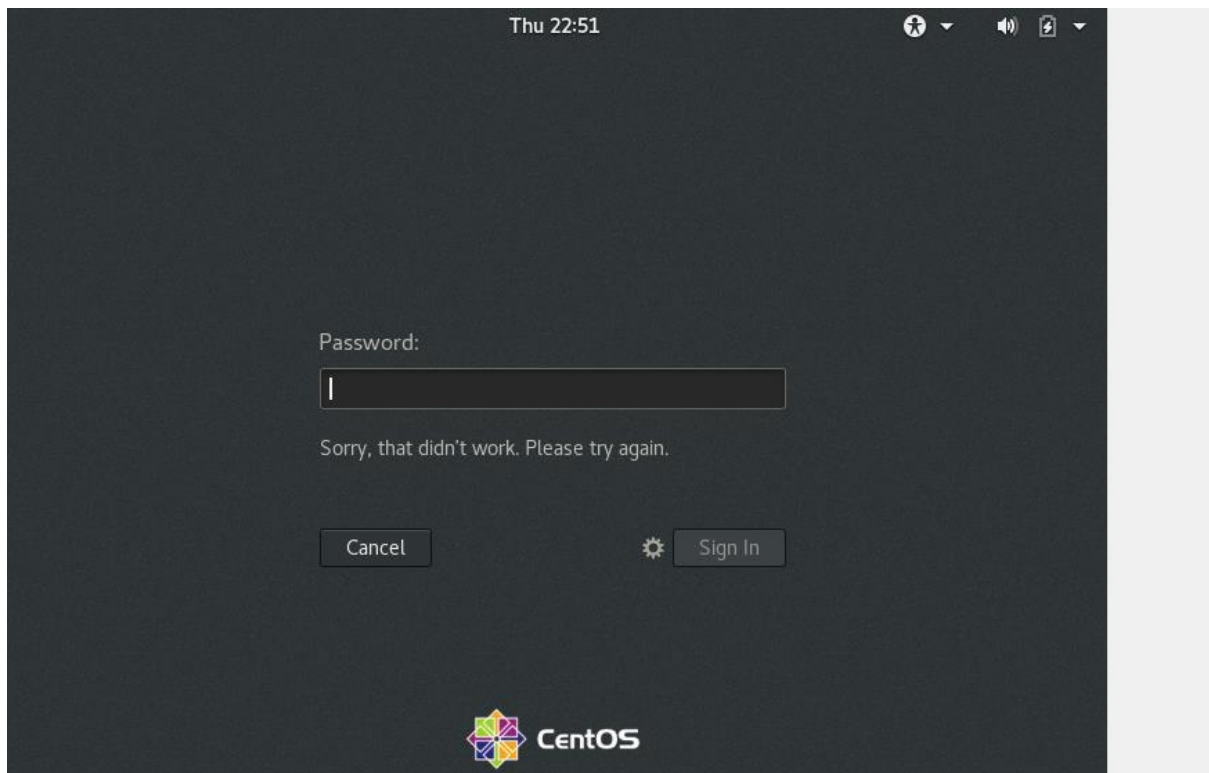


Assinment1:

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?



