



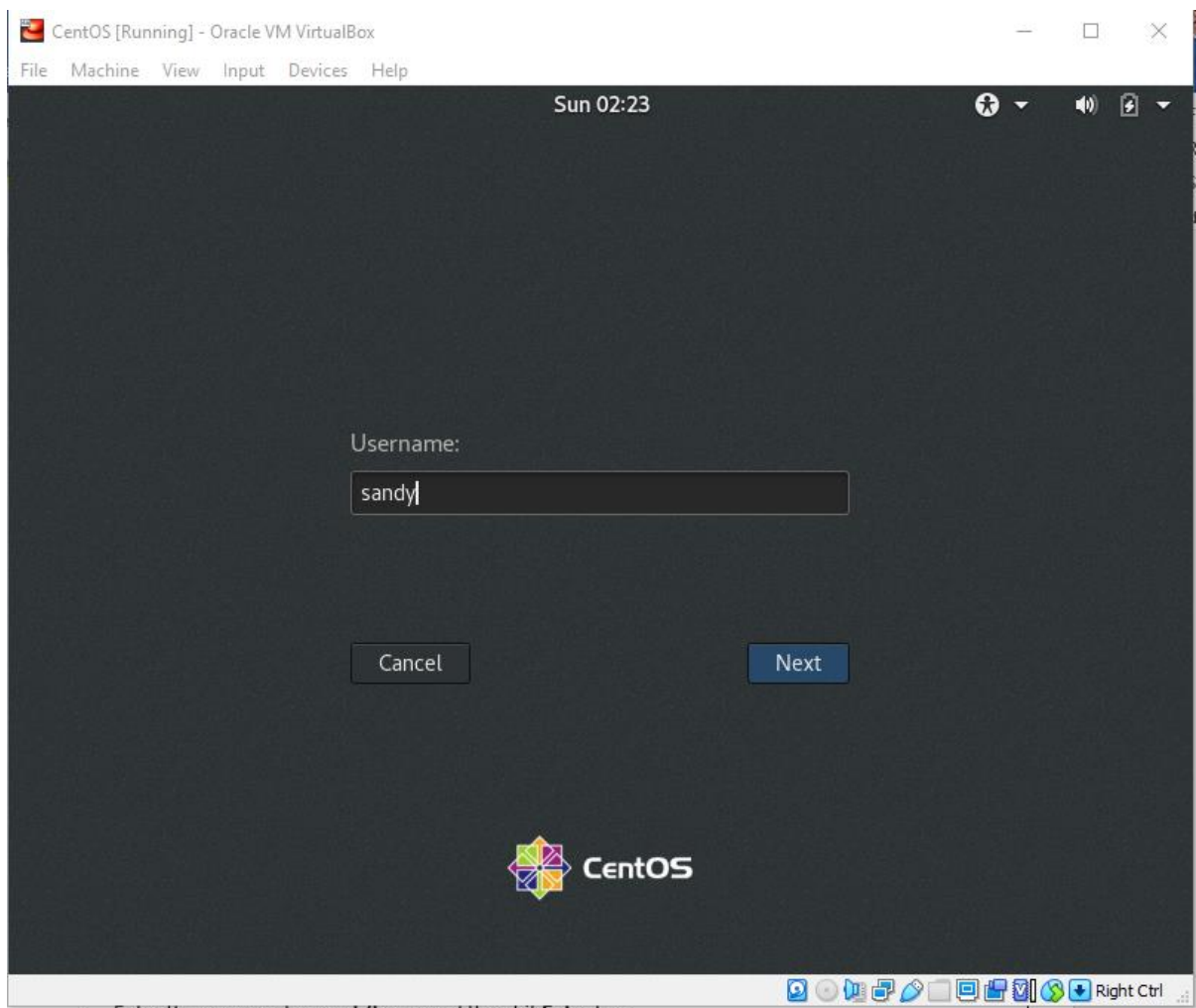
Basic Linux Commands Assignments with Solutions

