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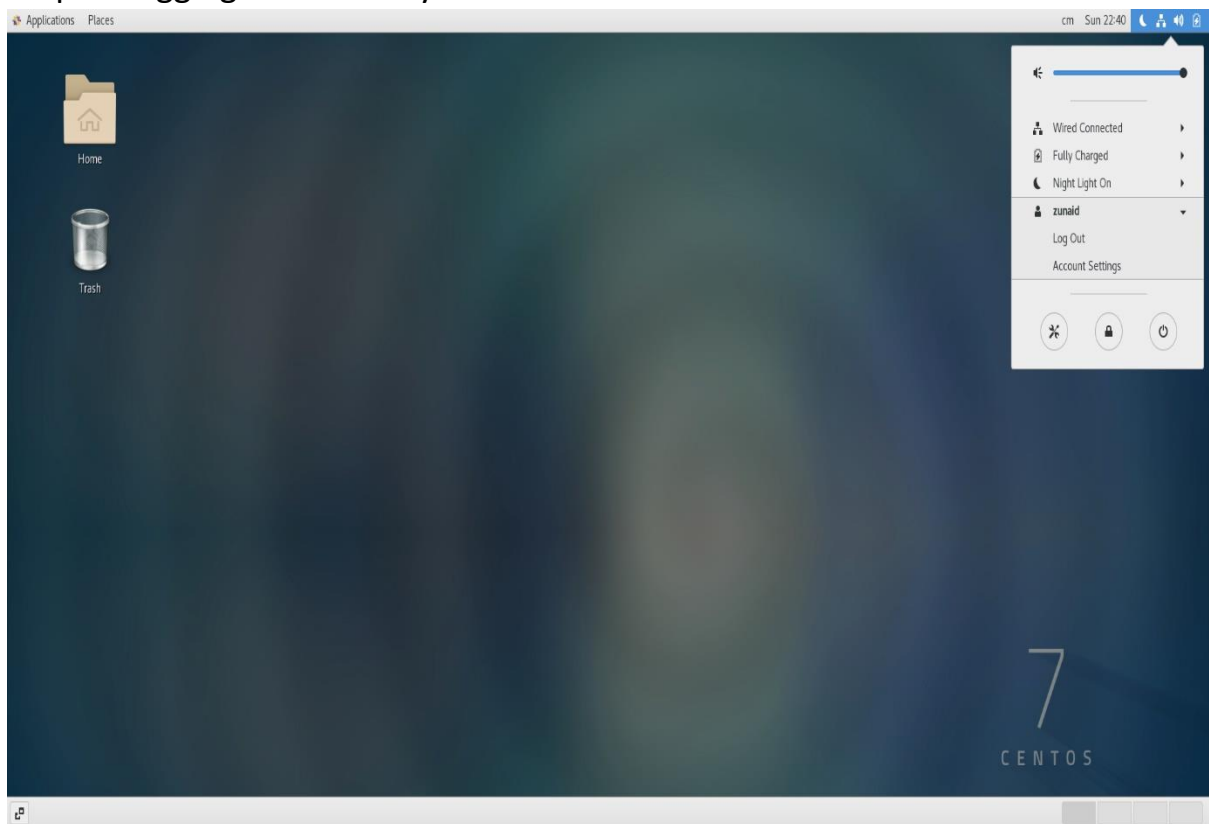
Date 17/10/2022