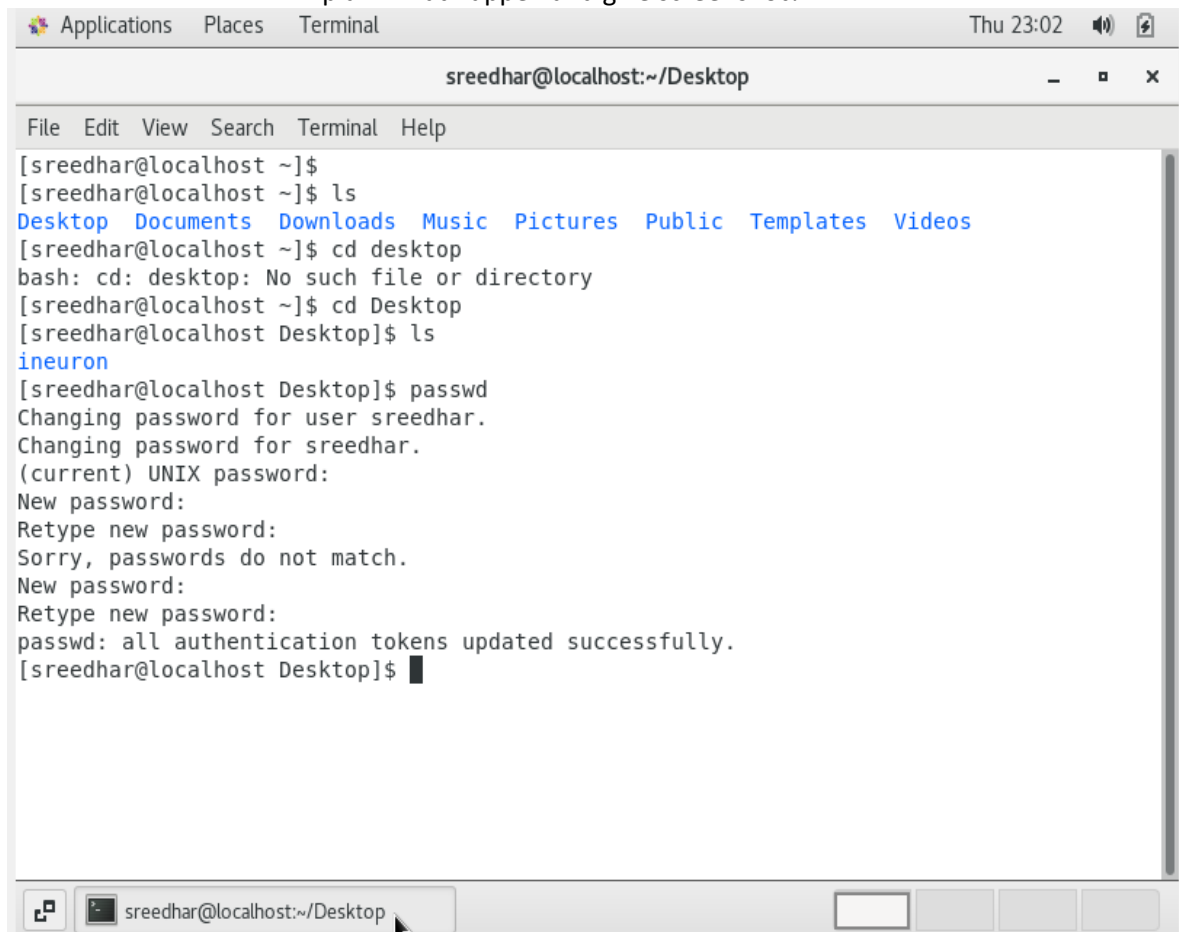
If we try to login as a non-existent user , we can't able to login and will gets an error like sorry please try again. Because `/etc/passwd` directory contains all the General account information of users. when you try to login, linux machine searches for user deatails in `/etc/passwd` directory

If the details not found it gives output as shown above screenshot.

Assignment 2:

Password changing

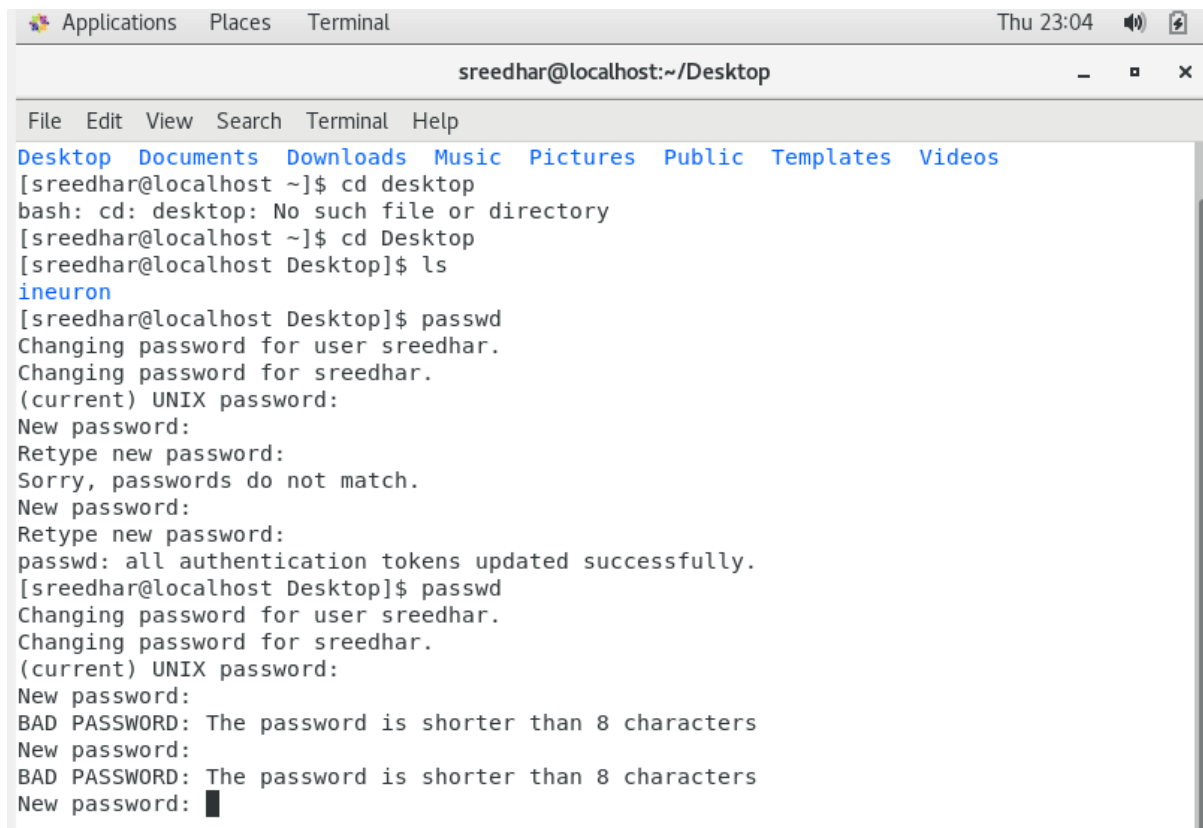
- Login into your account and then change password?
 - Change your password into **IneuR0n#42** and hit the **Enter** key
 - Explain what happen and give screenshot?