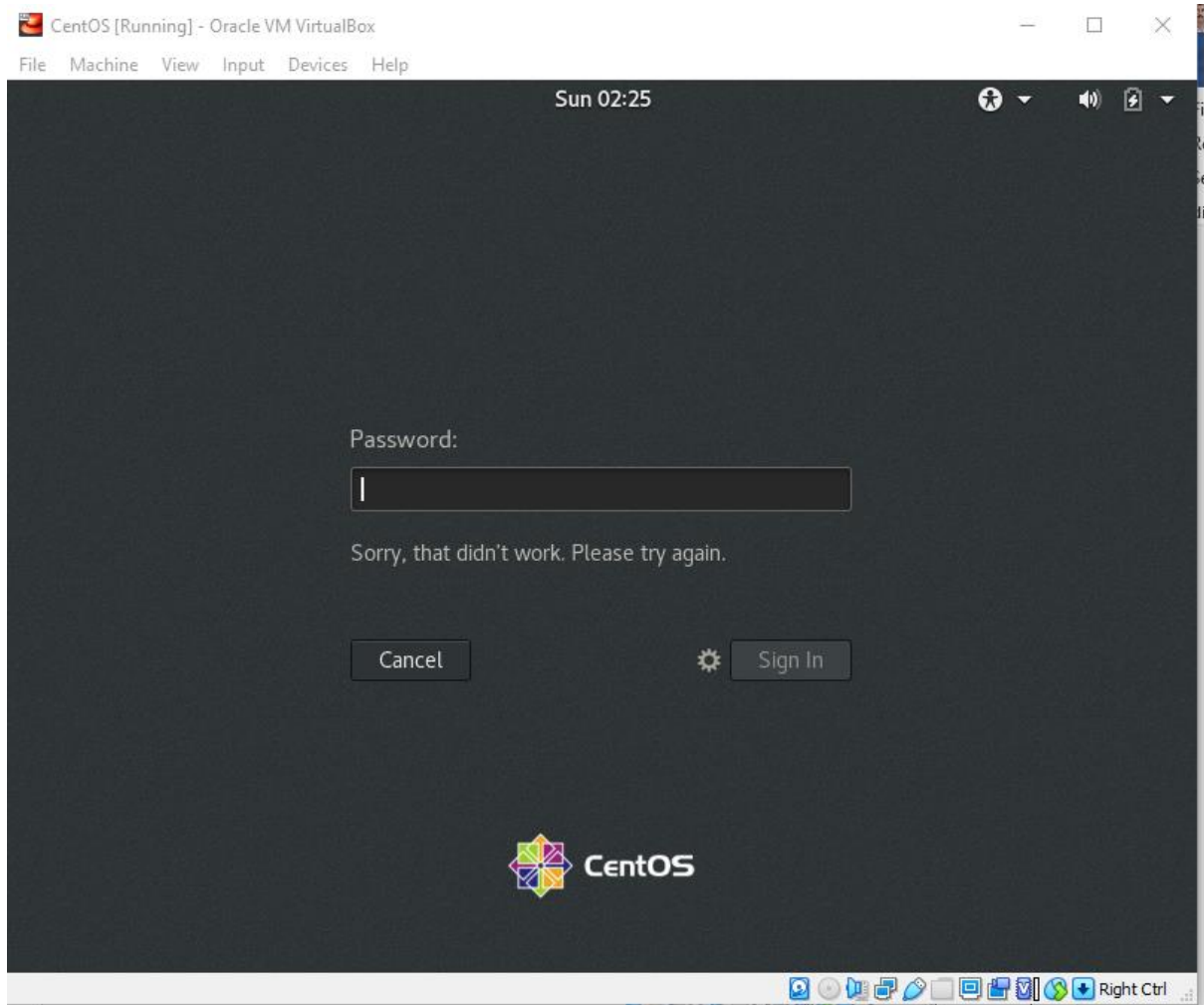
Assignment-1

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





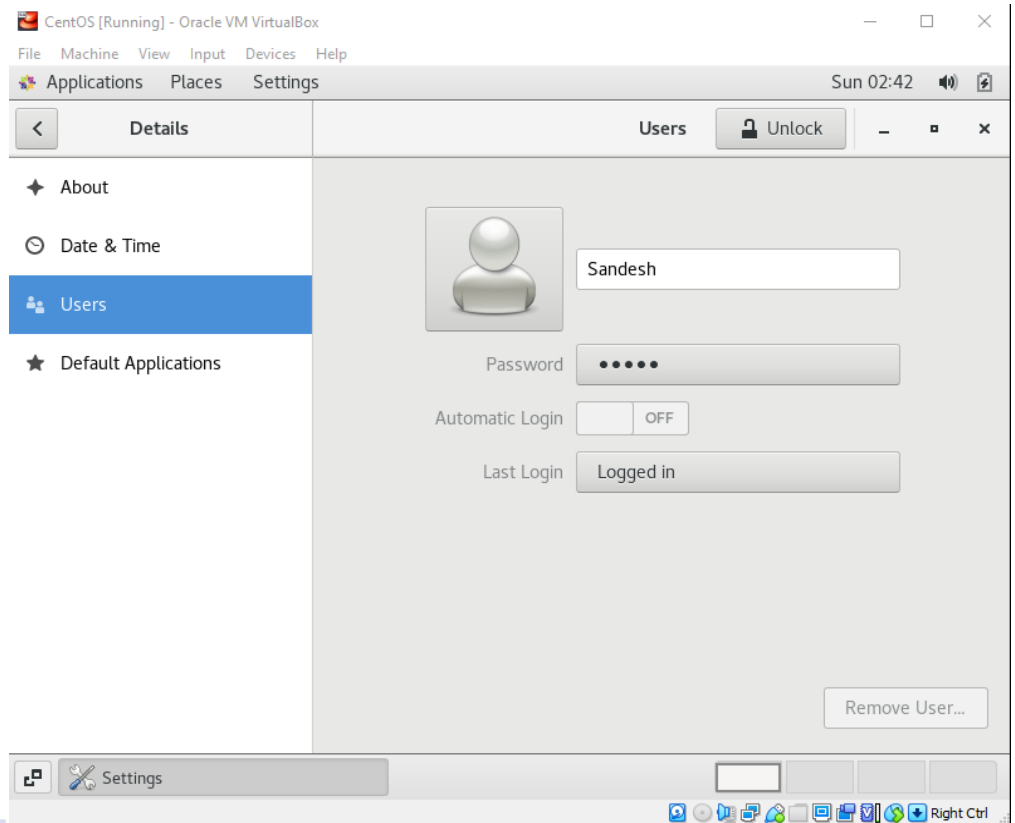
I understood that when I click on “Login as a different user” and enter the username as ‘sandy’, since the user ‘sandy’ does not exist as I have not created a user ‘sandy’ it accepts username and password but