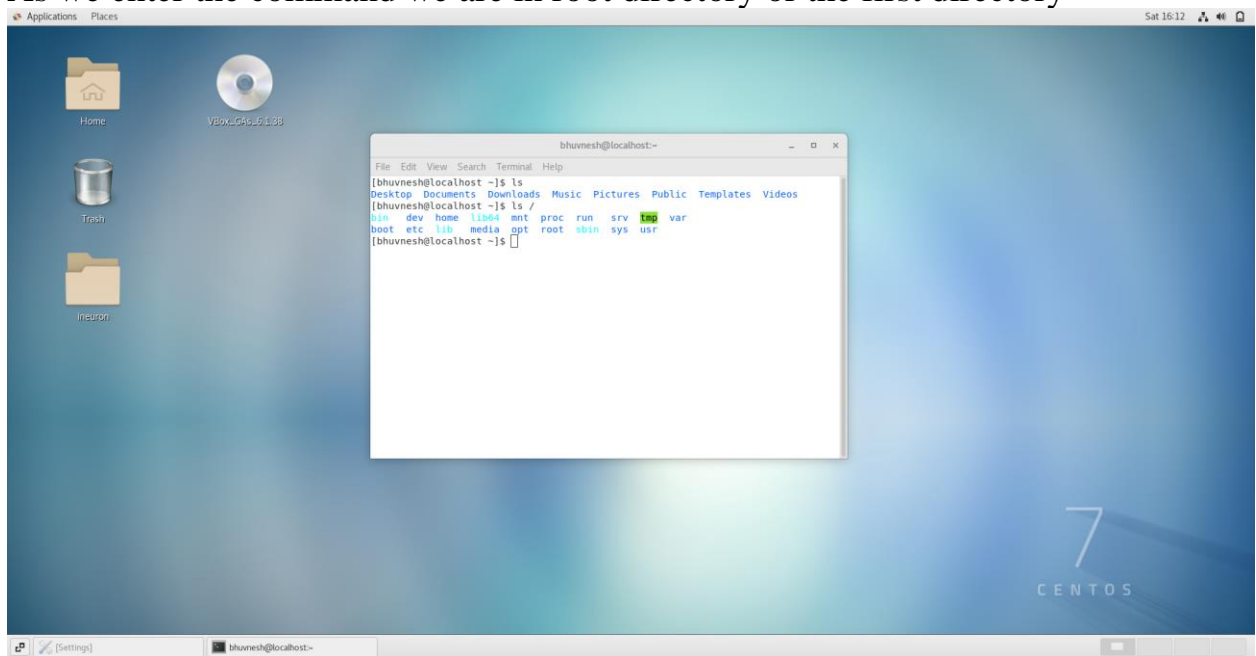
- Its throughs an error

Assignment-3

Working with Directories

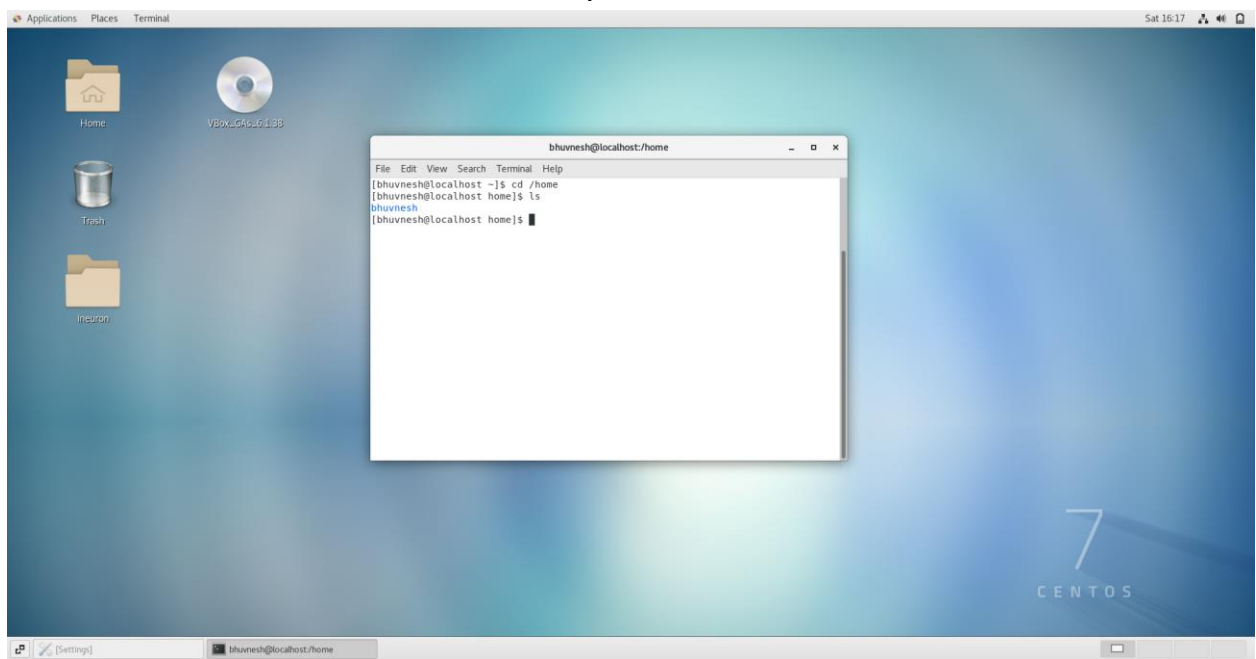
1. Enter the command **cd /** and then **ls** and then hit **Enter** key