A screenshot of a Linux terminal window. The window title is 'sreedhar@localhost:~/Desktop'. The terminal shows the following commands and output:

```
[sreedhar@localhost ~]$  
[sreedhar@localhost ~]$ ls  
Desktop Documents Downloads Music Pictures Public Templates Videos  
[sreedhar@localhost ~]$ cd desktop  
bash: cd: desktop: No such file or directory  
[sreedhar@localhost ~]$ cd Desktop  
[sreedhar@localhost Desktop]$ ls  
ineuron  
[sreedhar@localhost Desktop]$ passwd  
Changing password for user sreedhar.  
Changing password for sreedhar.  
(current) UNIX password:  
New password:  
Retype new password:  
Sorry, passwords do not match.  
New password:  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[sreedhar@localhost Desktop]$
```

I came to know **passwd** command is used to change password to a user and **/etc/gshadow** directory contains password and policy data groups , in the above screenshot we can see all authentication tokens updated successfully that mean the new passwd is updated in the directory.

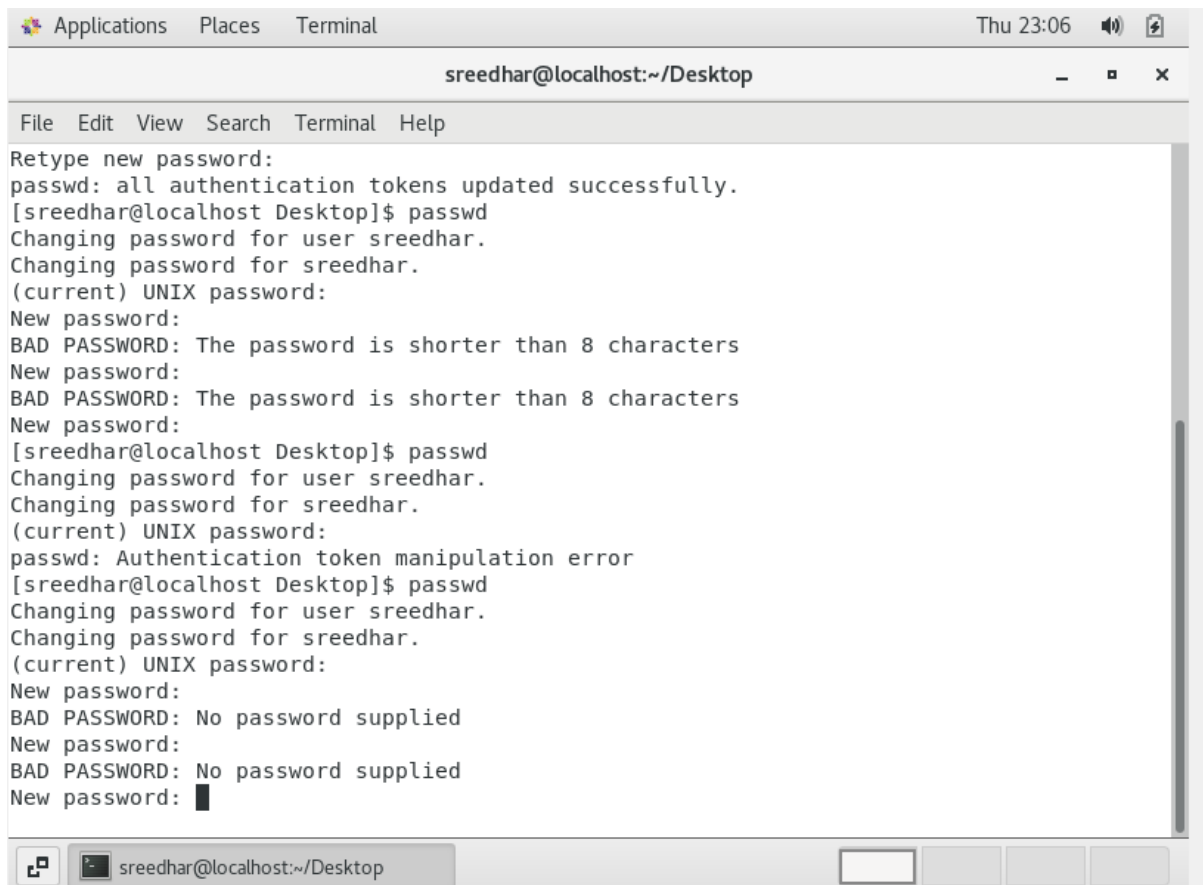
- Try again to change password but use like password **1234** or **abcd**
 - Explain what happen and give screenshot?