due to mismatch of username it can’t allow me to sign in. It displays a message “Sorry, that didn’t work. Please try again.”

Assignment-2

Password changing

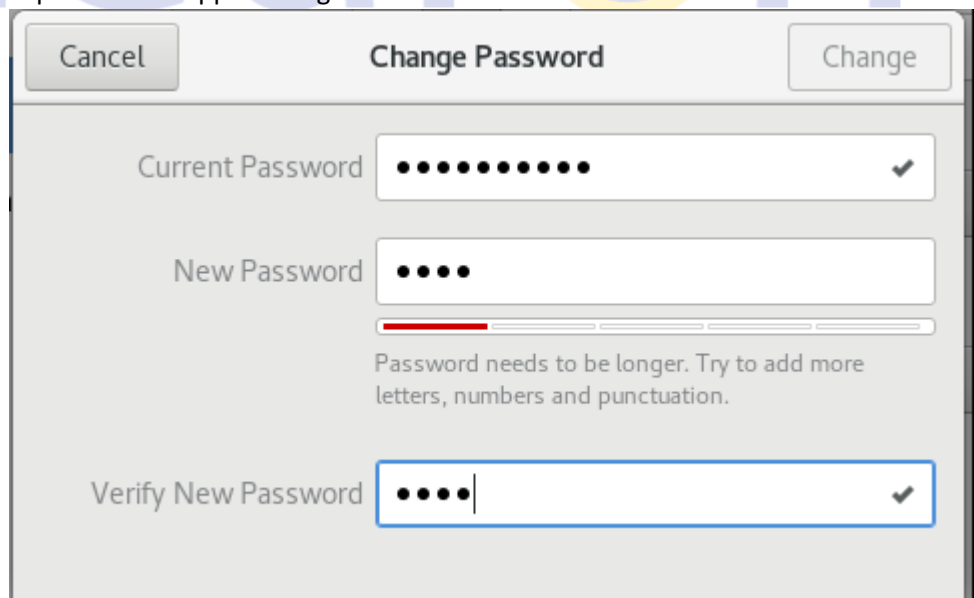
- Login into your account and then change password?
 - Change your password into **IneuR0n#42** and hit the **Enter** key
 - Explain what happen and give screenshot?

