



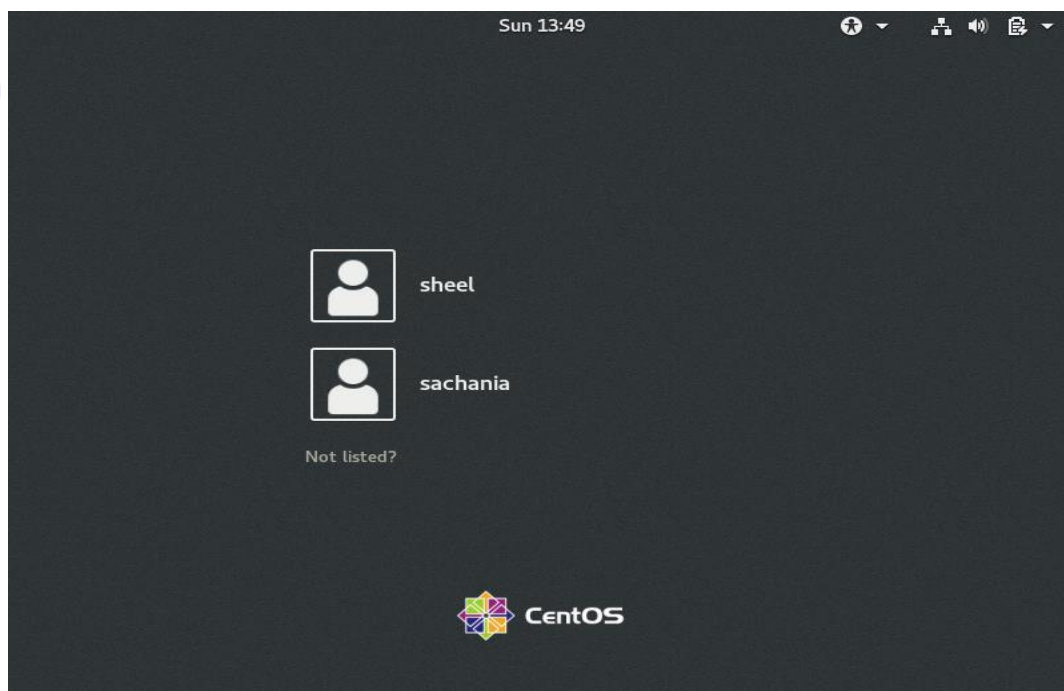
Basic Linux Commands Assignments

"(BOLD SENTENCES WITH ITALICS ARE ANSWERS)"

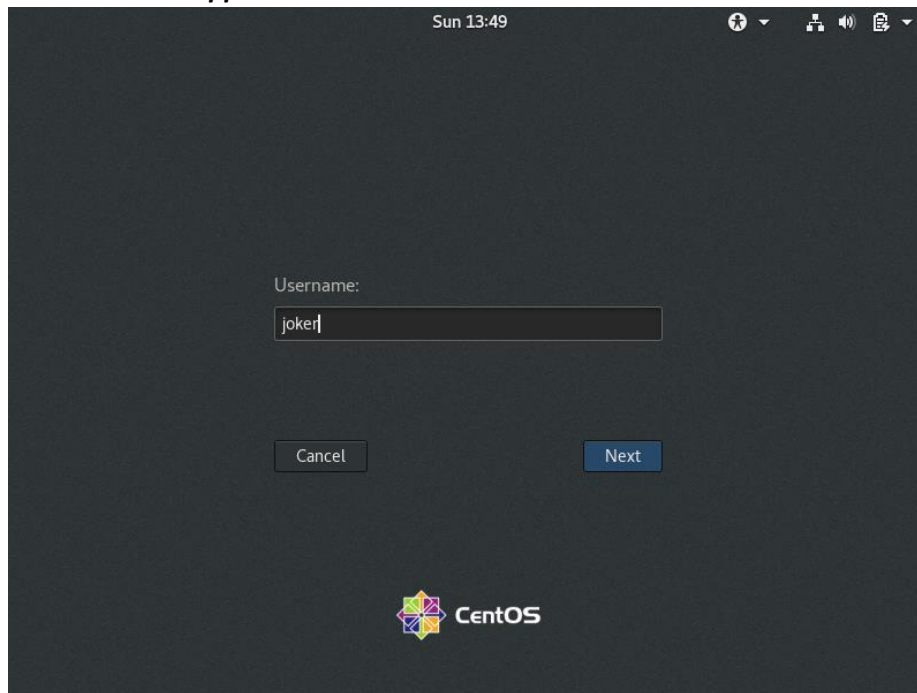
Assignment-1

Connect and disconnect with login Access

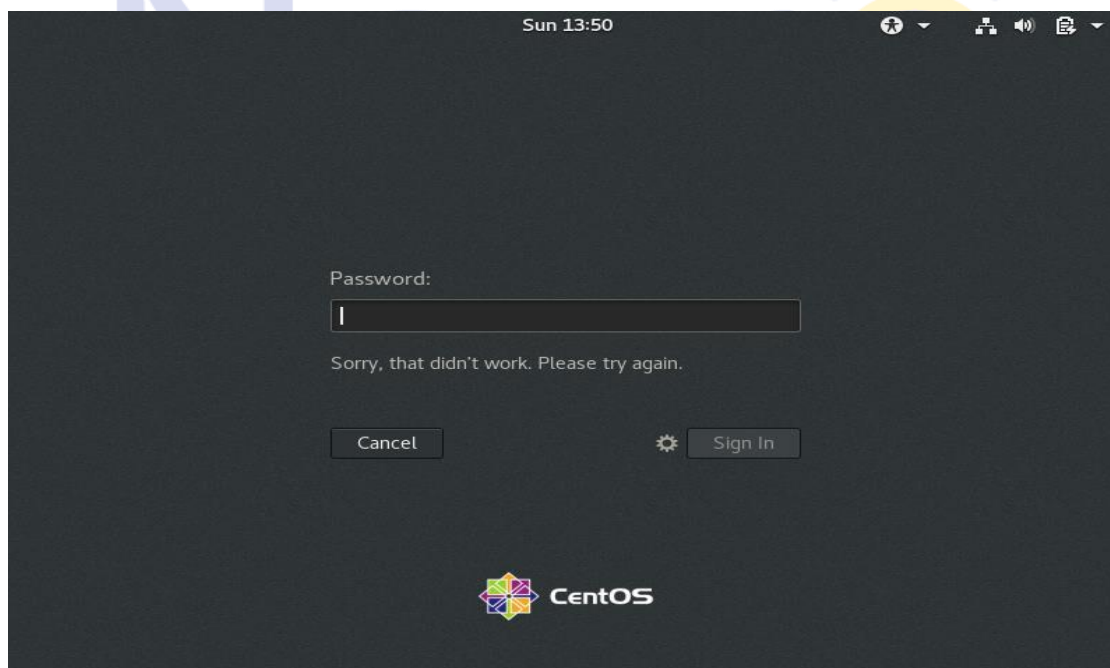
- What happens when you login a non-existent users or username?
 - Provide Screenshot and What you understand, explain in short brief?
- ***If the user is present then this screen appears first after system starts and if we select it further and enter user password it will login successful***



➔ *If the user is not listed then we need to click on not listed to enter the username and then this screen will appear*



➔ *After this password screen will appear and after entering it will throw error as the user does not exists.*



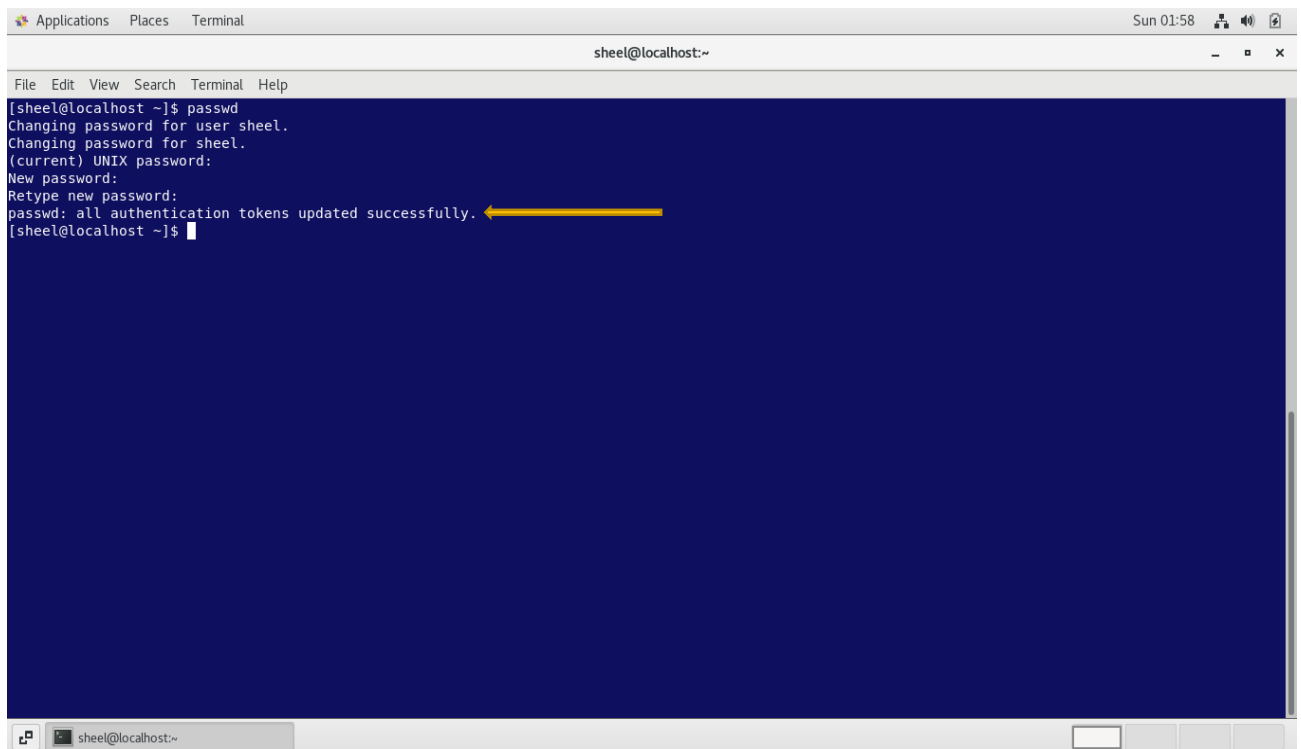
Sheel Sachania

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?