- As we enter the command we are in root directory or the first directory



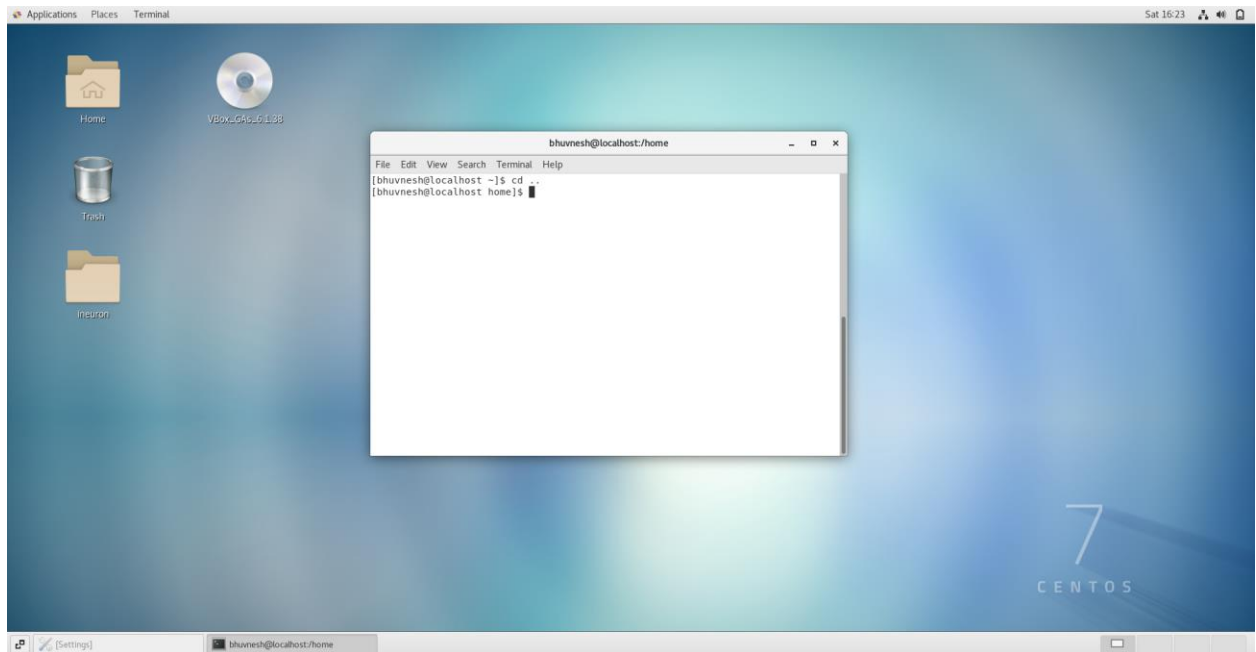
2. Enter the command now **cd /home** and then hit **Enter** key