Assignment 1

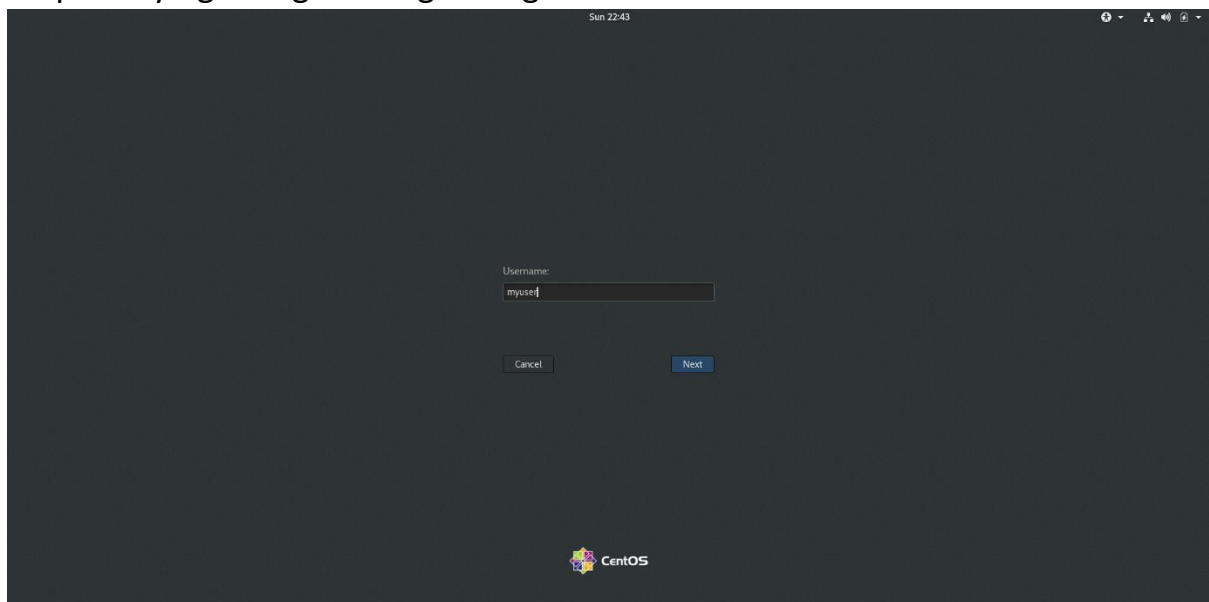
Connect and disconnect with login Access