➔ **After changing pass to IneuR0n#42 it will change successfully and show us message**



The screenshot shows a terminal window titled "Applications Places Terminal" with a status bar indicating "Sun 01:58". The terminal prompt is "sheel@localhost:~". The user has entered the command "passwd". The terminal output shows the following steps: "Changing password for user sheel.", "Changing password for sheel.", "(current) UNIX password:", "New password:", "Retype new password:", and finally "passwd: all authentication tokens updated successfully." A yellow arrow points to the last line of output. The terminal window has a menu bar with "File Edit View Search Terminal Help" and a taskbar at the bottom showing the terminal icon and the text "sheel@localhost:~".

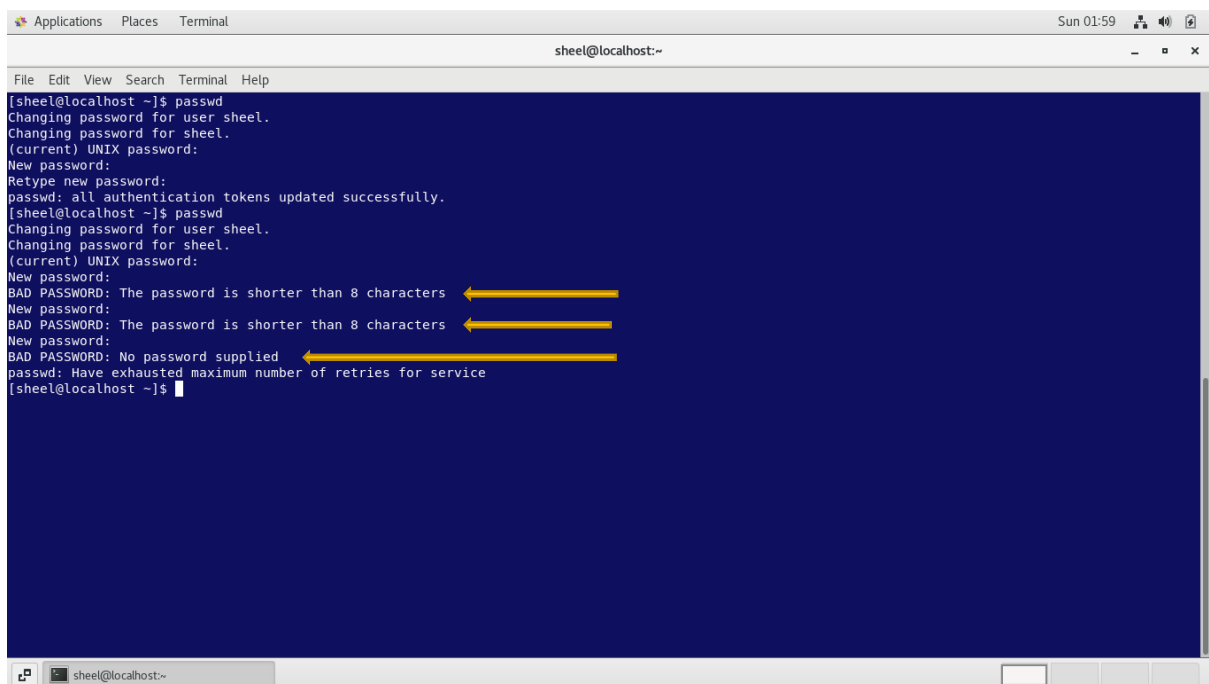
```
[sheel@localhost ~]$ passwd
Changing password for user sheel.
Changing password for sheel.
(current) UNIX password:
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[sheel@localhost ~]$
```

- 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?

➔ **First arrow is for pass 1234 & it shows error that pass is short means characters/letter are not enough**

➔ **Second arrow is for pass abcd & it shows same error that pass is short means characters/letter are not enough**

➔ **Third arrow is for no password means it is blank and shows error of no password supplied**



The screenshot shows a terminal window titled 'sheel@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal output is as follows:

```
[sheel@localhost ~]$ passwd
Changing password for user sheel.
Changing password for sheel.
(current) UNIX password:
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[sheel@localhost ~]$ passwd
Changing password for user sheel.
Changing password for sheel.
(current) UNIX password:
New password:
BAD PASSWORD: The password is shorter than 8 characters
New password:
BAD PASSWORD: The password is shorter than 8 characters
New password:
BAD PASSWORD: No password supplied
passwd: Have exhausted maximum number of retries for service
[sheel@localhost ~]$
```

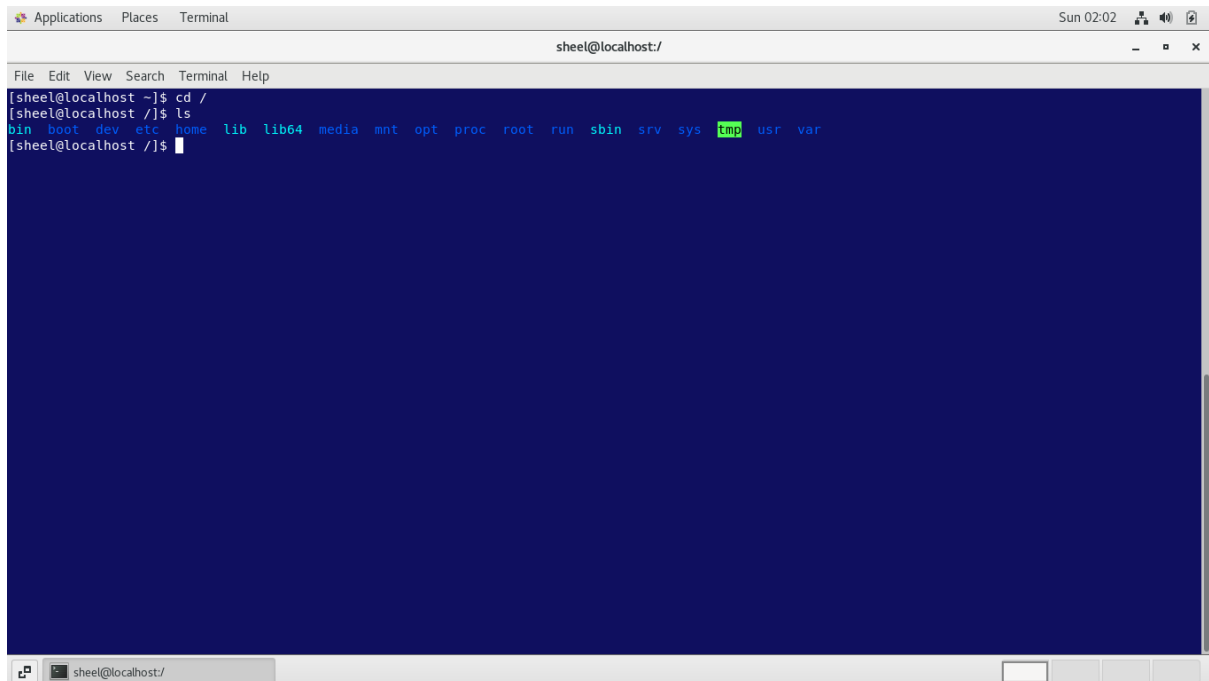
Three yellow arrows point to the error messages: 'BAD PASSWORD: The password is shorter than 8 characters' (twice) and 'BAD PASSWORD: No password supplied'.

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?

➔ ***cd / represents root directory and ls command lists all the contents of root directory***

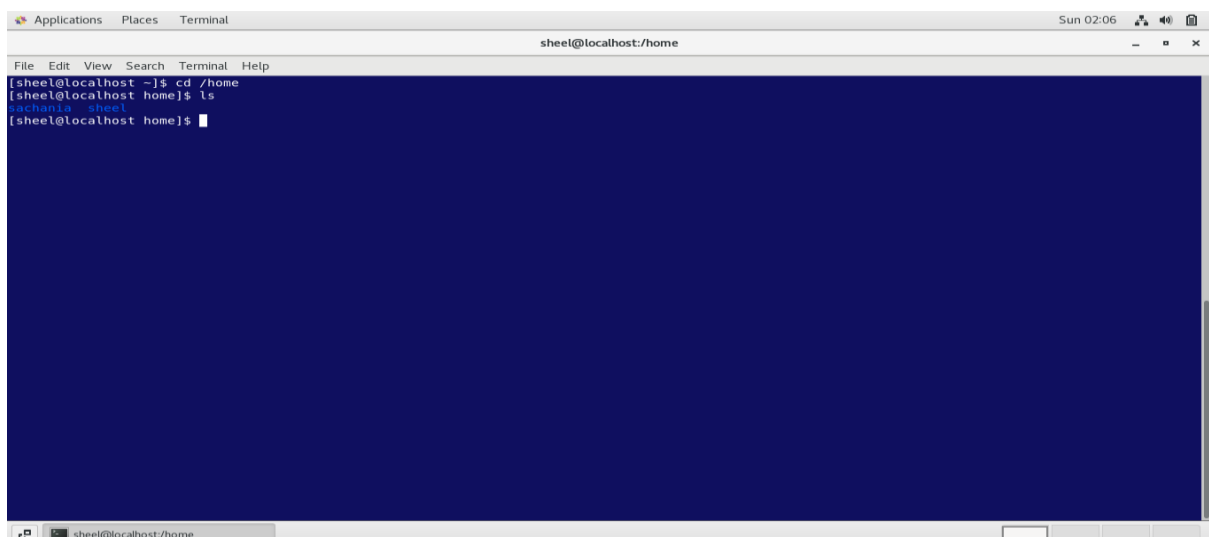


```
sheel@localhost: /
ls
bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
```

The screenshot shows a terminal window titled 'sheel@localhost: /'. The user has entered the command 'cd /' and then 'ls'. The output of the 'ls' command lists the contents of the root directory: bin, boot, dev, etc, home, lib, lib64, media, mnt, opt, proc, root, run, sbin, srv, sys, tmp, usr, and var. The terminal window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The status bar at the bottom shows 'sheel@localhost: /'.