Solution



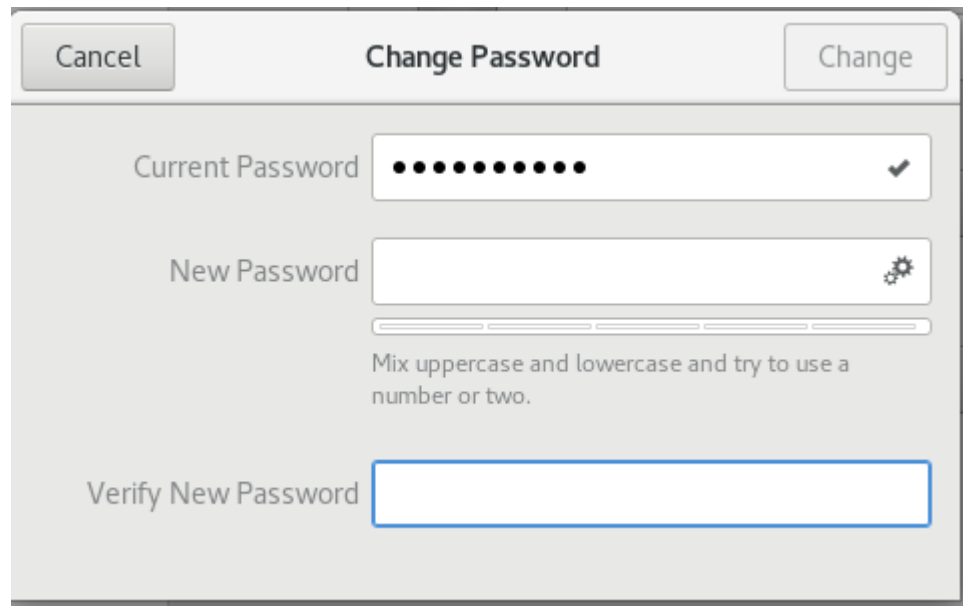
Since the given password is strong, it accepted that password.

- Try again to change password but use like password **1234** or **abcd**
 - Explain what happen and give screenshot?



Password is short.

- Try again to change password but now don't use any password just hit **Enter** key
 - Explain what happen and give screenshot?



A dialog box titled "Change Password" with "Cancel" and "Change" buttons. It contains three input fields: "Current Password" (filled with dots and a checkmark), "New Password" (empty with a gear icon and a strength indicator), and "Verify New Password" (empty). Below the "New Password" field, text reads: "Mix uppercase and lowercase and try to use a number or two."

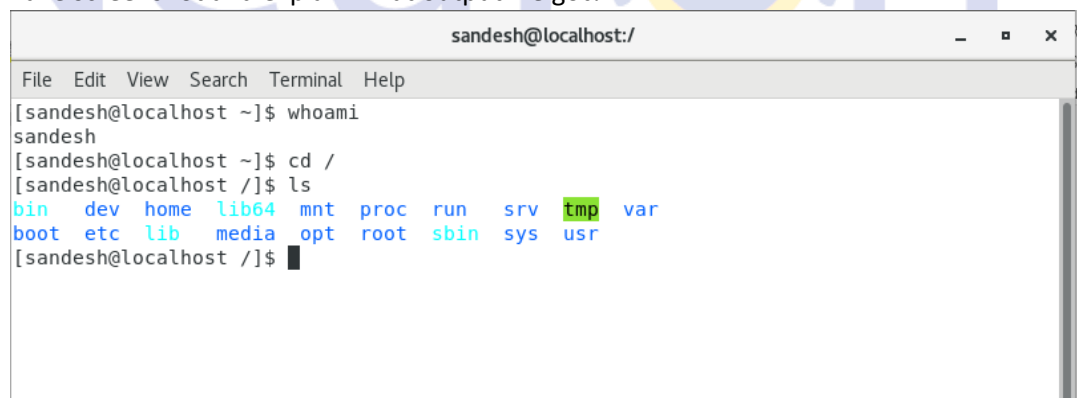
Without satisfying the password convention with the specified standard rules, it will not navigate to next screen.