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

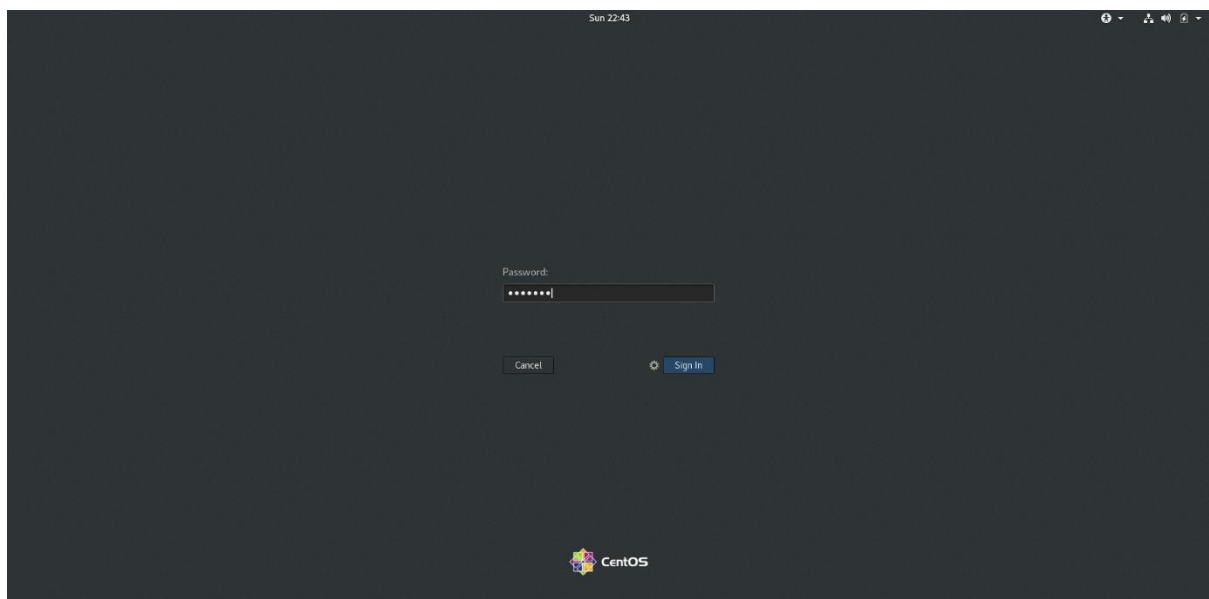
Step 1: Logging out from my account



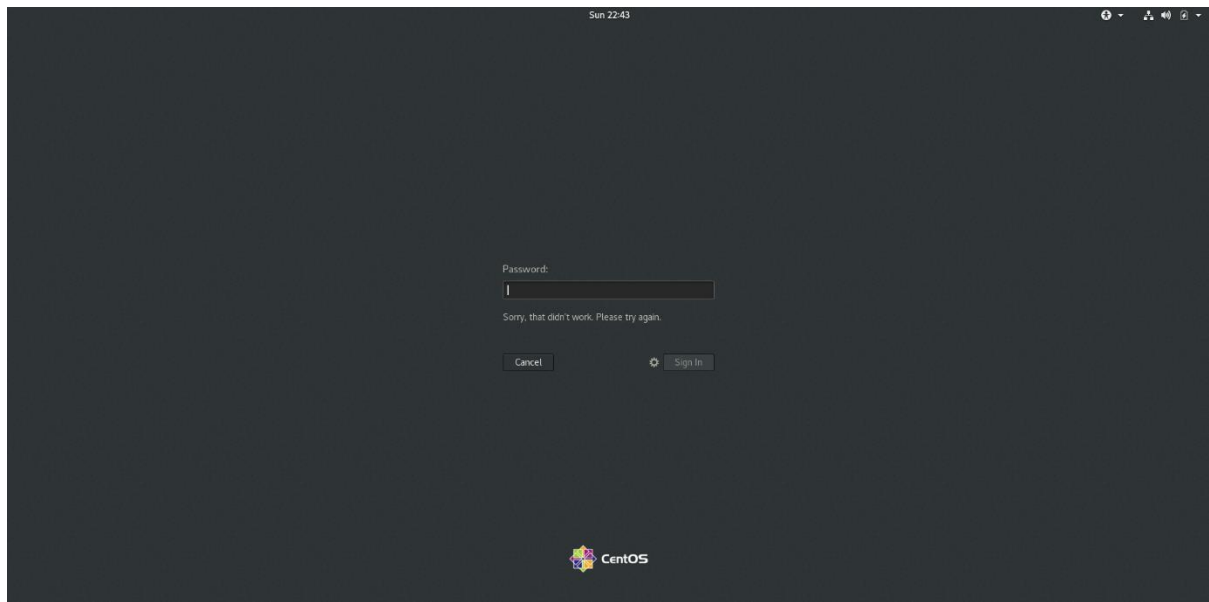
Step 2: Trying to log in using wrong user



Step 3: It will proceed for the password without checking for the username is present in the main account or not.



Step 4: It will now check for username and match the password and as the username is wrong and so as password too. It will show the same problem and do not allow to sign in.