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

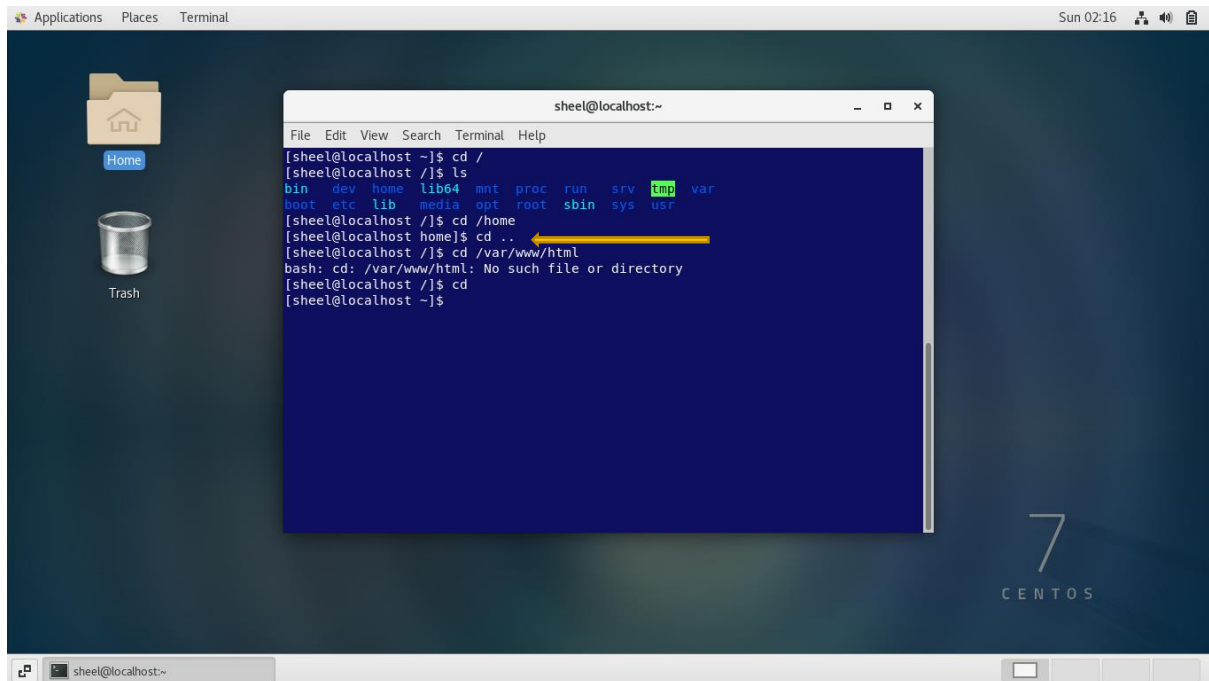
➔ ***cd /home will get us into home directory and after that running ls command will list all contents of home directory.***



```
sheel@localhost: /home
ls
sachania sheel
```

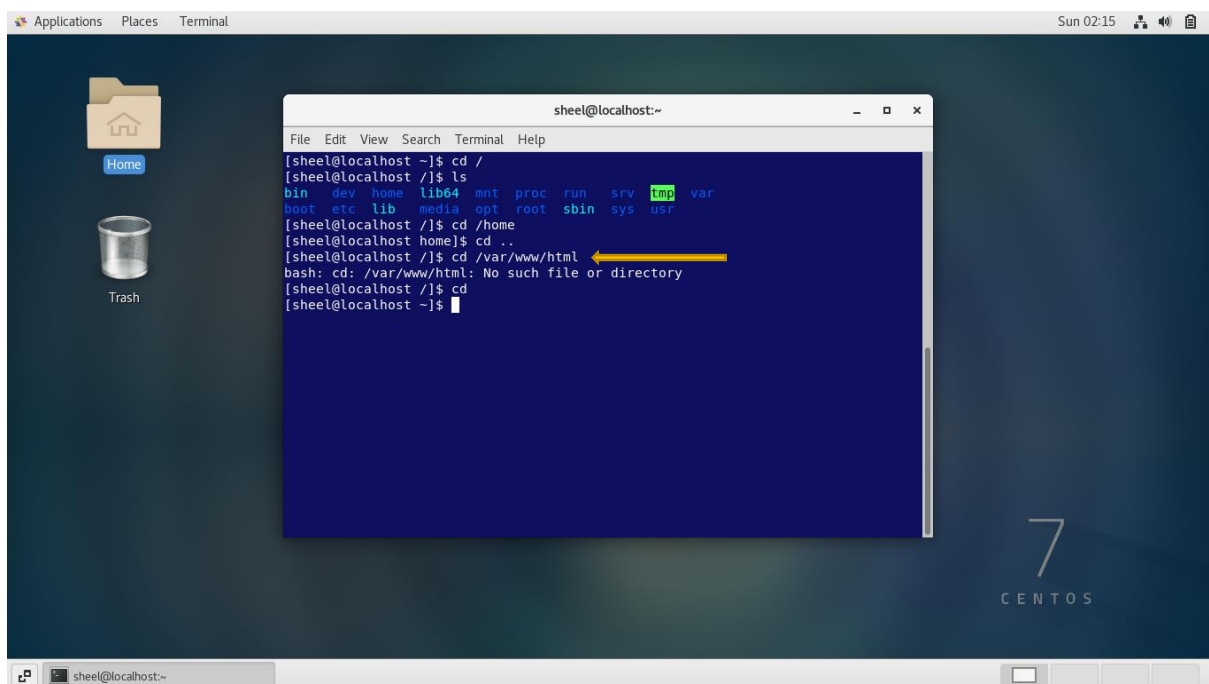
The screenshot shows a terminal window titled 'sheel@localhost: /home'. The user has entered the command 'cd /home' and then 'ls'. The output of the 'ls' command lists the contents of the /home directory: sachania and sheel. The terminal window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The status bar at the bottom shows 'sheel@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?
- ➔ **After running cd .. what it does is that it will move to the parent directory of current directory or the directory one level up from the current directory**



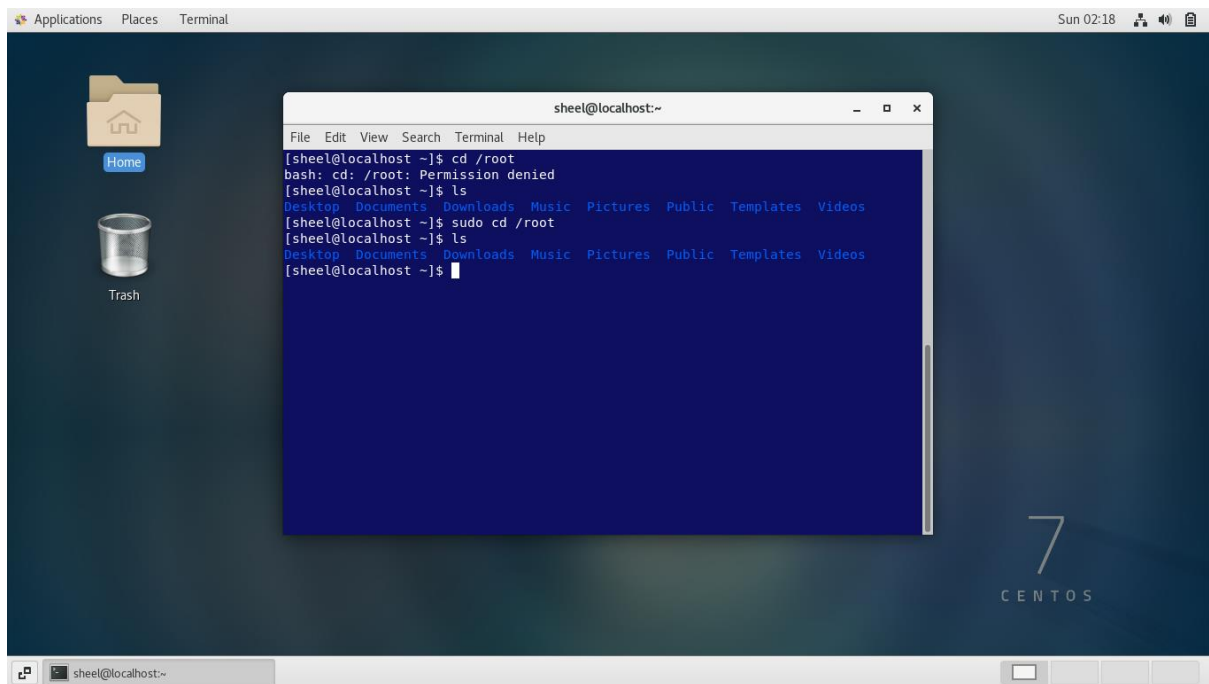
```
sheel@localhost:~  
File Edit View Search Terminal Help  
[sheel@localhost ~]$ cd /  
[sheel@localhost /]$ ls  
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var  
boot  etc  lib   media  opt  root  sbin  sys  usr  
[sheel@localhost /]$ cd /home  
[sheel@localhost home]$ cd ..  
[sheel@localhost /]$ cd /var/www/html  
bash: cd: /var/www/html: No such file or directory  
[sheel@localhost /]$ cd  
[sheel@localhost ~]$
```