Assignment-3

Solution

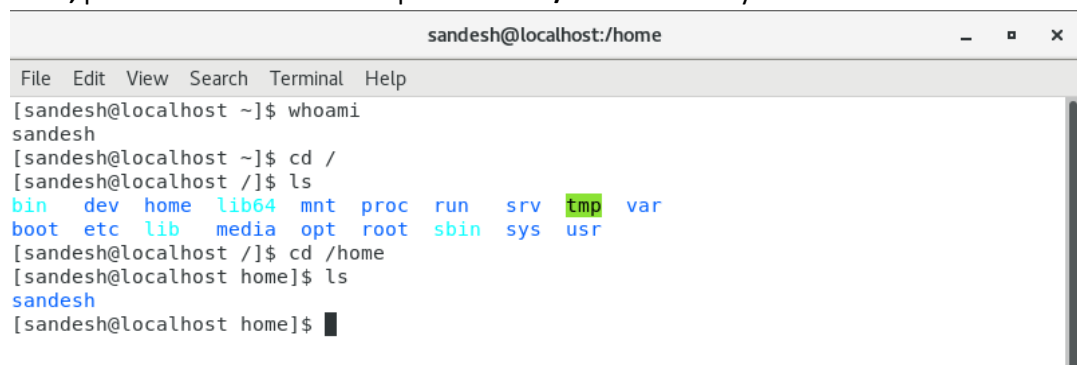
Working with Directories

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



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

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



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

```

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

```

~ indicates home directory and / indicates root directory. The user 'sandesh' is in home directory. Thus ~ is a home directory for the user 'sandesh'. Likewise, every user has his/her own home directory. Home directory is located in root directory /. By running cd .. I went back to root directory / which is parent directory for home directory ~.

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

```

sandesh@localhost:~
File Edit View Search Terminal Help
[sandesh@localhost /]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[sandesh@localhost /]$ cd
[sandesh@localhost ~]$

```

The directory 'html' does not exist in the given path. Even though we navigate to a valid and existing directory in the file system and then if we just run cd command without any arguments then we will directly return back to home directory ~.

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

```

[sandesh@localhost /]$ cd
[sandesh@localhost ~]$ cd /root
bash: cd: /root: Permission denied
[sandesh@localhost ~]$

```

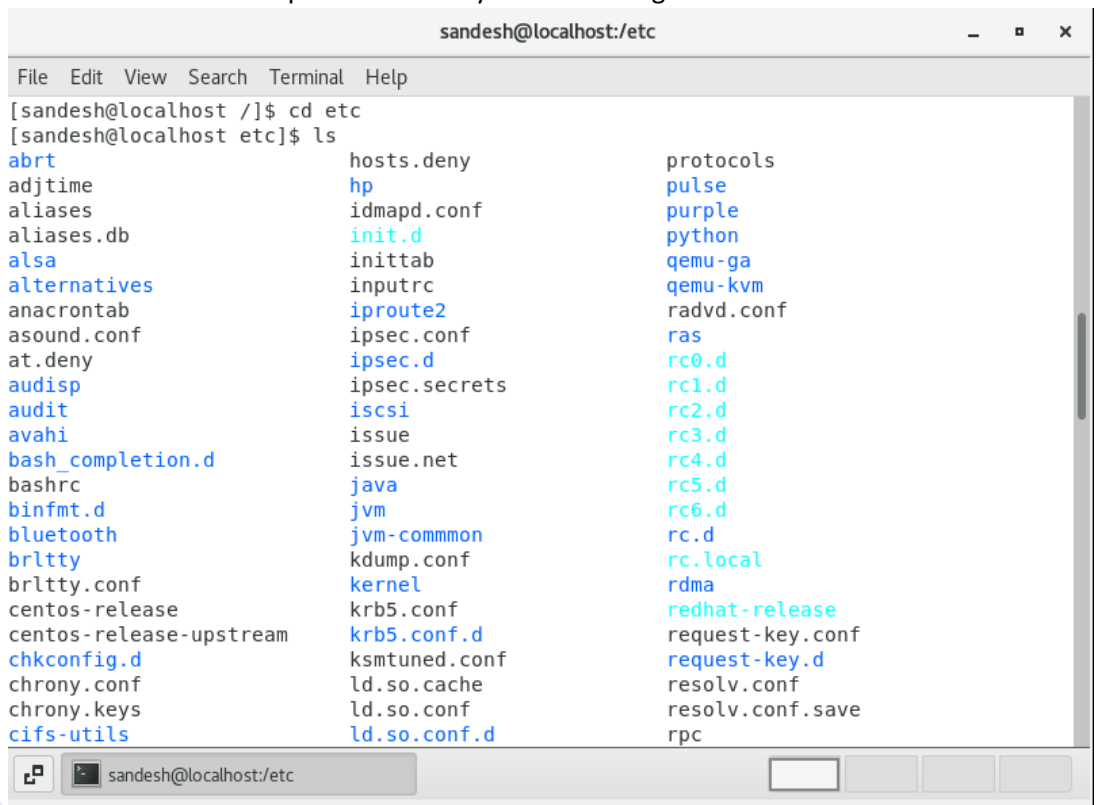
Since I am not a 'root' user it will not allow me to enter the root directory.