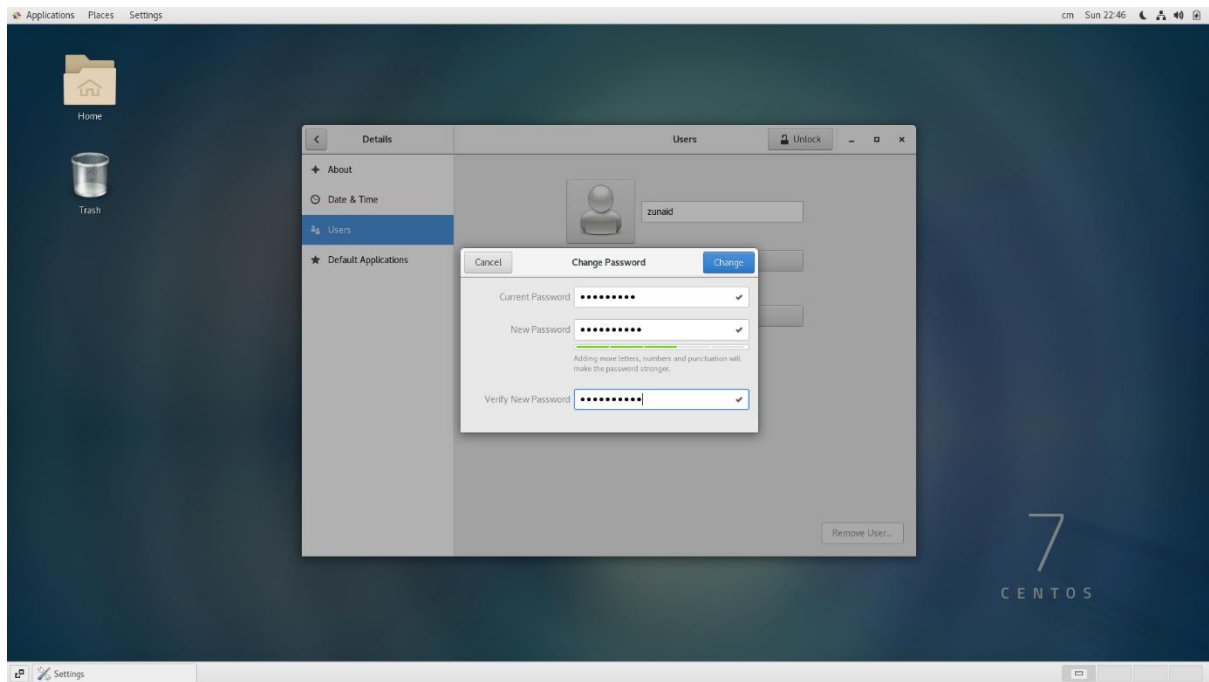


Assignment 2

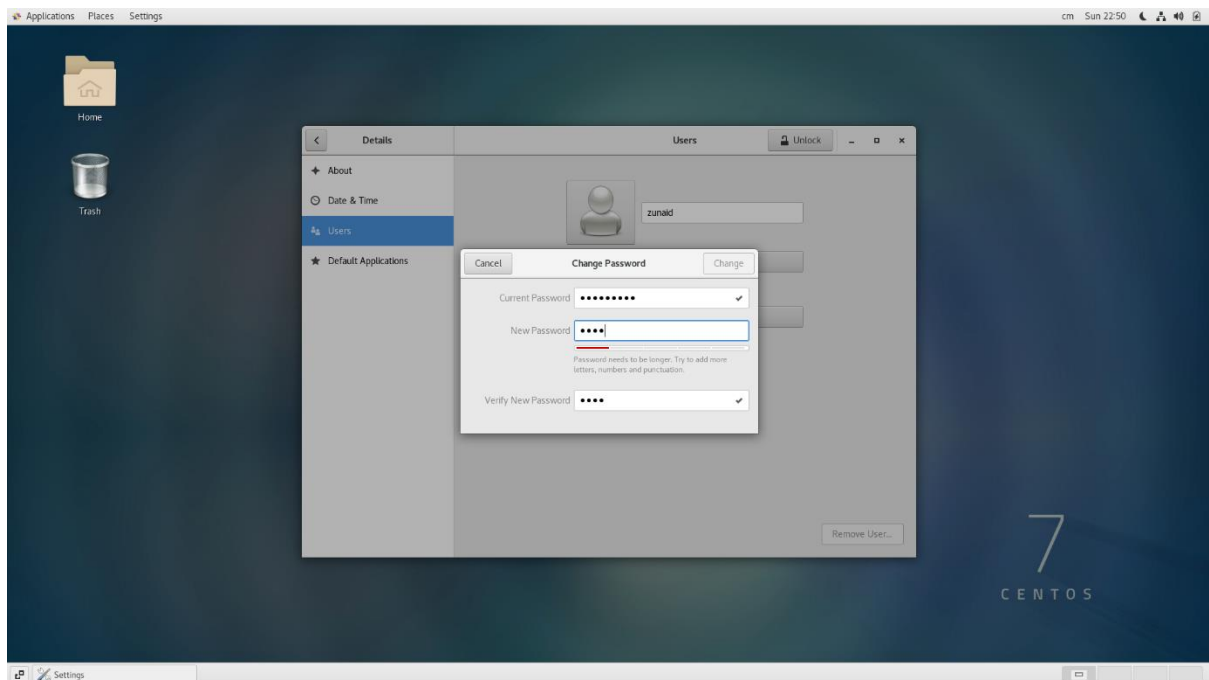
Password changing

- 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?
 - 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?