- Now enter **cd /var/www/html** and then type **cd** and hit **Enter** key
 - Explain what happen and give screenshot?
 -
- ➔ **/var/www/html is just the default root folder of the web server**
- ➔ **cd command just moves back into the parent directory or move all the way back to the root directory**



```
sheel@localhost:~  
File Edit View Search Terminal Help  
[sheel@localhost ~]$ cd /  
[sheel@localhost /]$ ls  
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var  
boot  etc  lib   media  opt  root  sbin  sys  usr  
[sheel@localhost /]$ cd /home  
[sheel@localhost home]$ cd ..  
[sheel@localhost /]$ cd /var/www/html  
bash: cd: /var/www/html: No such file or directory  
[sheel@localhost /]$ cd  
[sheel@localhost ~]$
```

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



iNeuron

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?
- ➔ */etc/ is where configuration files and directories are located*

[illegible]

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

➔ You can list the permissions of the files and directories as well as other attributes such as folder names, file and directory sizes, and modified date and time which also include the hidden files as shown in output below.

Sheel Sachania

```
Applications Places Terminal
sheel@localhost/etc

File Edit View Search Terminal Help
[sheel@localhost etc]$ ls -al
total 1376
drwxr-xr-x. 139 root root      8192 Oct 16 13:15 .
drwxr-xr-x. 17 root root      224 Oct 16 08:56 ..
drwxr-xr-x. 3 root root      101 Oct 16 08:41 abrt
-rw-r--r--. 1 root root       16 Oct 16 08:56 adjtime
-rw-r--r--. 1 root root    1529 Apr 1 2020 aliases
-rw-r--r--. 1 root root   12288 Oct 16 08:53 aliases.db
drwxr-xr-x. 3 root root       65 Oct 16 08:43 alsa
drwxr-xr-x. 2 root root    4896 Oct 16 01:27 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       14 May 8 21:24 at.deny
drwxr-xr-x. 3 root root       43 Oct 16 08:41 audit
drwxr-xr-x. 3 root root       83 Oct 16 08:53 audit
drwxr-xr-x. 4 root root       71 Oct 16 08:43 avahi
drwxr-xr-x. 2 root root    4896 Oct 16 01:26 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 16 08:48 bluetooth
drwxr-xr-x. 2 root root    12288 Oct 16 08:42 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 16 01:25 cifs-utils
drwxr-xr-x. 2 root root       34 Oct 16 01:23 cron.d
drwxr-xr-x. 2 root root       57 Oct 16 08:44 cron.daily
-rw-r--r--. 1 root root       6 Jan 13 2022 cron.deny
drwxr-xr-x. 2 root root       41 Oct 16 01:23 cron.hourly
drwxr-xr-x. 2 root root       6 Jun 10 2014 cron.monthly
-rw-r--r--. 1 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       6 Oct 16 08:37 crypttab
-rw-r--r--. 1 root root    1620 Apr 1 2020 csh.cshrc
drwxr-xr-x. 1 root root    1183 Apr 1 2020 csh.login
drwxr-xr-x. 5 root root       5 Oct 16 13:16 cups
drwxr-xr-x. 2 root root       34 Oct 16 08:42 cupshelpers
drwxr-xr-x. 4 root root       78 Oct 16 08:40 dbus-1
drwxr-xr-x. 4 root root       31 Oct 16 08:40 dcconf
drwxr-xr-x. 2 root root       44 Oct 16 01:25 default
drwxr-xr-x. 2 root root       71 Oct 16 13:13 depmod.d
drwxr-xr-x. 4 root root       53 Jun 9 2021 dhcp
-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 elyza-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 16 08:40 dracut-udev.d

[sheel@localhost ~]$
[sheel@localhost/etc ~]$
```

```
Applications Places Terminal
sheel@localhost/etc

File Edit View Search Terminal Help
-rw-r--r--. 1 root root       0 Apr 1 2020 environment
-rw-r--r--. 1 root root    1317 Apr 11 2018 ethertypes
-rw-r--r--. 1 root root       6 Jun 7 2013 exports
drwxr-xr-x. 2 root root       6 Oct 14 2021 exports.d
lrwxrwxrwx. 1 root root       50 Oct 16 08:39 favicon.png -> /usr/share/icons/hicolor/16x16/apps/fedora-logo-icon.png
drwxr-xr-x. 2 root root       22 Oct 16 08:42 fcoe
drwxr-xr-x. 2 root root       46 Oct 16 08:40 festival
-rw-r--r--. 1 root root       70 Apr 1 2020 filesystems
drwxr-xr-x. 3 root root      18 Sep 1 20:55 firefex
drwxr-xr-x. 7 root root     133 Oct 16 01:23 firewallld
drwxr-xr-x. 3 root root      23 Oct 16 08:41 flatpak
drwxr-xr-x. 3 root root      38 Oct 16 08:39 fonts
-rw-r--r--. 1 root root     20 Oct 31 2018 fprintd.conf
drwxr-xr-x. 1 root root     405 Oct 16 08:37 fsck
-rw-r--r--. 1 root root      38 Oct 30 2018 fuse.conf
drwxr-xr-x. 3 root root      59 Oct 16 08:42 fwupd
drwxr-xr-x. 7 root root     197 Oct 16 08:40 gcc.conf
drwxr-xr-x. 2 root root       6 Aug 2 2017 gcrypt
-rw-r--r--. 1 root root     269 Sep 30 2020 gdbinit
drwxr-xr-x. 2 root root       6 Sep 30 2020 gdbinit.d
drwxr-xr-x. 6 root root     197 Oct 16 01:24 gdm
drwxr-xr-x. 2 root root     26 Oct 16 08:41 gdmclue
-rw-r--r--. 1 root root    1704 Aug 13 2019 GeoIP.conf
drwxr-xr-x. 2 root root       6 Sep 30 2020 ghostscript
drwxr-xr-x. 3 root root      26 Oct 16 08:40 glund
drwxr-xr-x. 2 root root       6 Jul 13 2018 gnupg
-rw-r--r--. 1 root root     94 Mar 24 2017 GREP.COLORS
drwxr-xr-x. 4 root root      40 Oct 16 08:38 groff
-rw-r--r--. 1 root root    1012 Oct 16 12:55 group
-rw-r--r--. 1 root root     998 Oct 16 01:24 group-
lrwxrwxrwx. 1 root root      22 Oct 16 01:24 grub2.cfg -> ../boot/grub2/grub.cfg
drwxr-xr-x. 2 root root     182 Oct 16 01:23 grub.d
-rw-r--r--. 1 root root     817 Oct 16 12:55 gshadow
drwxr-xr-x. 1 root root     886 Oct 16 01:07 gshadow-
drwxr-xr-x. 3 root root     20 Jun 28 21:01 gss
drwxr-xr-x. 2 root root      79 Oct 16 01:24 gssproxy
-rw-r--r--. 1 root root       9 Jun 7 2013 host.conf
-rw-r--r--. 1 root root     22 Oct 16 08:56 hostname
-rw-r--r--. 1 root root    158 Jun 7 2013 hosts
-rw-r--r--. 1 root root    370 Jun 7 2013 hosts.allow
-rw-r--r--. 1 root root    460 Jun 7 2013 hosts.deny
drwxr-xr-x. 2 root root      24 Oct 16 08:41 hp
-rw-r--r--. 1 root root    4849 Apr 11 2018 idmapi.conf
-rw-r--r--. 1 root root     11 Oct 16 08:38 init.d -> rc.d/init.d
-rw-r--r--. 1 root root    511 Nov 16 2020 inittab
-rw-r--r--. 1 root root     942 Jun 7 2013 inputrc
drwxr-xr-x. 2 root root    158 Oct 16 08:38 irqroute
-rw-r--r--. 1 root root    1073 Aug 6 2020 ipsec.conf
drwxr-xr-x. 3 root root      22 Aug 6 2020 ipsec.d
-rw-r--r--. 1 root root     31 Aug 6 2020 ipsec.secrets
drwxr-xr-x. 2 root root     52 Oct 16 01:23 iscsi
-rw-r--r--. 1 root root     23 Nov 23 2020 issue
-rw-r--r--. 1 root root     23 Nov 23 2020 issue.d

[sheel@localhost ~]$
[sheel@localhost/etc ~]$
```