A screenshot of a Linux terminal window. The window title bar shows 'Applications Places Terminal' on the left, 'sreedhar@localhost:~/Desktop' in the center, and 'Thu 23:04' on the right. The terminal content shows a user navigating to the desktop directory and attempting to change their password. The first attempt with a short password fails with the message 'BAD PASSWORD: The password is shorter than 8 characters'.

```
Desktop Documents Downloads Music Pictures Public Templates Videos
[sreedhar@localhost ~]$ cd desktop
bash: cd: desktop: No such file or directory
[sreedhar@localhost ~]$ cd Desktop
[sreedhar@localhost Desktop]$ ls
ineuron
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
New password:
Retype new password:
Sorry, passwords do not match.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(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: █
```

Password length should be minimum 8 Characters, to set strong password we have to use combination of upper case, lower case, special characters and numbers also.

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



The screenshot shows a terminal window titled 'sreedhar@localhost:~/Desktop'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal output shows the following sequence of events:

```
Retype new password:
passwd: all authentication tokens updated successfully.
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(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:
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
passwd: Authentication token manipulation error
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
New password:
BAD PASSWORD: No password supplied
New password:
BAD PASSWORD: No password supplied
New password: █
```

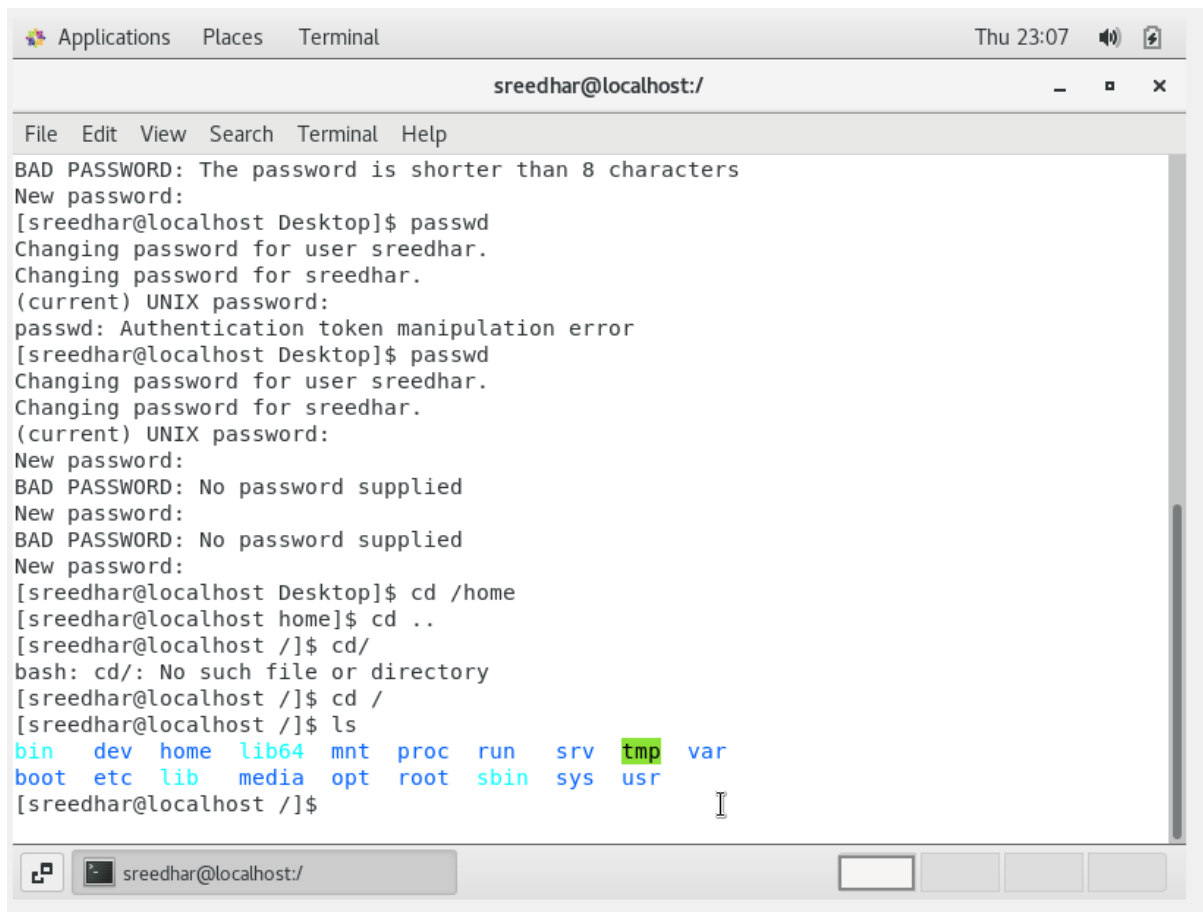
The terminal window has a status bar at the bottom showing the current directory as 'sreedhar@localhost:~/Desktop' and some window control buttons.