Assignment-4

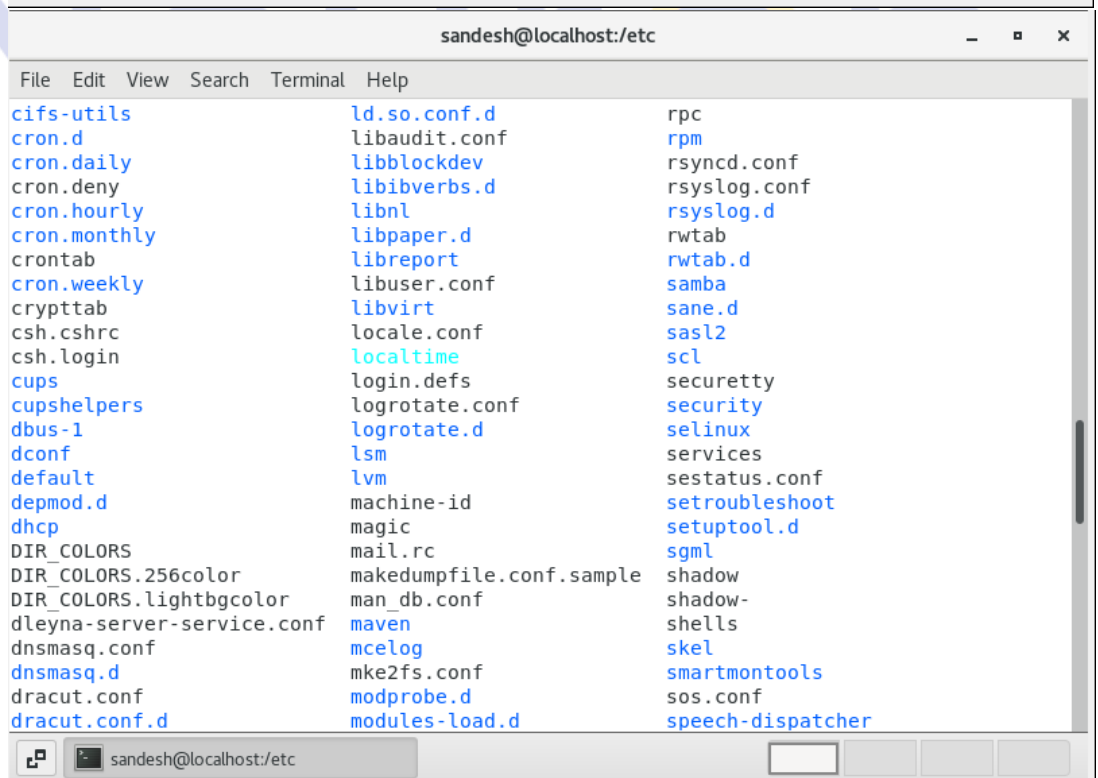
Solution

Working with File Listing

- Go to **cd /etc** and type **ls**
 - Take screenshot and explain what files you have seeing?



```
sandesh@localhost:/etc
File Edit View Search Terminal Help
[sandesh@localhost /]$ cd etc
[sandesh@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
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                     ksmtuned.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
```



```
sandesh@localhost:/etc
File Edit View Search Terminal Help
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                   rwtab
crontab                          libreport                     rwtab.d
cron.weekly                      libuser.conf                  samba
crypttab                        libvirt                       sane.d
csh.cshrc                       locale.conf                   sasl2
csh.login                        localtime                     scl
cups                             login.defs                    security
cupshelpers                     logrotate.conf                security
dbus-1                           logrotate.d                   selinux
dconf                            lsm                           services
default                          lvm                           sestatus.conf
depmod.d                        machine-id                     setroubleshoot
dhcp                             magic                         setupptool.d
DIR_COLORS                      mail.rc                       sgml
DIR_COLORS.256color             makedumpfile.conf.sample     shadow
DIR_COLORS.lightbgcolor         man_db.conf                  shadow-
dleyna-server-service.conf      maven                        shells
dnsmasq.conf                    mcelog                       skel
dnsmasq.d                       mke2fs.conf                  smartmontools
dracut.conf                     modprobe.d                   sos.conf
dracut.conf.d                   modules-load.d                speech-dispatcher
```

```
sandesh@localhost:/etc

File Edit View Search Terminal Help

e2fsck.conf      motd             ssh
egl              mtab             ssl
enscript.cfg     mtools.conf     statetab
environment      multipath        statetab.d
ethertypes       my.cnf           subgid
exports          my.cnf.d         subuid
exports.d        nanorc           sudo.conf
favicon.png      ndctl            sudoers
fcoe             netconfig        sudoers.d
festival         NetworkManager  sudo-ldap.conf
filesystems      networks         sysconfig
firefox          nfs.conf         sysctl.conf
firewallld       nfsmount.conf   sysctl.d
flatpak          nsswitch.conf   systemd
fonts            nsswitch.conf.bak system-release
fprintd.conf     ntp              system-release-cpe
fstab            numad.conf       tcstd.conf
fuse.conf        oddjob           terminfo
fwupd            oddjobd.conf     tmpfiles.d