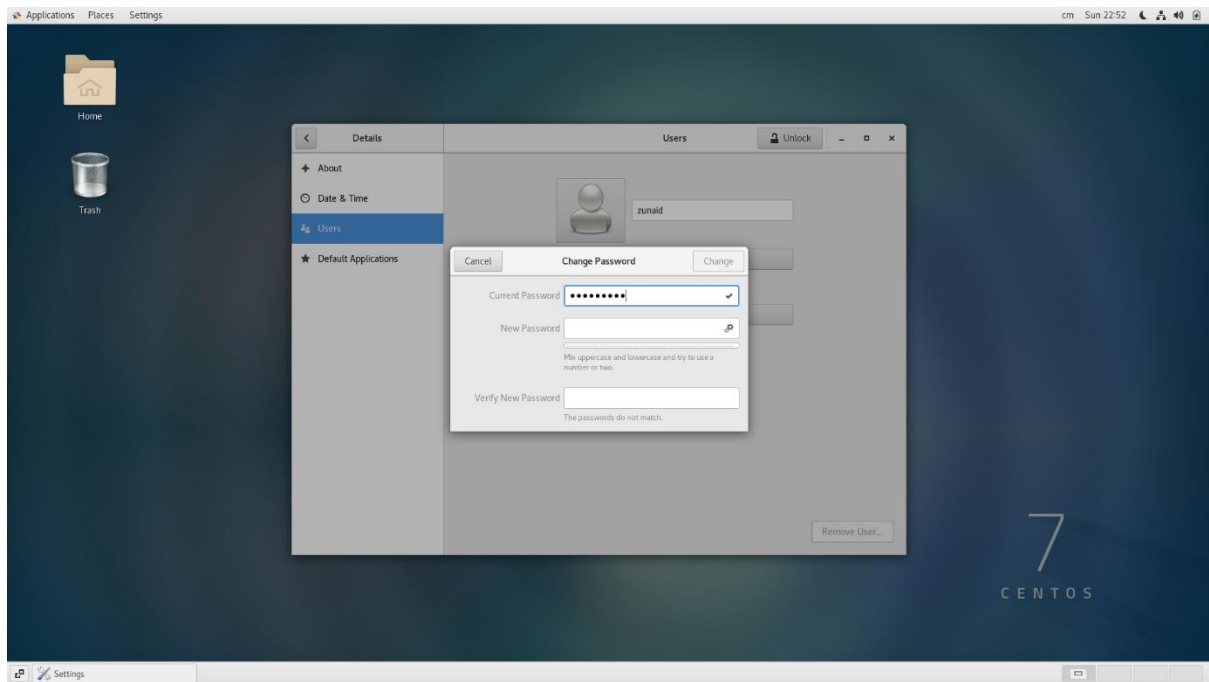
Solution



It is asking to fill current password before allowing to set new password so that to avoid unethical account access.



Trying to change password to 1234 but it is not allowing to change because this password is weak.



It will not allow Empty password which means password is mandatory in linux(CentOS) which provide security to the user account to some extent.

Assignment 3

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

```
[zunaaid@localhost ~]$ cd /
[zunaaid@localhost /]$ ls
bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
[zunaaid@localhost /]$
```

cd / / command change directory to root directory

after which `ls` command will print the list of all directories and file inside `/`

- Enter the command now **`cd /home`** and then hit **Enter** key

Do **`ls`**, provide screenshot and explain what is **`/home`** directory used for?



```
Applications Places Terminal cm Sun 22:58
zunaïd@localhost/home
File Edit View Search Terminal Help
[zunaïd@localhost ~]$ cd /home
[zunaïd@localhost home]$ ls
zunaïd
[zunaïd@localhost home]$
```

`cd /home` will take from `/` to home directory which is present in `/` after which `ls` is printing the file/directory which is present in home directory. Directory with username in this case.