If we don't give any password will get an popup no password supplied, because it is mandatory we have to give minimum 8 characters.

Assignment3

Working with Directories

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

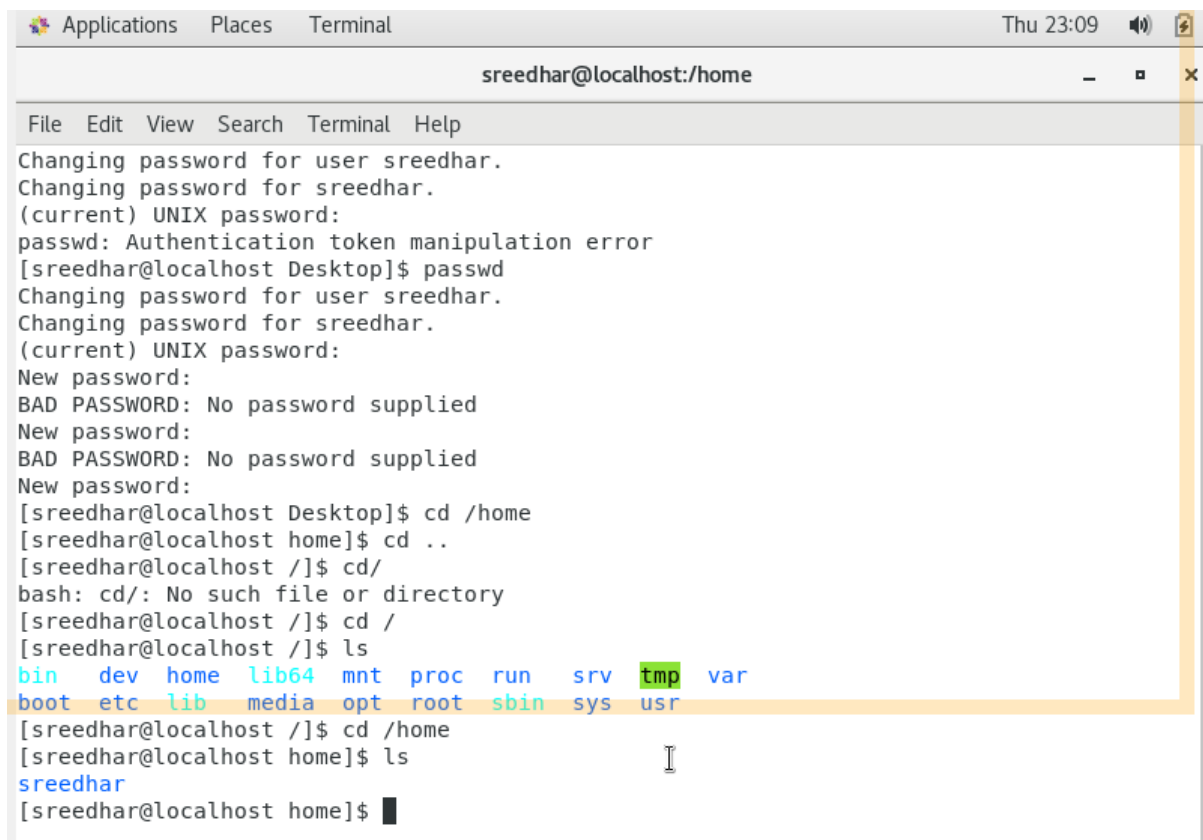


```
sreedhar@localhost:/  
File Edit View Search Terminal Help  
BAD PASSWORD: The password is shorter than 8 characters  
New password:  
[sreedhar@localhost Desktop]$ passwd  
Changing password for user sreedhar.  
Changing password for sreedhar.  
(current) UNIX password:  
passwd: Authentication token manipulation error  
[sreedhar@localhost Desktop]$ passwd  
Changing password for user sreedhar.  
Changing password for sreedhar.  
(current) UNIX password:  
New password:  
BAD PASSWORD: No password supplied  
New password:  
BAD PASSWORD: No password supplied  
New password:  
[sreedhar@localhost Desktop]$ cd /home  
[sreedhar@localhost home]$ cd ..  
[sreedhar@localhost /]$ cd/  
bash: cd/: No such file or directory  
[sreedhar@localhost /]$ cd /  
[sreedhar@localhost /]$ ls  
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var  
boot  etc  lib  media  opt  root  sbin  sys  usr  
[sreedhar@localhost /]$
```

Cd is used to change directory , after giving cd / we entered in to / directory.

ls gives the list of files in a directory and root is the home for all partitions.