Sheel Sachania

```
Applications Places Terminal
sheel@localhost/etc

File Edit View Search Terminal Help
dnxkr-xf-x: 3 root root 82 Oct 16 00:40 jare
dnxkr-xf-x: 2 root root 6 Nov 21 2015 jvs
dnxkr-xf-x: 2 root root 6 Nov 21 2015 jvs:common
dnxkr-xf-x: 1 root root 7274 Oct 16 01:25 kdump.conf
dnxkr-xf-x: 4 root root 39 Oct 16 13:14 kernel
dnxkr-xf-x: 1 root root 646 Jan 13 2022 krb5.conf
dnxkr-xf-x: 2 root root 6 Jun 28 21:01 krb5.conf.d
dnxkr-xf-x: 1 root root 478 Jan 7 2022 kstuned.conf
dnxkr-xf-x: 1 root root 8129 Oct 16 13:12 ld.so.cache
dnxkr-xf-x: 1 root root 28 Feb 28 2013 ld.so.conf
dnxkr-xf-x: 2 root root 208 Oct 16 01:25 ld.so.conf.d
dnxkr-xf-x: 1 root root 191 Mar 2 2019 libaudit.conf
dnxkr-xf-x: 3 root root 20 Oct 16 00:40 liblockdev
dnxkr-xf-x: 2 root root 4096 Oct 16 01:24 liblverbs.d
dnxkr-xf-x: 2 root root 35 Oct 16 00:38 libnl
dnxkr-xf-x: 2 root root 6 Sep 30 2020 libpaper.d
dnxkr-xf-x: 6 root root 107 Oct 16 00:40 libreport
dnxkr-xf-x: 1 root root 2391 Oct 13 2013 libuser.conf
dnxkr-xf-x: 5 root root 199 Oct 16 01:24 libvirt
dnxkr-xf-x: 1 root root 19 Oct 16 00:50 locale.conf
dnxkr-xf-x: 1 root root 34 Oct 16 00:50 localtime -> ../usr/share/zoneinfo/Asia/Kolkata
dnxkr-xf-x: 1 root root 2027 Aug 6 2019 login.defs
dnxkr-xf-x: 1 root root 862 Jul 31 2013 logrotate.conf
dnxkr-xf-x: 2 root root 218 Oct 16 01:25 logrotate.d
dnxkr-xf-x: 3 root root 43 Oct 16 01:23 lvm
dnxkr-xf-x: 6 root root 100 Oct 16 01:24 lvm
dnxkr-xf-x: 1 root root 33 Oct 16 00:40 machine-id
dnxkr-xf-x: 1 root root 111 Sep 30 2020 magic
dnxkr-xf-x: 1 root root 1908 Apr 11 2018 mail.rc
dnxkr-xf-x: 1 root root 5122 Jun 9 2021 makedumpfile.conf.sample
dnxkr-xf-x: 1 root root 5173 Oct 31 2018 man_db.conf
dnxkr-xf-x: 2 root root 6 Nov 21 2015 maven
dnxkr-xf-x: 3 root root 61 Oct 16 00:43 mcclisp
dnxkr-xf-x: 1 root root 1106 Sep 30 2020 md2fs.conf
dnxkr-xf-x: 2 root root 166 Oct 16 01:25 mdprobe.d
dnxkr-xf-x: 2 root root 6 Sep 1 20:27 modules-load.d
dnxkr-xf-x: 1 root root 6 Jun 7 2013 mtd
dnxkr-xf-x: 1 root root 17 Oct 16 00:37 mtab -> /proc/self/mounts
dnxkr-xf-x: 1 root root 2020 Jun 10 2014 mtools.conf
dnxkr-xf-x: 2 root root 6 Aug 21 2021 multipath
dnxkr-xf-x: 1 root root 576 Sep 30 2020 my.cnf
dnxkr-xf-x: 2 root root 31 Oct 16 00:40 my.cnf.d
dnxkr-xf-x: 1 root root 8892 Jun 10 2014 nasmrc
dnxkr-xf-x: 3 root root 36 Oct 16 00:40 ndctl
dnxkr-xf-x: 1 root root 767 Aug 9 2019 netconfig
dnxkr-xf-x: 6 root root 145 Jun 9 2021 netconf-manager
dnxkr-xf-x: 1 root root 50 Nov 16 2020 networks
dnxkr-xf-x: 1 root root 1023 Oct 14 2021 nfs.conf
dnxkr-xf-x: 1 root root 1391 Oct 14 2021 nfsmount.conf
dnxkr-xf-x: 1 root root 1949 Oct 16 00:40 nsswitch.conf
dnxkr-xf-x: 1 root root 1938 Sep 30 2020 nsswitch.conf.bak
dnxkr-xf-x: 2 root root 36 Oct 16 00:44 ntp

sheel@localhost/etc

Applications Places Terminal
sheel@localhost/etc

File Edit View Search Terminal Help
dnxkr-xf-x: 1 root root 91 Dec 3 2012 named.conf
dnxkr-xf-x: 2 root root 6 Mar 6 2015 oddjob
dnxkr-xf-x: 1 root root 4823 Mar 6 2015 oddjobd.conf
dnxkr-xf-x: 2 root root 76 Oct 16 00:41 oddjobd.conf.d
dnxkr-xf-x: 3 root root 38 Oct 16 01:23 openldap
dnxkr-xf-x: 2 root root 6 Apr 11 2018 opt
dnxkr-xf-x: 1 root root 21 Oct 16 01:22 os-release -> ../usr/lib/os-release
dnxkr-xf-x: 3 root root 92 Oct 16 00:41 Packstack
dnxkr-xf-x: 2 root root 4096 Oct 16 01:25 pam.d
dnxkr-xf-x: 1 root root 40 Sep 30 2020 passwsize
dnxkr-xf-x: 1 root root 2362 Oct 16 12:55 passwd
dnxkr-xf-x: 1 root root 2317 Oct 16 01:07 passwd
dnxkr-xf-x: 1 root root 1302 Jun 10 2014 pbm2ppa.conf
dnxkr-xf-x: 1 root root 1072 Jun 10 2014 piforce
dnxkr-xf-x: 3 root root 21 Oct 16 00:38 pkcs11
dnxkr-xf-x: 12 root root 151 Oct 16 00:44 pk
dnxkr-xf-x: 2 root root 28 Oct 16 00:41 plymouth
dnxkr-xf-x: 5 root root 30 Oct 16 00:37 pm
dnxkr-xf-x: 1 root root 6306 Jun 10 2014 pnm2ppa.conf
dnxkr-xf-x: 5 root root 72 Jan 26 2022 polkit-1
dnxkr-xf-x: 2 root root 6 Jan 10 2014 post.d
dnxkr-xf-x: 2 root root 154 Oct 16 00:43 postfix
dnxkr-xf-x: 3 root root 235 Oct 16 01:23 ppp
dnxkr-xf-x: 2 root root 105 Oct 16 01:25 ppcLink.conf.d
dnxkr-xf-x: 1 root root 233 Jun 7 2013 printcap
dnxkr-xf-x: 1 root root 1039 Apr 1 2020 profile
dnxkr-xf-x: 2 root root 4096 Oct 16 01:22 profile.d
dnxkr-xf-x: 1 root root 6549 Apr 1 2020 protocols
dnxkr-xf-x: 2 root root 70 Oct 16 01:23 public
dnxkr-xf-x: 1 root root 0 Oct 16 00:40 puid.lock
dnxkr-xf-x: 2 root root 39 Oct 16 01:22 pytho
dnxkr-xf-x: 3 root root 50 Oct 16 00:44 qemu.ga
dnxkr-xf-x: 2 root root 51 Oct 16 01:24 qemu.kvm
dnxkr-xf-x: 1 root root 433 Oct 16 2018 radvd.conf
dnxkr-xf-x: 3 root root 27 Oct 16 00:45
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc8.d -> rc.d/rc8.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc1.d -> rc.d/rc1.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc2.d -> rc.d/rc2.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc3.d -> rc.d/rc3.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc4.d -> rc.d/rc4.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc5.d -> rc.d/rc5.d
dnxkr-xf-x: 1 root root 10 Oct 16 01:23 rc6.d -> rc.d/rc6.d
dnxkr-xf-x: 10 root root 127 Nov 16 2020 rc.d
dnxkr-xf-x: 1 root root 13 Oct 16 01:23 rc.local -> rc.d/rc.local
dnxkr-xf-x: 3 root root 94 Oct 16 01:24 rdma
dnxkr-xf-x: 1 root root 14 Oct 16 01:22 rebase-release -> centos-release
dnxkr-xf-x: 1 root root 1787 Jun 10 2014 request-key.conf
dnxkr-xf-x: 2 root root 30 Oct 16 01:24 request-key.d
dnxkr-xf-x: 1 root root 78 Oct 16 13:15 resolv.conf
dnxkr-xf-x: 1 root root 1038 Dec 25 2012 rpm
dnxkr-xf-x: 2 root root 128 Nov 24 2021 rpm
```

```

File Edit View Search Terminal Help
sheel@localhost/etc

drwxr-xr-x. 1 root root 1390 Oct 16 12:55 shadow
drwxr-xr-x. 1 root root 1376 Oct 16 02:01 shadow-
drwxr-xr-x. 1 root root 63 Oct 16 00:44 shells
drwxr-xr-x. 3 root root 78 Oct 16 01:22 skel
drwxr-xr-x. 3 root root 74 Oct 16 00:44 smartmontools
drwxr-xr-x. 1 root root 138 Jun 28 20:59 sos.conf
drwxr-xr-x. 4 root root 56 Oct 16 00:41 speech-dispatcher
drwxr-xr-x. 2 root root 225 Oct 16 01:25 sss
drwxr-xr-x. 2 root root 19 Oct 16 01:22 ssl
drwxr-xr-x. 1 root root 212 Nov 16 2020 statetab
drwxr-xr-x. 1 root root 6 Nov 16 2020 statetab.d
drwxr-xr-x. 1 root root 22 Oct 16 01:07 subgid
drwxr-xr-x. 1 root root 0 Apr 1 2020 subgid-
drwxr-xr-x. 1 root root 22 Oct 16 01:07 subuid
drwxr-xr-x. 1 root root 0 Apr 1 2020 subuid-
drwxr-xr-x. 1 root root 1786 Sep 30 2020 sudo.conf
drwxr-xr-x. 1 root root 4328 Sep 30 2020 sudoers
drwxr-xr-x. 2 root root 6 Oct 14 2021 sudoers.d
drwxr-xr-x. 1 root root 3181 Sep 30 2020 sudo-ldap.conf
drwxr-xr-x. 6 root root 4096 Oct 16 01:25 sysconfig
drwxr-xr-x. 1 root root 449 Nov 16 2020 sysctl.conf
drwxr-xr-x. 2 root root 20 Oct 16 01:23 sysctl.d
drwxr-xr-x. 4 root root 151 Oct 16 01:23 system
drwxr-xr-x. 1 root root 14 Oct 16 01:22 system-release
drwxr-xr-x. 1 root root 23 Nov 23 2020 system-release-cpe
drwxr-xr-x. 1 root root 7046 Aug 3 2017 tcid.conf
drwxr-xr-x. 2 root root 6 Sep 7 2017 terminfo
drwxr-xr-x. 2 root root 6 Sep 1 2027 tpmfiles.d
drwxr-xr-x. 1 root root 750 Oct 4 12:36 trusted-key.key
drwxr-xr-x. 3 root root 189 Oct 16 01:25 tuned
drwxr-xr-x. 3 root root 54 Oct 16 01:23 udev
drwxr-xr-x. 2 root root 20 Oct 16 00:42 udisks2
drwxr-xr-x. 2 root root 68 Oct 16 00:41 unbound
drwxr-xr-x. 1 root root 163 Oct 16 00:37 updatedb
drwxr-xr-x. 1 root root 957 Apr 11 2018 updatecb.conf
drwxr-xr-x. 2 root root 25 Oct 16 00:41 UPower
drwxr-xr-x. 1 root root 1523 Apr 11 2018 usb_modeswitch.conf
drwxr-xr-x. 1 root root 37 Oct 16 00:56 usb_modeswitch.conf
drwxr-xr-x. 1 root root 1982 Dec 15 2020 vmirc
drwxr-xr-x. 1 root root 1982 Dec 15 2020 vmirc-
drwxr-xr-x. 4 root root 208 Oct 16 01:23 vmware-tools
drwxr-xr-x. 1 root root 4479 May 16 2019 wgetrc
drwxr-xr-x. 2 root root 33 Oct 16 01:23 wpa_supplicant
drwxr-xr-x. 1 root root 6 Jun 10 2014 wvdial.conf
drwxr-xr-x. 6 root root 103 Oct 16 00:40 x11
drwxr-xr-x. 6 root root 116 Oct 16 00:41 xdg
drwxr-xr-x. 2 root root 6 Apr 11 2018 xinetd.d
drwxr-xr-x. 2 root root 21 Oct 16 00:38 xorg
drwxr-xr-x. 6 root root 100 Oct 16 00:40 yum
drwxr-xr-x. 1 root root 970 Oct 1 2020 yum.conf
drwxr-xr-x. 2 root root 220 Oct 16 01:22 yum.repos.d
sheel@localhost etc$