gconf            oddjobd.conf.d   trusted-key.key
gcrypt           openldap         tuned
gdbinit          opt              udev
gdbinit.d        os-release       udisks2
gdm              PackageKit       unbound
geoclue          pam.d            updatedb.conf
GeoIP.conf       papersize        UPower

GeoIP.conf       papersize        UPower
ghostscript      passwd           usb_modeswitch.conf
glvnd            passwd-         vconsole.conf
gnupg            pbm2ppa.conf    vimrc
GREP_COLORS     pinforc         virc
groff            pkcs11          vmware-tools
group            pki              wgetrc
group-          plymouth        wpa_supplicant
grub2.cfg        pm               wvdial.conf
grub.d           pnm2ppa.conf    X11
gshadow          polkit-1         xdg
gshadow-         popt.d          xinetd.d
gss              postfix         xml
gssproxy         ppp             yum
host.conf        prelink.conf.d  yum.conf
hostname         printcap        yum.repos.d
hosts            profile
hosts.allow      profile.d

[sandesh@localhost etc]$
```

- Take screenshot and explain what different output you found compare to previous command you used?

I could not enter into directory 'root', but I could enter into the directory 'etc' and list the files.

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

```
sandesh@localhost:/etc
File Edit View Search Terminal Help
[sandesh@localhost etc]$ ls -al
total 1372
drwxr-xr-x. 139 root root 8192 Oct 16 02:53 .
dr-xr-xr-x. 17 root root 224 Oct 16 01:56 ..
drwxr-xr-x. 3 root root 101 Oct 16 01:27 abrt
-rw-r--r--. 1 root root 16 Oct 16 01:56 adjtime
-rw-r--r--. 1 root root 1529 Apr 1 2020 aliases
-rw-r--r--. 1 root root 12288 Oct 16 02:02 aliases.db
drwxr-xr-x. 3 root root 65 Oct 16 01:36 alsa
drwxr-xr-x. 2 root root 4096 Oct 16 01:51 alternatives
-rw-r--r--. 1 root root 541 Aug 9 2019 anacrontab
-rw-r--r--. 1 root root 55 Aug 8 2019 asound.conf
-rw-r--r--. 1 root root 1 Oct 30 2018 at.deny
drwxr-xr-x. 3 root root 43 Oct 16 01:28 audisp
drwxr-xr-x. 3 root root 83 Oct 16 02:01 audit
drwxr-xr-x. 4 root root 71 Oct 16 01:36 avahi
drwxr-xr-x. 2 root root 4096 Oct 16 01:37 bash_completion.d
-rw-r--r--. 1 root root 2853 Apr 1 2020 bashrc
drwxr-xr-x. 2 root root 6 Oct 1 2020 binfo.d
drwxr-xr-x. 2 root root 23 Oct 16 01:26 bluetooth
drwxr-xr-x. 2 root root 12288 Oct 16 01:31 brlty
-rw-r--r--. 1 root root 21929 Apr 11 2018 brlty.conf
-rw-r--r--. 1 root root 37 Oct 23 2020 centos-release
-rw-r--r--. 1 root root 51 Oct 23 2020 centos-release-upstream
drwxr-xr-x. 2 root root 6 Oct 13 2020 chkconfig.d
-rw-r--r--. 1 root root 1108 Aug 8 2019 chrony.conf
```

Earlier I saw only list file names. This time I saw filenames along with their details such as permissions, size, date of creation, etc. Also, I saw the files which start from . (dot) which indicate hidden files. Here, . indicates current directory and .. indicates parent directory.