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

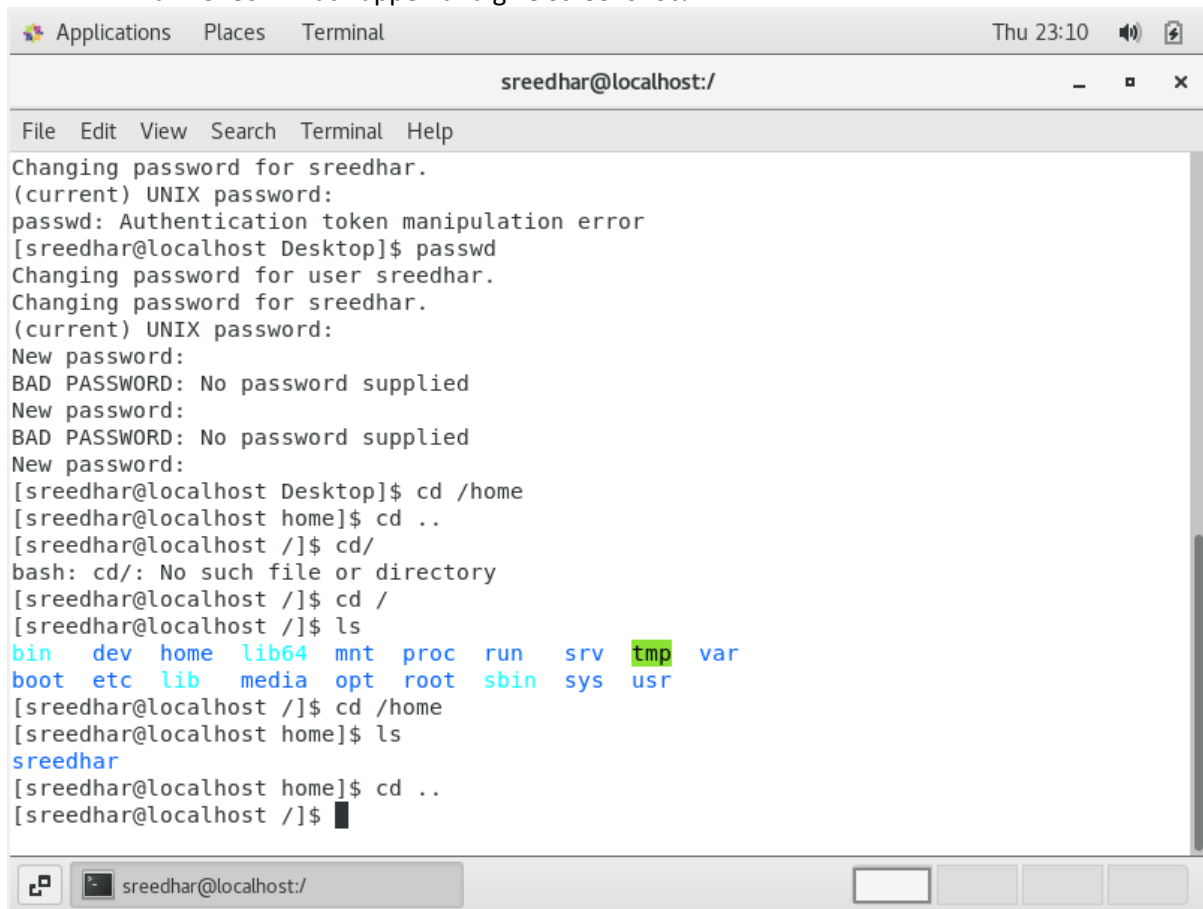


```
Applications  Places  Terminal  Thu 23:09
sreedhar@localhost:/home

File Edit View Search Terminal Help
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
passwd: Authentication token manipulation error
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
New password:
BAD PASSWORD: No password supplied
New password:
BAD PASSWORD: No password supplied
New password:
[sreedhar@localhost Desktop]$ cd /home
[sreedhar@localhost home]$ cd ..
[sreedhar@localhost /]$ cd/
bash: cd/: No such file or directory
[sreedhar@localhost /]$ cd /
[sreedhar@localhost /]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[sreedhar@localhost /]$ cd /home
[sreedhar@localhost home]$ ls
sreedhar
[sreedhar@localhost home]$
```

`cd /home` we entered in to home directory , it contains users information or simply we can say users directory