- As I hit enter we are in home directory of current user



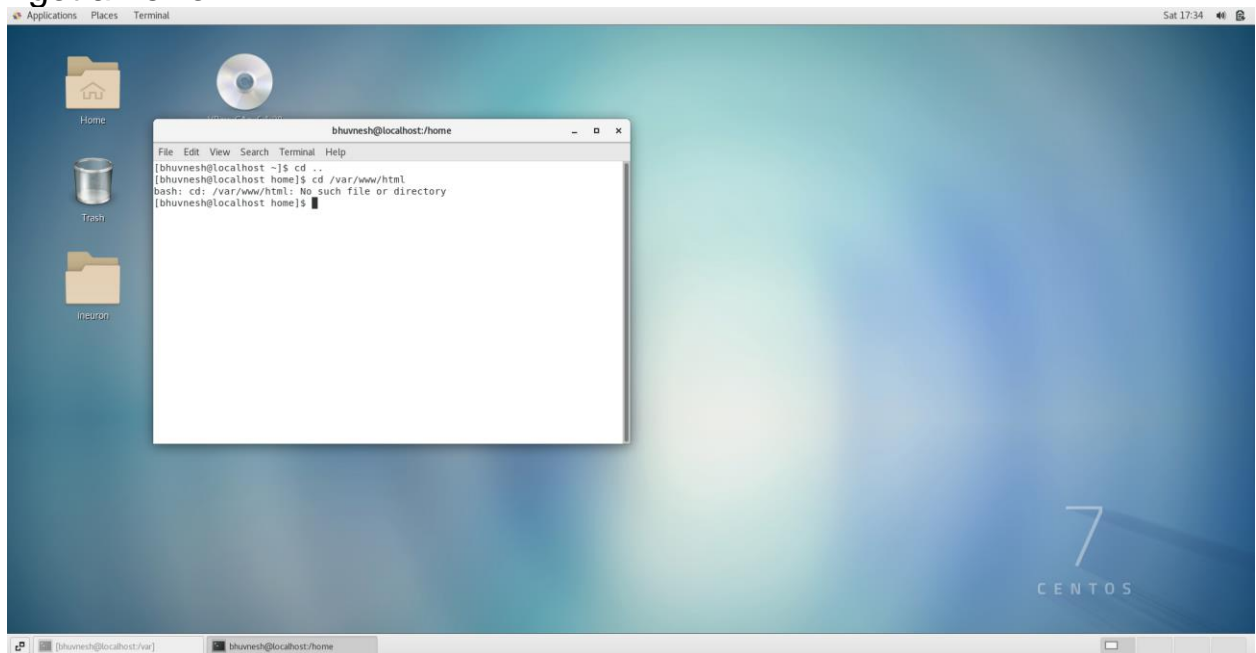
3. Enter **cd ..** and hit **Enter** key [Note: here we have space after cd then use double dot]

- We move the parent directory to current directory



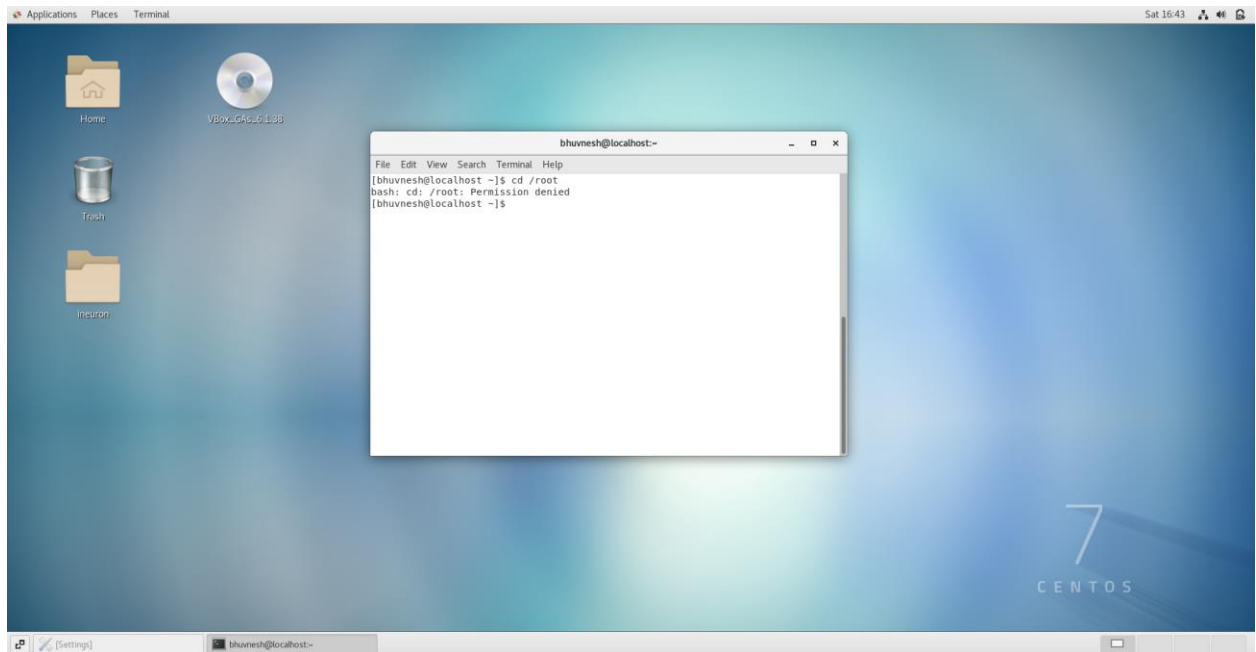
4. Now enter **cd /var/www/html** and then type **cd** and hit **Enter** key