```

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

➔ *The **ls -l** command will list the index (called inode) number of each file and directory. In the output below you can have some number index/inode printed before the files and directories.*

```

File Edit View Search Terminal Help
sheel@localhost/etc

drwxr-xr-x. 2 root root 21 Oct 16 00:38 xsl
drwxr-xr-x. 6 root root 100 Oct 16 00:40 xorg
drwxr-xr-x. 1 root root 970 Oct 1 2020 yum.conf
drwxr-xr-x. 2 root root 220 Oct 16 01:22 yum.repos.d
[sheel@localhost etc]$ ls -l
total 151196
drwxr-xr-x. 2 root root 151196 drwxr-xr-x. 2 root root 16778358 hosts.deny
drwxr-xr-x. 2 root root 17381871 dracut.conf 17572229 hp
drwxr-xr-x. 6 root root 34561796 dracut.conf.d 17400375 idmapd.conf
drwxr-xr-x. 6 root root 17349075 cifsck.conf 16880784 init.d
drwxr-xr-x. 2 root root 1241616 egl 16778354 initab
drwxr-xr-x. 2 root root 18017267 encrypt.cfg 16778359 inputrc
drwxr-xr-x. 2 root root 16778359 environment 16801858 ipmtools
drwxr-xr-x. 2 root root 1771905 ethersypes 17309035 ipsec.conf
drwxr-xr-x. 2 root root 16778353 exports 51380702 ipsec.d
drwxr-xr-x. 2 root root 2196442 ipsec.d 17309037 ipsec.secrets
drwxr-xr-x. 2 root root 17349519 fawicon.png 1164484 iiscli
drwxr-xr-x. 2 root root 51507824 fcoe 16777321 issue
drwxr-xr-x. 2 root root 34663045 fcinfo 16777322 issue.net
drwxr-xr-x. 2 root root 16778352 filesystems 17351408 iusa
drwxr-xr-x. 2 root root 35187741 firewalld 898270 jvm
drwxr-xr-x. 2 root root 35187290 firewalld 17351501 jvm-common
drwxr-xr-x. 2 root root 17631586 flatpak 17309049 kdump.conf
drwxr-xr-x. 2 root root 87 fonts 51835786 kernel
drwxr-xr-x. 2 root root 17555398 fprintd.conf 17823238 krb5.conf
drwxr-xr-x. 2 root root 16777282 fstab 17300235 krs.conf.d
drwxr-xr-x. 2 root root 16902221 fuse.conf 17471984 kstunnd.conf
drwxr-xr-x. 2 root root 1901728 fwupd 17693869 ld.so.cache
drwxr-xr-x. 2 root root 34582354 gconf 18176984 ld.so.conf
drwxr-xr-x. 2 root root 123752 gpg 50339920 ld.so.conf.d
drwxr-xr-x. 2 root root 17349905 gdmibinit 16880772 libaudit.conf
drwxr-xr-x. 2 root root 17349906 gdmibinit.d 51027381 libblockdev
drwxr-xr-x. 2 root root 51346929 gdm 17405776 liblverbs.d
drwxr-xr-x. 2 root root 5143926 gdmcli 33927966 libnl
drwxr-xr-x. 2 root root 17400383 GeoIP.conf 50713873 libpaper.d
drwxr-xr-x. 2 root root 17697326 gnuascipt 50333593 libreport
drwxr-xr-x. 2 root root 1769675 givnd 17399973 libuser.conf
drwxr-xr-x. 2 root root 34536084 gmpsp 51380871 libvirt
drwxr-xr-x. 2 root root 16891973 GREP_COLORS 16777293 locale.conf
drwxr-xr-x. 2 root root 9037316 gperf 16777287 localtime
drwxr-xr-x. 2 root root 17555268 group 17381646 login.defs
drwxr-xr-x. 2 root root 17381756 group 17381193 logrotate.conf
drwxr-xr-x. 2 root root 17492256 grub2.cfg 800570 logrotate.d
drwxr-xr-x. 2 root root 16778343 grub.d 1197831 lsw
drwxr-xr-x. 2 root root 17383593 gshadow 34668133 lwp
drwxr-xr-x. 2 root root 17681754 gshadow- 17430973 machine-id
drwxr-xr-x. 2 root root 50714131 gss 16902198 magic
drwxr-xr-x. 2 root root 17555492 gssproxy 17400369 mail.rc
drwxr-xr-x. 2 root root 17677294 hostname 91615 profile.conf.d
drwxr-xr-x. 2 root root 16778356 hosts 16778362 printcap
drwxr-xr-x. 2 root root 16778357 hosts.allow 34532787 raven
drwxr-xr-x. 2 root root 2830918 mclog 50331773 profile.d
drwxr-xr-x. 2 root root 16778364 mke2fs.conf 16778364 protocols
drwxr-xr-x. 2 root root 17381937 modprobe.d 34568462 pulse
drwxr-xr-x. 2 root root 1038472 modules-load.d 2143109 purple
drwxr-xr-x. 2 root root 16778368 motd 17300275 python
drwxr-xr-x. 2 root root 16777284 mtab 2831179 qemu-pa
drwxr-xr-x. 2 root root 17148281 mttools.conf 51499569 qemu-kvm
drwxr-xr-x. 2 root root 17400400 my.cnf 17400651 rc0.d
drwxr-xr-x. 2 root root 18051008 nanorc 16880790 rc1.d
drwxr-xr-x. 2 root root 34663012 ndccli 16880791 rc2.d
drwxr-xr-x. 2 root root 17349918 netconfig 16880792 rc3.d
drwxr-xr-x. 2 root root 34562738 NetworkManager 16880793 rc4.d
drwxr-xr-x. 2 root root 17400647 networks 16880794 rc5.d
drwxr-xr-x. 2 root root 17591571 nfs.conf 16880795 rc6.d
drwxr-xr-x. 2 root root 17591572 nfsmount.conf 123707 rc.d
drwxr-xr-x. 2 root root 17433988 nsaswitch.conf 16778367 rc.local
drwxr-xr-x. 2 root root 16880751 nsaswitch.conf.bak 1241631 rdma
drwxr-xr-x. 2 root root 51835677 ntp 16777324 redhat-release
drwxr-xr-x. 2 root root 17301354 nmud.conf 17241272 request-key.conf
drwxr-xr-x. 2 root root 51162666 odijob 33979968 request-key.d
drwxr-xr-x. 2 root root 17555073 oddjob.conf 18016983 resolv.conf
drwxr-xr-x. 2 root root 3512032 oddjob.conf.d 18176985 rpc
drwxr-xr-x. 2 root root 17309066 openldap 33713195 rpm
drwxr-xr-x. 2 root root 16778732 opt 17309053 rsync.conf
drwxr-xr-x. 2 root root 17777323 os-release 17309108 rsyslog.conf
drwxr-xr-x. 2 root root 1164338 packagexml 34561894 rsync.log
drwxr-xr-x. 2 root root 34389032 pam.d 16880796 rtab.d
drwxr-xr-x. 2 root root 17291734 papersize 50865469 rtab.d
drwxr-xr-x. 2 root root 18135603 passwd 50966737 samba
drwxr-xr-x. 2 root root 17381801 passwd 1242102 sasl2
drwxr-xr-x. 2 root root 18064937 pbm2ppa.conf 767099 sasl2
drwxr-xr-x. 2 root root 1718296 pinforconf 18064988 sel
drwxr-xr-x. 2 root root 33028146 pkcs11 16778368 security
drwxr-xr-x. 2 root root 16777317 pki 17351571 selinux
drwxr-xr-x. 2 root root 17472752 plymouth 33758246 skel
drwxr-xr-x. 2 root root 33758246 pm 16778366 shells
drwxr-xr-x. 2 root root 18064938 pnm2ppa.conf 17400537 sestatus.conf
drwxr-xr-x. 2 root root 50985485 polkit-1 34679462 setroublesheet
drwxr-xr-x. 2 root root 17430973 pop.d 18016079 setroubleshoot
drwxr-xr-x. 2 root root 18016010 postfix 130147 sftp
drwxr-xr-x. 2 root root 34682750 ppp 18135604 shadow
drwxr-xr-x. 2 root root 91615 profile.conf.d 17381981 shadow-
drwxr-xr-x. 2 root root 16778362 printcap 16778368 shells
drwxr-xr-x. 2 root root 34532787 raven 17381568 yum.conf
drwxr-xr-x. 2 root root 50331773 profile.d 50331734 yum.repos.d