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

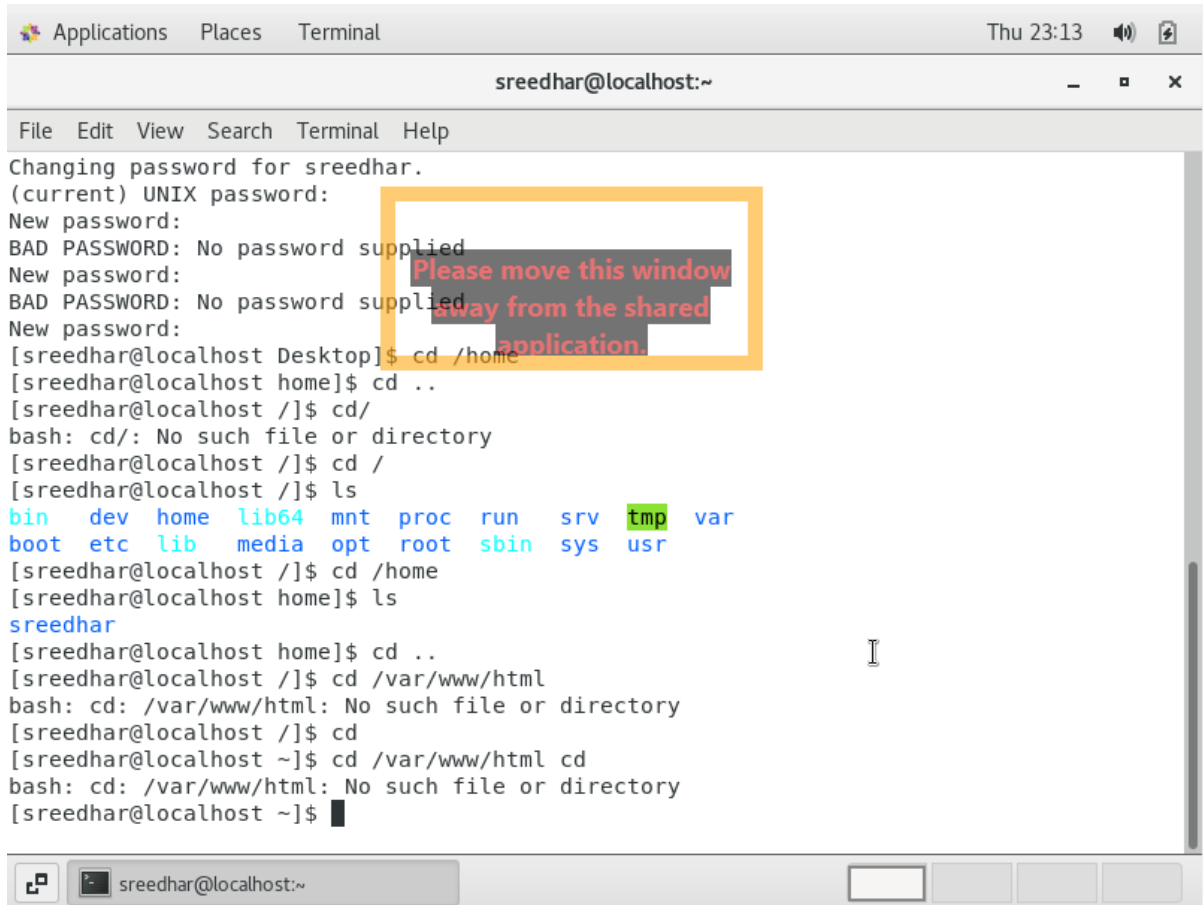


The screenshot shows a terminal window titled "sreedhar@localhost:/" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar at the bottom. The terminal output is as follows:

```
Changing password for sreedhar.
(current) UNIX password:
passwd: Authentication token manipulation error
[sreedhar@localhost Desktop]$ passwd
Changing password for user sreedhar.
Changing password for sreedhar.
(current) UNIX password:
New password:
BAD PASSWORD: No password supplied
New password:
BAD PASSWORD: No password supplied
New password:
[sreedhar@localhost Desktop]$ cd /home
[sreedhar@localhost home]$ cd ..
[sreedhar@localhost /]$ cd/
bash: cd/: No such file or directory
[sreedhar@localhost /]$ cd /
[sreedhar@localhost /]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[sreedhar@localhost /]$ cd /home
[sreedhar@localhost home]$ ls
sreedhar
[sreedhar@localhost home]$ cd ..
[sreedhar@localhost /]$
```

cd .. we will come one step back.