- I got an error



05. Now type **cd /root** and then hit **Enter** key

- **Permission denied**



Assignment-4

Working with File Listing

1. Go to **cd /etc** and type **ls**

- **As I observed there were a lot of folders and files**
- **And files are basically configuration files and as I entered one there where configuration in it**
- **There some configuration to on/off settings**

- And compared to the previous command its totally indepth settings

```

[~] Applications Places Terminal Sat 16:50
bhuvmesh@localhost:/etc

[~] File Edit View Search Terminal Help

[~] bhuvmesh@localhost ~]$ cd /etc
[~] bhuvmesh@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               iscsl                 rc2.d
avahi                issue                 rc3.d
bash_completion.d    issue.net             rc4.d
bashrc              java                  rc5.d
binfmt.d             jvm                   rc5.d
bluetooth            jvm-common            rc.d
brltty              kdump.conf            rc.local
brltty.conf          kernel                rdma
centos-release        krb5.conf             redhat-release
centos-release-upstream  krb5.conf.d           request-key.conf
chkconfig.d          ksmtd.conf            request-key.d
chrony.conf           ld.so.cache           resolv.conf
chrony.keys           ld.so.conf            resolv.conf.save
cifs-utils            ld.so.conf.d          rpc
cron.d               libaudit.conf         rpm
cron.daily            libblockdev            rsyncd.conf
cron.deny             libibverbs.d          rsyslog.conf
cron.hourly           libnl                  rsyslog.d
cron.monthly          libpaper.d            rntab
crontab               libreport             rntab.d
cron.weekly           libuser.conf          samba
crypttab             libvirt               sane.d
csh.cshrc             locale.conf           sas2
csh.login             localtime             scl
cups                 login.defs             security
cupshelpers           logrotate.conf         selinux
dbus-1               logrotate.d            services
dconf                lvm                   sestatus.conf
default              lvms                   setroubleshoot
depmod.d             machine-id             setroubleshoot.d
dhcpcd               magic                 sgml
DIR_COLORS            mail.rc                shadow
DIR_COLORS.256color  makedumpfile.conf.sample
  
```

2.then type **ls -al** and hit **Enter** key

- It listed all the files in the current directory in long format, sorted by modification time oldest first