```

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

```

File Edit View Search Terminal Help
sheel@localhost:etc
ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -ctuvSUX 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 nongraphical 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, --sort=NAME                  sort by NAME: -t, 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, --sort=NAME                  list entries by columns
                                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, --full                       do not sort, enable -su, disable -le --color
-F, --classify                  append indicator (one of */=>) to entries
                                likewise, except do not append '*'
--file-type                     across -x, commas -m, horizontal -x, long -l,
--format=WORD                   single column -l, verbose -l, vertical -C
--full-time                     like -l --time-style=full-iso
-g, --group-directories-first    like -l, but do not list owner
                                group directories before files;
                                can be augmented with a --sort option, but any
                                use of --sort=name [-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)
-l, --inode                     print the index number of each file
-L, --ignore=PATTERN            do not list implied entries matching shell PATTERN
-k, --kibibytes                 default to 1024-byte blocks for disk usage
-l, --long                      use a long listing format
--dereference                   when showing file information for a symbolic
                                link, show the file it points to, not the link
--sort=WORD                     sort by WORD instead of name: none (-U), size (-S),
                                time (-t), version (-v), extension (-X)
--time=WORD                     with -l, show time as WORD instead of default
                                modification time: atime or access or use (-u)
                                ctime or status (-c); also use specified time
                                as sort key if --sort=time
--time-style=STYLE              with -l, show times using style STYLE:
                                full-iso, long-iso, iso, locale, or +FORMAT;
                                FORMAT is interpreted like in 'date'; if FORMAT
                                is FORMAT1=TIME1=FORMAT2, then FORMAT1 applies
                                to non-recent files and FORMAT2 to recent files;
                                if STYLE is prefixed with 'posix-', STYLE
                                takes effect only outside the POSIX locale
-t, --sort=time                 sort by modification time, newest first
-T, --tabsize=COLS              assume tab stops at each COLS instead of 8
-u, --sort=access                with -lt: sort by, and show, access time;
                                with -l: show access time and sort by name;
                                otherwise: sort by access time
-U, --sort=name                  do not sort; list entries in directory order
-v, --sort=version               natural sort of (version) numbers within text
-w, --width=COLS                assume screen width instead of current value
-x, --sort=name                  list entries by lines instead of by columns
-X, --sort=extension             sort alphabetically by entry extension
-l, --sort=name                  list one file per line

SELinux options:
--lcontext                      Display security context. Enable -l. Lines
                                will probably be too wide for most displays.
-Z, --context                   Display security context so it fits on most
                                displays. Displays only mode, user, group,
                                security context and file name.
--scontext                      Display only security context and file name.
-l, --help                      display this help and exit
--version                       output version information and exit

SIZE is an integer and optional unit (example: 10M is 10*1024*1024). Units
are K, M, G, T, P, E, Z, Y (powers of 1024) or KB, MB, ... (powers of 1000).

Using color to distinguish file types is disabled both by default and
with --color=never. With --color=auto, ls emits color codes only when
standard output is connected to a terminal. The LS_COLORS environment
variable can change the settings. Use the dircolors command to set it.

Exit status:
0 if OK,
1 if minor problems (e.g., cannot access subdirectory),
2 if serious trouble (e.g., cannot access command-line argument).

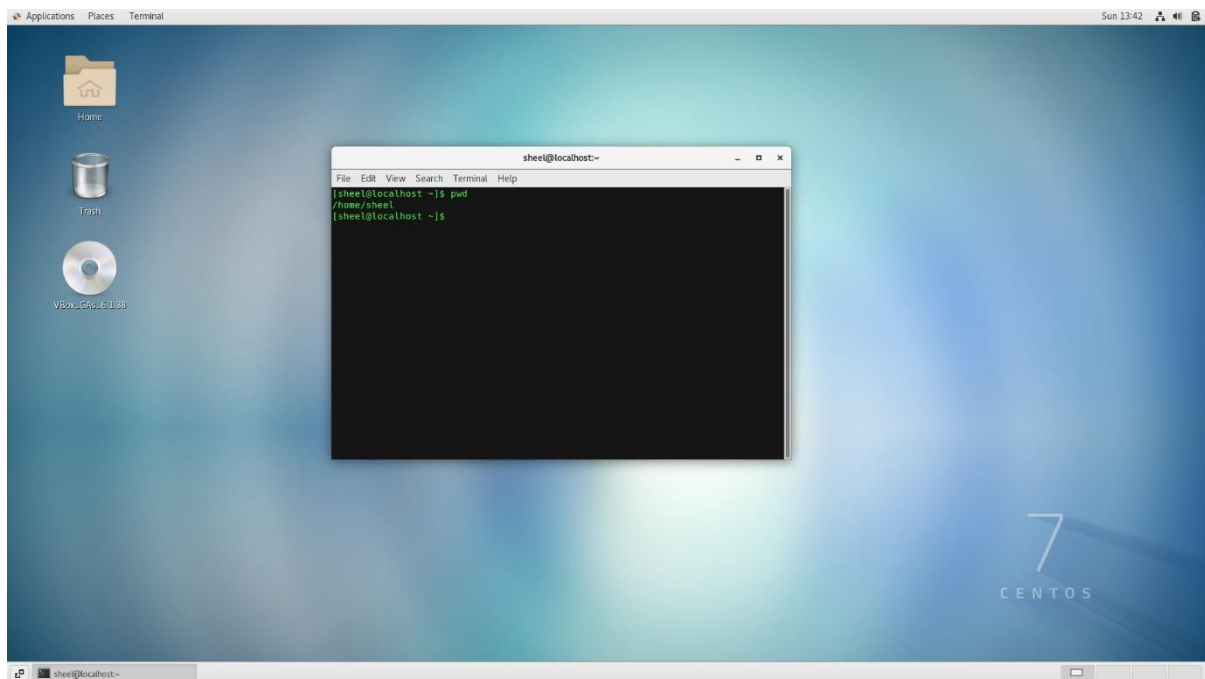
GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
For complete documentation, run: info coreutils 'ls invocation'
sheel@localhost:etc$
    
```

Assignment-5

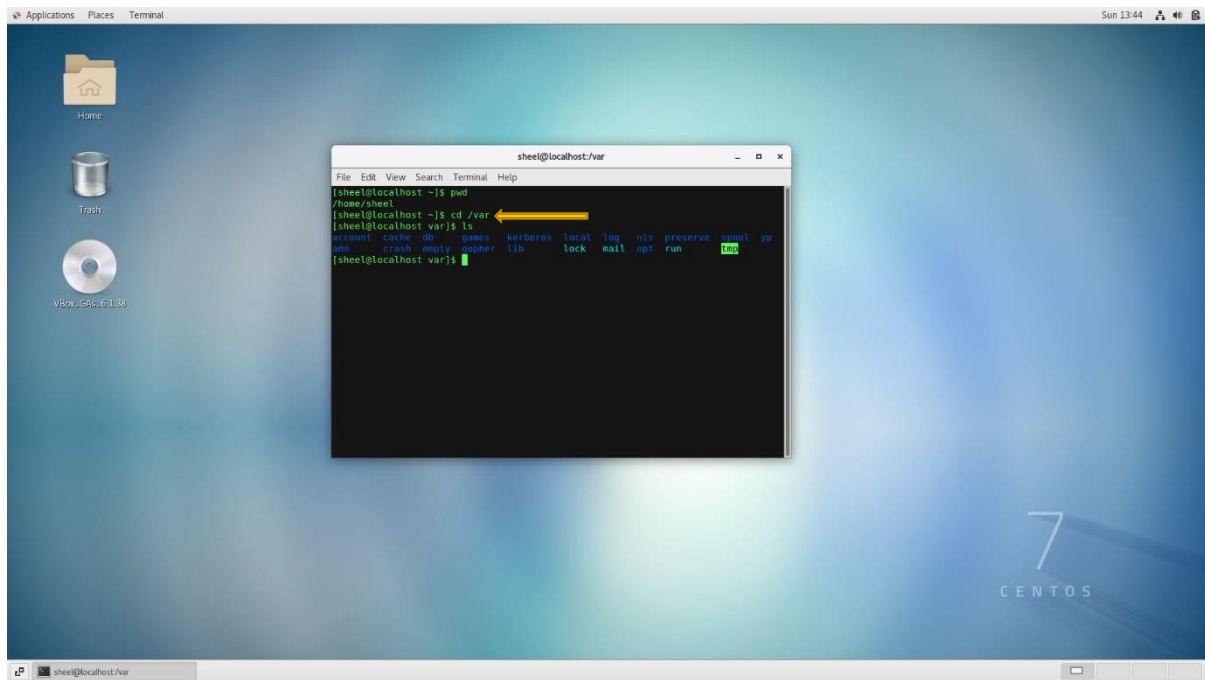
Know where you are and where you working