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

```
sandesh@localhost:/etc
File Edit View Search Terminal Help
-rw-r--r--. 1 root root 970 Oct 1 2020 yum.conf
drwxr-xr-x. 2 root root 220 Oct 1 2020 yum.repos.d
[sandesh@localhost etc]$ ls -i
34505112 abrt 2852998 mcelog
17506278 adjtime 17317929 mke2fs.conf
16778346 aliases 17466257 modprobe.d
18001242 aliases.db 1116744 modules-load.d
1584498 alsa 16778360 motd
33923986 alternatives 16777284 mtab
17506250 anacrontab 17091449 mtools.conf
17240239 asound.conf 17667025 multipath
18000712 at.deny 17436400 my.cnf
51230262 audisp 17436401 my.cnf.d
17592597 audit 18077600 nanorc
35221211 avahi 34504900 ndctl
77924 bash_completion.d 17317950 netconfig
16778347 bashrc 34423154 NetworkManager
51057706 binfo.d 17506280 networks
51141633 bluetooth 17688466 nfs.conf
17666589 brlty 17688468 nfsmount.conf
17666590 brlty.conf 17467132 nsswitch.conf
16777320 centos-release 16788975 nsswitch.conf.bak
16777321 centos-release-upstream 51952317 ntp
50376151 chkconfig.d 17531066 numad.conf
17607766 chrony.conf 51230250 oddjob
17607768 chrony.keys 17592577 oddjobd.conf
```


Now it displayed only size of files, not all details.

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

```
[sandesh@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
--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
```

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

```
sandesh@localhost:~
File Edit View Search Terminal Help
[sandesh@localhost ~]$ pwd
/home/sandesh
[sandesh@localhost ~]$
```

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

```
[sandesh@localhost ~]$ cd /var
[sandesh@localhost var]$ ls
account  cache  db      games  kerberos  local  log  nis  preserve  spool  yp
adm      crash  empty  gopher  lib       lock  mail  opt  run      tmp
[sandesh@localhost var]$
```

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

Spot Assignments given by Saksham during the class in rough notes

Assignment 1 :- Install all the dependencies for making CentOS full screen.

I referred the following YouTube video. But I could not complete this assignment because of following errors. I tried with both root user password and sandesh user password.

<https://youtu.be/Eo-DjllwPvw>

```
[sandesh@localhost ~]$ sudo yum -y install gcc
[sudo] password for sandesh:
Sorry, try again.
[sudo] password for sandesh:
sandesh is not in the sudoers file. This incident will be reported.
[sandesh@localhost ~]$ sudo yum -y install gcc
[sudo] password for sandesh:
Sorry, try again.
[sudo] password for sandesh:
Sorry, try again.
[sudo] password for sandesh:
sandesh is not in the sudoers file. This incident will be reported.
```

Assignment 2 :- Please update your CentOS machine

I referred the following YouTube video. But I could not complete this assignment because of following errors.

<https://youtu.be/rXsK7IEemNo>

```
[sandesh@localhost ~]$ su
Password:
[root@localhost sandesh]# yum update
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
Could not retrieve mirrorlist http://mirrorlist.centos.org/?release=7&arch=x86_64&repo=
os&infra=stock error was
14: curl#6 - "Could not resolve host: mirrorlist.centos.org; Unknown error"
```

One of the configured repositories failed (Unknown),
and yum doesn't have enough cached data to continue. At this point the only
safe thing yum can do is fail. There are a few ways to work "fix" this:

1. Contact the upstream for the repository and get them to fix the problem.
2. Reconfigure the baseurl/etc. for the repository, to point to a working upstream. This is most often useful if you are using a newer distribution release than is supported by the repository (and the packages for the previous distribution release still work).
3. Run the command with the repository temporarily disabled
yum --disablerepo=<repoid> ...

4. Disable the repository permanently, so yum won't use it by default. Yum will then just ignore the repository until you permanently enable it again or use `--enablerepo` for temporary usage:

```
yum-config-manager --disable <repoid>
or
subscription-manager repos --disable=<repoid>
```

5. Configure the failing repository to be skipped, if it is unavailable. Note that yum will try to contact the repo. when it runs most commands, so will have to try and fail each time (and thus. yum will be be much slower). If it is a very temporary problem though, this is often a nice compromise:

```
yum-config-manager --save --setopt=<repoid>.skip_if_unavailable=true
```

```
Cannot find a valid baseurl for repo: base/7/x86_64
[root@localhost sandesh]# █
```