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



```
Applications Places Terminal cm Sun 22:59
zunaïd@localhost:/
File Edit View Search Terminal Help
[zunaïd@localhost ~]$ cd /home
[zunaïd@localhost home]$ ls
zunaïd
[zunaïd@localhost home]$ cd ..
[zunaïd@localhost ~]$
```

`cd ..` is taking to the previos directory from the current directory/file.

- Now type **`cd /root`** and then hit **Enter** key

Do **`ls`**, check any output we have on screen if yes then take screenshot?



```
Applications Places Terminal cm Sun 23:13
zunaïd@localhost:/
File Edit View Search Terminal Help
[zunaïd@localhost ~]$ cd /root
bash: cd: /root: Permission denied
[zunaïd@localhost ~]$
```

`cd /root` command taking us to the root which is present inside `/` but the permission is denied because only root user is allowed to go inside it. `/root` is home director for root user.

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?

```

[zunaid@localhost /]$ cd /etc
[zunaid@localhost etc]$ ls
abrt                cron.monthly        favicon.png          gshadow             ksmntuned.conf     modules-load.d      passwd             rc4.d              sgml               tuned
adjtime             crontab             fcoe                gshadow-            ld.so.cache        motd                pin2ppa.conf       rc5.d              shadow            udev
aliases             cron.weekly         festival            gss                 ld.so.conf         mtools.conf        pinforc            rc6.d              shadow-          udisks2
aliases.db          crypttab            filesystems          gssproxy            ld.so.conf.d       multipath           pkcs11             rc.d               shells            unbound
alsa                csh.cshrc           firefox             host.conf            libaudit.conf      my.cnf             pki                rc.local           skel              updatedb.conf
alternatives        csh.login           firewallld          hostname            libblockdev         my.cnf.d            plymouth           rdma              smartmontools     UPower
anacrontab          cups                flatpak            hosts               libbinder.d         nanorc              pm                 redhat-release    sos.conf          usb_modeswitch.conf
asound.conf         cupshelpers         fonts              hosts.allow         libblockdev         netconfig           pnm2ppa.conf      request-key.conf  speech-dispatcher  vconsole.conf
at.deny             dbus-1             fstab              hosts.deny          libpaper.d         NetworkManager     polkit-1           request-key.d      ssh              vimrc
audisp              dconf              fuse.conf          idmapd.conf         libreport           networks            popt.d            resolv.conf        ssl              vmware-tools
audit              depmod.d            fwupd              init.d              libvirt             nfs.conf            postfix            rpm               statetab          wgetrc
avahi               dhcp               gcrypt             inittab             locale.conf         nfs.mount.conf      ppp               rsyncd.conf        statetab.d        wpa_supplicant
bash_completion.d   dhclient            gdbinit            inputrc             localtime           nfs.mount.conf      printcap           rsyslog.conf       subgid            wvdial.conf
bashrc              DIR_COLORS          gdbinit.d          ipsec               logrotate.d         numad.conf          profile            rsyslog.d          subuid            x11
binfmt.d            DIR_COLORS.256color gdbinit.d          ipsec.conf          logrotate.d         numad.conf          protocols          rtab              sudoers           xdg
bluetooth           dleyna-server-service.conf geoClue            ipsec.secrets       lsm                 oddjob              pulse             samba             sudo-ldap.conf    xml
brltty              dnsmasq.conf        GeoIP.conf         iscsi               lvm                 oddjobd.conf        python            sasl              sysconfig          yum
centos-release      dracut.conf         ghostscript         issue               machine-id          magic               oddjobd.conf.d    qemu-ga           sysctl.conf       yum.conf
chkconfig.d         dracut.conf.d       glvnd              issue.net           mail.rc             makedumpfile.conf.sample  opt              ras               systemd            yum.repos.d
chrony.conf         e2fsck.conf         GREP_COLORS        jvm                 man-db.conf         man_db.conf        os-release         rc9.d             services          tcsh.conf
chrony.keys         enviroment          group              kernel              mcelog              mke2fs.conf        PackageKit         rc1.d             setstatus.conf    terminfo
cifs-utils          ethertypes          grub2.cfg          krb5.conf           mke2fs.conf         modprobe.d          pam.d              rc2.d             setroubleshoot    tmpfiles.d
cron.d              exports             grub.d             krb5.conf.d         modprobe.d          modules-load.d      passw              rc3.d             setupool.d        trusted-key.key
cron.daily          exports.d            grub.d             krb5.conf.d         modprobe.d          modules-load.d      passw              rc3.d             setupool.d        trusted-key.key
cron.hourly         exports.d            grub.d             krb5.conf.d         modprobe.d          modules-load.d      passw              rc3.d             setupool.d        trusted-key.key