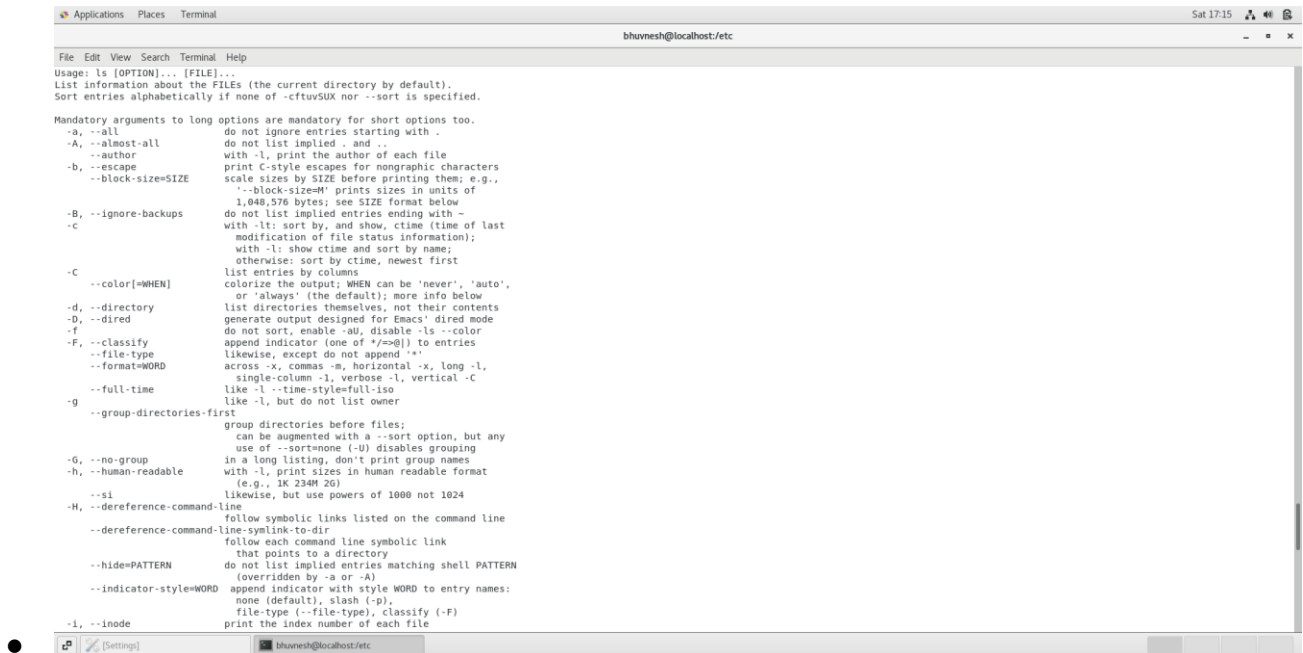
```

[~] Applications Places Terminal Sat 17:10
bhuvmesh@localhost:/etc

[~] File Edit View Search Terminal Help

[~] bhuvmesh@localhost ~]$ cd /etc
[~] bhuvmesh@localhost /etc]$ ls -al
drwxr-xr-x. 3 root root 65 Oct 10 16:00 alsa
drwxr-xr-x. 2 root root 4096 Oct 10 23:42 alternatives
-rw-r--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 10 21:24 at.deny
drwxr-xr-x. 3 root root 43 Oct 10 15:58 audisp
drwxr-xr-x. 4 root root 83 Oct 10 16:12 audit
drwxr-xr-x. 2 root root 71 Oct 10 16:00 avahi
drwxr-xr-x. 2 root root 4096 Oct 10 23:40 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 10 15:57 bluetooth
drwxr-xr-x. 2 root root 12288 Oct 10 15:59 brltty
-rw-r--r--. 1 root root 21929 Apr 11 2018 brltty.conf
-rw-r--r--. 1 root root 37 Nov 23 2020 centos-release
-rw-r--r--. 1 root root 51 Nov 23 2020 centos-release-upstream
drwxr-xr-x. 2 root root 6 Oct 13 2020 chkconfig.d
-rw-r--r--. 1 root root 1188 Aug 8 2019 chrony.conf
-rw-r--r--. 1 root root 481 Aug 8 2019 chrony.keys
drwxr-xr-x. 2 root root 26 Oct 10 23:38 cifs-utils
drwxr-xr-x. 2 root root 54 Oct 10 23:36 cron.d
drwxr-xr-x. 2 root root 57 Oct 10 16:00 cron.daily
-rw-r--r--. 1 root root 0 Jan 13 2022 cron.deny
drwxr-xr-x. 2 root root 41 Oct 10 23:36 cron.hourly
drwxr-xr-x. 2 root root 6 Jun 10 2014 cron.monthly
drwxr-xr-x. 2 root root 451 Jun 10 2014 crontab
drwxr-xr-x. 2 root root 6 Jun 10 2014 cron.weekly
-rw-r--r--. 1 root root 0 Oct 10 15:54 crypttab
-rw-r--r--. 1 root root 1620 Apr 1 2020 csh.cshrc
-rw-r--r--. 1 root root 1163 Apr 1 2020 csh.login
drwxr-xr-x. 5 root lp 4096 Oct 15 16:57 cups
drwxr-xr-x. 2 root root 34 Oct 10 15:58 cupshelpers
drwxr-xr-x. 4 root root 78 Oct 10 15:57 dbus-1
drwxr-xr-x. 4 root root 31 Oct 10 15:57 dconf
drwxr-xr-x. 2 root root 44 Oct 10 23:38 default
drwxr-xr-x. 2 root root 71 Oct 10 21:56 depmod.d
drwxr-xr-x. 4 root root 53 Jun 9 2021 dhcpcd
-rw-r--r--. 1 root root 5090 Nov 16 2020 DIR_COLORS
-rw-r--r--. 1 root root 5725 Nov 16 2020 DIR_COLORS.256color
-rw-r--r--. 1 root root 4669 Nov 16 2020 DIR_COLORS.lightbgcolor
-rw-r--r--. 1 root root 1174 Apr 11 2018 dleyna-server-service.conf
-rw-r--r--. 1 root root 26832 Jul 21 2021 dnsmasq.conf
drwxr-xr-x. 2 root root 6 Jul 21 2021 dnsmasq.d
-rw-r--r--. 1 root root 1285 Sep 30 2020 dracut.conf
drwxr-xr-x. 2 root root 34 Oct 10 15:57 dracut.conf.d
-rw-r--r--. 1 root root 112 Sep 30 2020 e2fsck.conf
drwxr-xr-x. 3 root root 37 Oct 10 15:57 egl
-rw-r--r--. 1 root root 4760 Aug 9 2019 encrypt.cfg
  