*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.*

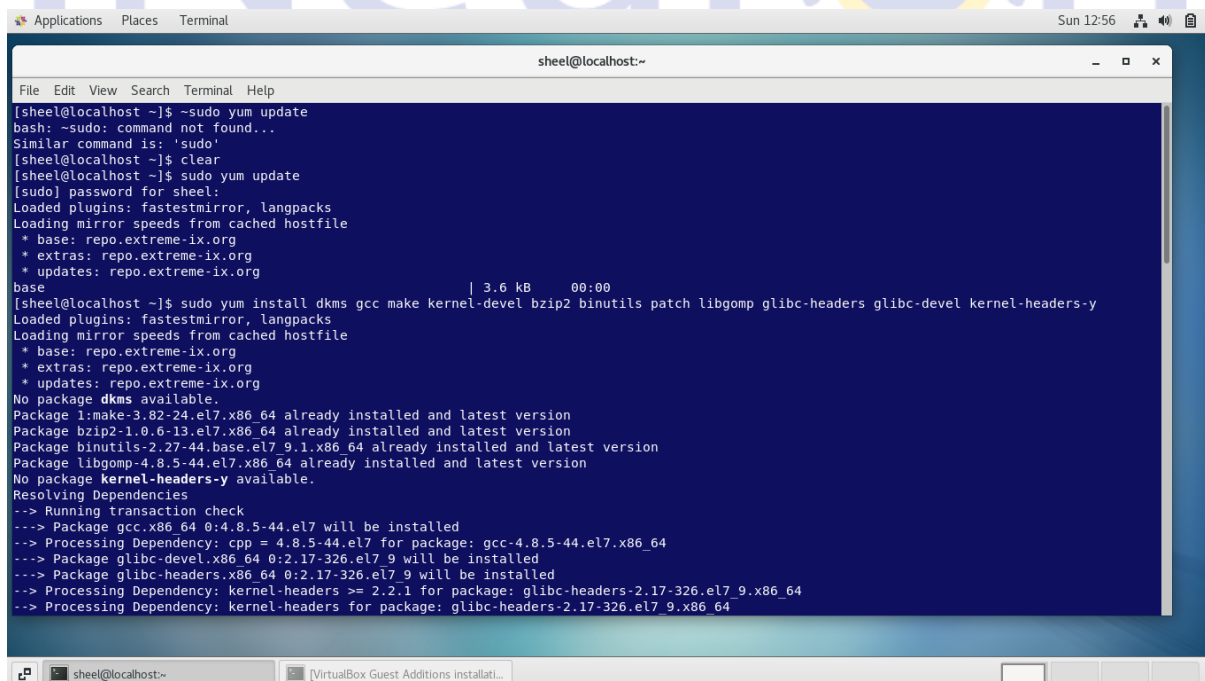
- Open terminal after restart the linux
 - Check which location you working, type **pwd** and take screenshot



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



➔ Installing dependencies for cent os fullscreen and applying updates on cent os.



ApplicationsPlacesTerminalSun 12:57

sheel@localhost:~

File Edit View Search Terminal Help

--> Processing Dependency: kernel-headers for package: glibc-headers-2.17-326.el7_9.x86_64
--> Package kernel-devel.x86_64 0:3.10.0-1160.76.1.el7 will be installed
--> Package patch.x86_64 0:2.7.1-12.el7_7 will be installed
--> Running transaction check
--> Package cpp.x86_64 0:4.8.5-44.el7 will be installed
--> Package kernel-headers.x86_64 0:3.10.0-1160.76.1.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

Package	Arch	Version	Repository	Size
Installing:				
gcc	x86_64	4.8.5-44.el7	base	16 M
glibc-devel	x86_64	2.17-326.el7_9	updates	1.1 M
glibc-headers	x86_64	2.17-326.el7_9	updates	691 k
kernel-devel	x86_64	3.10.0-1160.76.1.el7	updates	18 M
patch	x86_64	2.7.1-12.el7_7	base	111 k
Installing for dependencies:				
cpp	x86_64	4.8.5-44.el7	base	5.9 M
kernel-headers	x86_64	3.10.0-1160.76.1.el7	updates	9.1 M

Transaction Summary

Install 5 Packages (+2 Dependent packages)

Total download size: 51 M
Installed size: 98 M
Is this ok [y/d/N]: y
Downloading packages:
No Presto metadata available for updates

sheel@localhost:~[VirtualBox Guest Additions installati...

ApplicationsPlacesTerminalSun 12:57

sheel@localhost:~

File Edit View Search Terminal Help

(1/7): glibc-headers-2.17-326.el7_9.x86_64.rpm | 691 kB 00:00:01
(2/7): glibc-devel-2.17-326.el7_9.x86_64.rpm | 1.1 MB 00:00:01
(3/7): patch-2.7.1-12.el7_7.x86_64.rpm | 111 kB 00:00:00
(4/7): cpp-4.8.5-44.el7.x86_64.rpm | 5.9 MB 00:00:07
(5/7): kernel-headers-3.10.0-1160.76.1.el7.x86_64.rpm | 9.1 MB 00:00:08
(6/7): kernel-devel-3.10.0-1160.76.1.el7.x86_64.rpm | 18 MB 00:00:13
(7/7): gcc-4.8.5-44.el7.x86_64.rpm | 16 MB 00:00:15

Total 3.2 MB/s | 51 MB 00:00:16

Running transaction check
Running transaction test
Transaction test succeeded
Running transaction

Installing :	cpp-4.8.5-44.el7.x86_64	1/7
Installing :	kernel-headers-3.10.0-1160.76.1.el7.x86_64	2/7
Installing :	glibc-headers-2.17-326.el7_9.x86_64	3/7
Installing :	glibc-devel-2.17-326.el7_9.x86_64	4/7
Installing :	gcc-4.8.5-44.el7.x86_64	5/7
Installing :	kernel-devel-3.10.0-1160.76.1.el7.x86_64	6/7
Installing :	patch-2.7.1-12.el7_7.x86_64	7/7
Verifying :	patch-2.7.1-12.el7_7.x86_64	1/7
Verifying :	kernel-headers-3.10.0-1160.76.1.el7.x86_64	2/7
Verifying :	glibc-devel-2.17-326.el7_9.x86_64	3/7
Verifying :	cpp-4.8.5-44.el7.x86_64	4/7
Verifying :	glibc-headers-2.17-326.el7_9.x86_64	5/7
Verifying :	gcc-4.8.5-44.el7.x86_64	6/7
Verifying :	kernel-devel-3.10.0-1160.76.1.el7.x86_64	7/7

Installed:

gcc.x86_64 0:4.8.5-44.el7	glibc-devel.x86_64 0:2.17-326.el7_9	glibc-headers.x86_64 0:2.17-326.el7_9
kernel-devel.x86_64 0:3.10.0-1160.76.1.el7	patch.x86_64 0:2.7.1-12.el7_7	

sheel@localhost:~[VirtualBox Guest Additions installati...


```

Applications  Places  Terminal  Sun 12:58

sheel@localhost:~
File Edit View Search Terminal Help
(6/7): kernel-devel-3.10.0-1160.76.1.el7.x86_64.rpm | 18 MB 00:00:13
(7/7): gcc-4.8.5-44.el7.x86_64.rpm | 16 MB 00:00:15
-----
Total | 3.2 MB/s | 51 MB 00:00:16
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : cpp-4.8.5-44.el7.x86_64 1/7
Installing : kernel-headers-3.10.0-1160.76.1.el7.x86_64 2/7
Installing : glibc-headers-2.17-326.el7_9.x86_64 3/7
Installing : glibc-devel-2.17-326.el7_9.x86_64 4/7
Installing : gcc-4.8.5-44.el7.x86_64 5/7
Installing : kernel-devel-3.10.0-1160.76.1.el7.x86_64 6/7
Installing : patch-2.7.1-12.el7_7.x86_64 7/7
Verifying : patch-2.7.1-12.el7_7.x86_64 1/7
Verifying : kernel-headers-3.10.0-1160.76.1.el7.x86_64 2/7
Verifying : glibc-devel-2.17-326.el7_9.x86_64 3/7
Verifying : cpp-4.8.5-44.el7.x86_64 4/7
Verifying : glibc-headers-2.17-326.el7_9.x86_64 5/7
Verifying : gcc-4.8.5-44.el7.x86_64 6/7
Verifying : kernel-devel-3.10.0-1160.76.1.el7.x86_64 7/7

Installed:
gcc.x86_64 0:4.8.5-44.el7 glibc-devel.x86_64 0:2.17-326.el7_9 glibc-headers.x86_64 0:2.17-326.el7_9
kernel-devel.x86_64 0:3.10.0-1160.76.1.el7 patch.x86_64 0:2.7.1-12.el7_7

Dependency Installed:
cpp.x86_64 0:4.8.5-44.el7 kernel-headers.x86_64 0:3.10.0-1160.76.1.el7

Complete!
[sheel@localhost ~]$

```