```

cd /etc command taking to etc directory which is present inside / directory

ls command is showing all the directories and files present inside etc

difference between root and etc is /etc contains host specific system configuration does not need permission to access while /root is home directory for root user and require permission to get access.

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

A screenshot of a Linux terminal window. The title bar shows 'Applications Places Terminal' on the left and 'cm Sun 23:15' with system icons on the right. The terminal text shows the user 'zunaid@localhost/etc' at the prompt. The command 'ls -al' has been executed, resulting in the following output:

```
[zunaid@localhost etc]$ ls -al
total 1368
drwxr-xr-x. 139 root root   8192 Oct 16 22:48 .
dr-xr-xr-x.  17 root root    224 Oct 16 14:24 ..
```

ls -al

-a is used so that it will not ignore entries starting with ‘.’

-l to show in long listing format.

It is showing the access of each file and the time it was created.

- Then use **ls -i** and hit **Enter** key

- Now see what different output it shows and take screenshot?

```

File Edit View Search Terminal Help
zunaid@localhost:etc
21 Oct 16 14:11 xml
drwxr-xr-x. 2 root root 100 Oct 16 14:12 yum
-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
[zunaid@localhost etc]$ ls -l
34657948 abrt
17478470 adjtime
16777386 aliases
17612194 aliases.db
1593042 alsa
33927986 alternatives
17478442 anacrontab
17253359 asound.conf
17980776 at.deny
51122838 audisp
17564245 audit
35382203 avahi
74276 bash_completion.d
16777387 bashrc
50919114 binfmt.d
51010561 bluetooth
17656829 brltty
17656830 brltty.conf
16777320 centos-release
16777321 centos-release-upstream
50972567 chkconfig.d
17580406 chrony.conf
17580408 chrony.keys
51841789 cifs-utils
34566572 cron.d
34498465 cron.daily
17478448 cron.deny
34566578 cron.hourly
50975684 cron.monthly
17478441 crontab
1192958 cron.weekly
16777283 crypttab
16777388 csh.cshrc
16777389 csh.login
51547104 cups
34878577 cupshelpers
1675398 dbus-1
50975522 dc.conf
33807244 default
1675354 depmod.d
17509068 dhcp
17153321 DIR_COLORS
17153322 DIR_COLORS.256color
17153323 DIR_COLORS.lightbgcolor
17641481 dnf-plugins-core
17564217 dnsmasq.conf
[zunaid@localhost etc]$
1541246 dnsmasq.d
17379631 dracut.conf
34527312 dracut.conf.d
17280979 e2fsck.conf
1268432 egl
17981875 encrypt.cfg
16777398 environment
17508929 etherypes
16777391 exports
2270939 exports.d
17280923 foxconn-pkg
51464144 fcoe
34565869 festival
16777392 filesystems
16777392 firewalld
35201885 firewalld
17564542 fprintd.conf
180800152 fstab
50972567 fuse.conf
17580406 fwupd
34566194 gconf
123868 gcrpypt
17281809 gdbinit.d
17281810 gdbinit.d
51488251 gdm
51392644 gdm.conf
17398175 GeoIP.conf
17501840 ghostscript
16807947 glvnd
34502188 gnupg
16896069 GREP_COLORS
50375318 groff
19262628 group
17379516 group
16777383 grub.d
19262626 gshadow
17379514 gshadow-
50724115 gss
17564644 gssproxy
16777395 host.conf
17379514 hostname
16777396 hosts
16777397 hosts.allow
1541246 mke2fs.conf
17379697 modprobe.d
1075400 modules-load.d
16777400 mtd
16777284 mtab
17116153 mtools.conf
17657265 multipath
17398192 my.cnf
17398193 my.cnf.d
18016832 nanorc
34645316 ndctl
17281022 netconfig
3456578 NetworkManager
17478472 networks
17501714 nfs.conf
17501716 nfs-mount.conf
17431868 nsswitch.conf
16879119 nsswitch.conf.bak
51841757 ntp
17527801 numad.conf
5122826 odjjob
17564225 odjjob.conf
1541312 odjjob.conf.d
17397726 openldap
16777412 opt