```

3.Then use **ls -help** and see other options about **ls** command

A screenshot of a terminal window titled 'Applications Places Terminal'. The window shows the help text for the 'ls' command. The text is as follows:

```
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 -al, disable -ls --color
-F, --classify           append indicator (one of */->@|) to entries
                          likewise, except do not append '*'
--format=WORD            across -x, commas -m, horizontal -x, long -l,
                          single-column -l, verbose -l, vertical -C
--full-time              like -l --time-style=full-iso
-g                       like -l, but do not list owner
--group-directories-first
                          group directories before files;
                          can be augmented with a --sort option, but any
                          use of --sort=none (-U) disables grouping
-G, --no-group           in a long listing, don't print group names
-h, --human-readable     with -l, print sizes in human readable format
                          (e.g., 1K 234M 2G)
--si                    likewise, but use powers of 1000 not 1024
-H, --dereference-command-line
                          follow symbolic links listed on the command line
--dereference-command-line-symlink-to-dir
                          follow each command line symbolic link
                          that points to a directory
--hide=PATTERN           do not list implied entries matching shell PATTERN
                          (overridden by -a or -A)
--indicator-style=WORD  append indicator with style WORD to entry names:
                          none (default), slash (-p),
                          file-type (--file-type), classify (-F)
-i, --inode              print the index number of each file
```

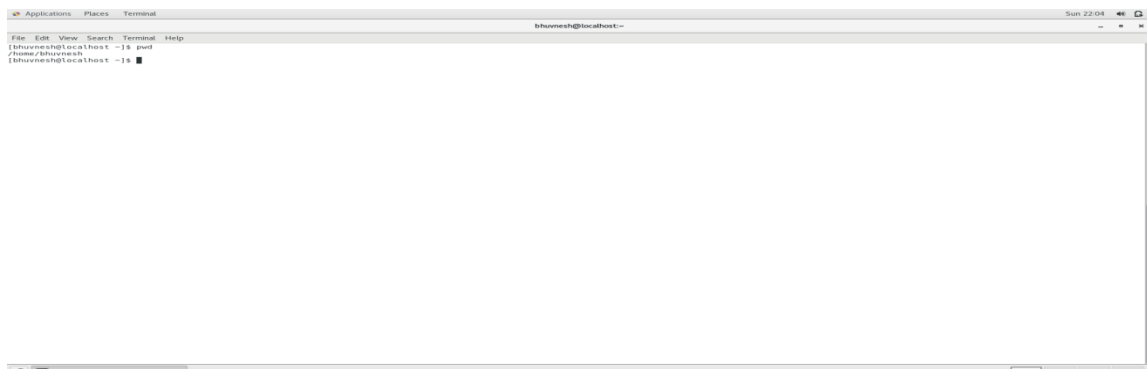
Assignment-5

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.