16777324 os-release
1192868 PackageKit
34417286 psd.d
17242390 papersize
18011849 passwd
17397621 passwd-
18029513 pnm2ppa.conf
17980928 pinforc
33928346 pkcs11
16777317 pki
17480848 plymouth
33593542 pm
18029514 pnm2ppa.conf
50950893 polkit-1
123631 popd.d
17980458 postfix
34566590 ppp
101215 preLink.conf.d
16777402 printcap
16777403 profile
50331773 profile.d
16777404 protocols
34548846 pulse
2078245 purple
17128595 python
2850795 qemu-ga
51464081 qemu-kvm
17581346 rdevd.conf
51841586 ras
16879158 rc0.d
16879159 rc1.d
16879160 rc2.d
16879161 rc3.d
16879162 rc4.d
16879163 rc5.d
16879164 rc6.d
123643 rc.d
17430947 rc.local
1268447 rdma
16777325 redhat-release
17107960 request-key.conf
33976132 request-key.d
18089229 resolv.conf
19240373 rpc
33593497 rpm
17581355 rsyncd.conf
17980677 rsyslog.conf
34797700 rsyslog.d
34527398 rsyslog.d
17478476 rtab
50864157 rtat.d
50975713 samba
1273910 sane.d
804891 sasl2
18029564 scl
16777405 security
34417226 security
17410973 selinux
16777406 services
17432185 setstatus.conf
34756614 setroubleshoot
17980327 setuptool.d
140227 sgml
16787369 shadow
17379741 shadow-
16777408 shells
33593543 skel
17980714 smartmontools
17378262 sos.conf
17564416 speech-dispatcher
34685456 ssh
126451 ssl
1192984 statetab.d
16777409 subgid
16777410 subuid
17980893 sudo.conf
17980894 sudoers
2850914 sudobers.d
17980892 sudo-ldap.conf
5032834 sysconfig
16777326 system-release
16777327 system-release-cpe
17581345 tcsh.conf
101147 terminfo
17430949 tagfiles.d
17980891 trusted-key.key
35259412 tuned
34527409 udev
2188919 udisks2
34797700 unbound
17980344 updatedb.conf
34797990 uPnp
17564534 usb-modeswitch.conf
16777286 vconsole.conf
17115954 vmirc
17526949 vmware-tools
17981872 wgetrc
1273479 wpa_supplicant
17956782 wvdial.conf
16777411 x11
74278 xdg
33593544 xinetd.d
33929695 xml
89 yum
17379328 yum.conf
50331734 yum.repos.d
17980714 smartmontools

```

It is printing the list of directories and file with their respective index numbers.

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

```
Applications Places Terminal
zunaidd@localhost/etc

File Edit View Search Terminal Help
[zunaidd@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 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 '*'
--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
-I, --ignore=PATTERN     do not list implied entries matching shell PATTERN
-k, --kibibytes          default to 1024-byte blocks for disk usage
-l                       use a long listing format
--long-headers            do not show file information for a symbolic link
```

It provides all the other command which can be used with ls and a short description about the command.

We can use `--help` command with any command to find their use with other commands

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 commands

A screenshot of a Linux terminal window. The window title bar shows 'Applications Places Terminal' on the left and 'cm Sun 23:25' on the right. The terminal content shows the user 'zunaid' at 'localhost' in the directory '/home/zunaid'. They run 'pwd' and get '/home/zunaid'. Then they run 'cd /var' and 'ls', which lists the contents of the /var directory: 'account adm cache crash db empty games gopher kerberos lib local lock log mail nis opt preserve run spool tmp yp'.

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

pwd print name of working directory

cd /var change the directory to var directory

ls print the list of all directories present in /var directory.