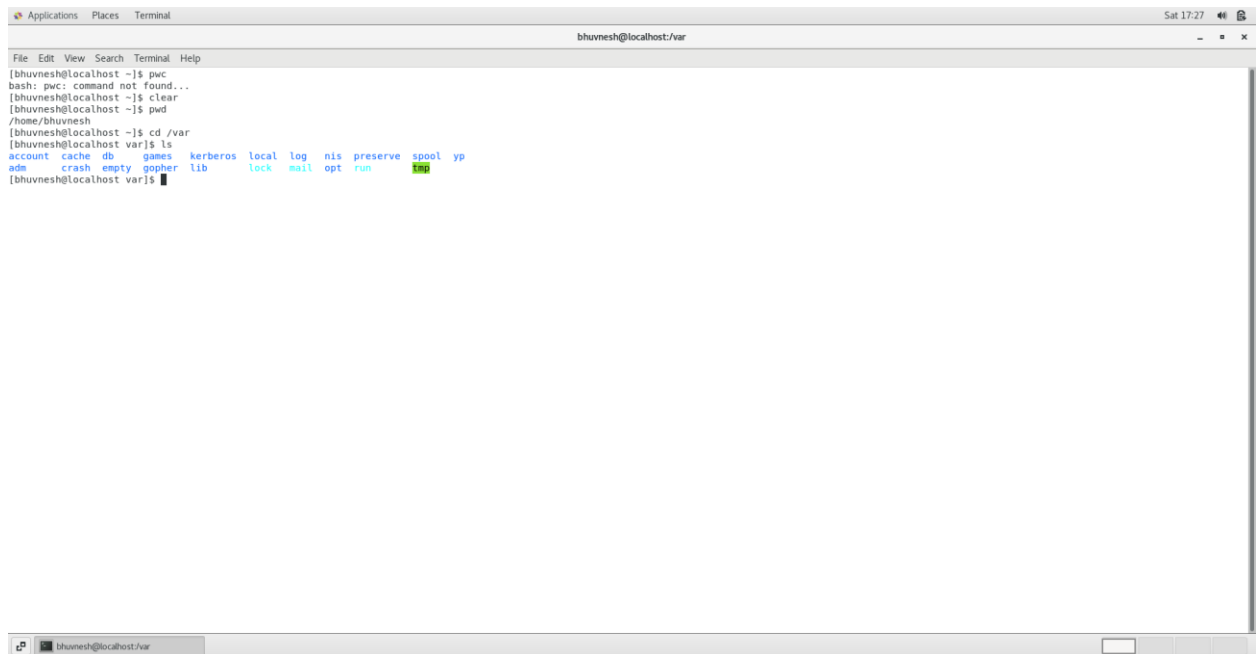
1. Open terminal after restart the linux

- We are in home directory

A screenshot of a terminal window titled 'Applications Places Terminal'. The window shows the output of the 'pwd' command. The text is as follows:

```
[bhumesh@localhost ~]$ pwd
/home/bhumesh
[bhumesh@localhost ~]$
```


2. Now use **cd /var** and hit **Enter** key



A terminal window titled "Applications Places Terminal" with a subtitle "bhuvnesh@localhost:/var". The window shows the following commands and output:

```
[bhuvnesh@localhost ~]$ pwd
bash: pwd: command not found...
[bhuvnesh@localhost ~]$ clear
[bhuvnesh@localhost ~]$ pwd
/home/bhuvnesh
[bhuvnesh@localhost ~]$ cd /var
[bhuvnesh@localhost var]$ ls
account  cache  db      games  kerberos  local  log    nis    preserve  spool  yp
ade      crash  empty  gopher lib       lock  mail  opt    run      tmp
```

- Now we entered the var directory also called absolute path

```
Applications Places Terminal Sat 17:27
bhuvnesh@localhost:~$ pwd
/home/bhuvnesh
[ bhuvnesh@localhost ~ ]$ clear
[ bhuvnesh@localhost ~ ]$ pwd
/home/bhuvnesh
[ bhuvnesh@localhost ~ ]$ cd /var
[ bhuvnesh@localhost var ]$ ls
account  cache  db      games  kerberos  local  log  nis  preserve  spool  yp
ade      crash  empty  gopher  lib       lock   mail  opt  run       ssh    tmp
[ bhuvnesh@localhost var ]$
```