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



The screenshot shows a terminal window titled 'sreedhar@localhost:~'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal output shows the user attempting to change their password, which fails twice due to 'BAD PASSWORD: No password supplied'. Then, the user navigates through directories: from Desktop to home, then to /, then to /home, and finally to /var/www/html. The terminal shows the following commands and output:

```
Changing password for sreedhar.
(current) UNIX password:
New password:
BAD PASSWORD: No password supplied
New password:
BAD PASSWORD: No password supplied
New password:
[sreedhar@localhost Desktop]$ cd /home
[sreedhar@localhost home]$ cd ..
[sreedhar@localhost /]$ cd/
bash: cd/: No such file or directory
[sreedhar@localhost /]$ cd /
[sreedhar@localhost /]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[sreedhar@localhost /]$ cd /home
[sreedhar@localhost home]$ ls
sreedhar
[sreedhar@localhost home]$ cd ..
[sreedhar@localhost /]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[sreedhar@localhost /]$ cd
[sreedhar@localhost ~]$ cd /var/www/html cd
bash: cd: /var/www/html: No such file or directory
[sreedhar@localhost ~]$
```

A yellow rectangular box highlights the password change section, and a red text overlay reads 'Please move this window away from the shared application.'.

/var/www/html it is a root folder of the webserver, the output shows no such file or directory. If we install any web server like apache or inginx all the scripts with .html extension are saved to this directory therefore we can acces and run the scripts from /var/www/html

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

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

```

sreedhar@localhost:~
File Edit View Search Terminal Help
[sreedhar@localhost ~]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[sreedhar@localhost ~]$ cd
[sreedhar@localhost ~]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[sreedhar@localhost ~]$ cd /root
bash: cd: /root: Permission denied
[sreedhar@localhost ~]$ sudo cd /root
[sudo] password for sreedhar:
sudo: cd /root: command not found
[sreedhar@localhost ~]$ sudo cd /root
[sreedhar@localhost ~]$ cd root
bash: cd: root: No such file or directory
[sreedhar@localhost ~]$ su root
Password:
su: Authentication failure
[sreedhar@localhost ~]$ su root
Password:
su: Authentication failure
[sreedhar@localhost ~]$ sudo su
[root@localhost sreedhar]# cd /root
[root@localhost ~]# ls
anaconda-ks.cfg  Documents  initial-setup-ks.cfg  Pictures  Templates
Desktop          Downloads  Music               Public    Videos
[root@localhost ~]#

```

cd /root, user can't run this command directly we need to switch to root users using **sudo su** command then we can run the command and will get output. We know the function of **ls**.

Assignment4:

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?

```
File Edit View Search Terminal Help
[sreedhar@localhost ~]$ cd /etc
[sreedhar@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
brlty                             kdump.conf                    rc.local
brlty.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

gconf                             oddjobd.conf.d                trusted-key.key
gcrypt                           openssl                       tuned
gdbinit                          opt                            udev
gdbinit.d                       os-release                    udisks2
gdm                              PackageKit                   unbound
geoclue                         pam.d                        updatedb.conf
GeoIP.conf                     papersize                     UPower
ghostscript                     passwd                       usb_modeswitch.conf
glvnd                           passwd-                      vconsole.conf
gnupg                           pbm2ppa.conf                 vimrc
GREP_COLORS                     pinforc                      virg
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
[sreedhar@localhost etc]$
```

/etc directory contains all the configuration files.

In previous outputs we have seen all partitions under root and user information under home.

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

```

File Edit View Search Terminal Help
hosts.allow                                profile.d
[sreedhar@localhost etc]$ ls -al
total 1372
drwxr-xr-x. 139 root root      8192 Oct 13 23:02 .
dr-xr-xr-x.  17 root root      245 Oct 12 21:08 ..
drwxr-xr-x.   3 root root      101 Oct 10 21:40 abrt
-rw-r--r--.   1 root root       16 Oct 10 22:12 adjtime
-rw-r--r--.   1 root root     1529 Apr  1  2020 aliases
-rw-r--r--.   1 root root    12288 Oct 10 22:16 aliases.db
drwxr-xr-x.   3 root root       65 Oct 10 21:51 alsa
drwxr-xr-x.   2 root root     4096 Oct 12 22:21 alternatives
-rw-----.   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 Oct 30  2018 at.deny
drwxr-x---.   3 root root       43 Oct 10 21:41 audisp
drwxr-x---.   3 root root       83 Oct 10 22:16 audit
drwxr-xr-x.   4 root root       71 Oct 10 21:52 avahi
drwxr-xr-x.   2 root root     4096 Oct 12 22:28 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 21:39 bluetooth
drwxr-xr-x.   2 root root    12288 Oct 10 21:45 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

```

Ls -al Displays all files and directories along with hidden files

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

```
File Edit View Search Terminal Help
drwxr-xr-x.  6 root root      116 Oct 10 21:41 xdg
drwxr-xr-x.  2 root root         6 Apr 11 2018 xinetd.d
drwxr-xr-x.  2 root root      21 Oct 10 21:31 xml
drwxr-xr-x.  6 root root     100 Oct 10 21:37 yum
-rw-r--r--.  1 root root     970 Oct  1 2020 yum.conf
drwxr-xr-x.  2 root root     220 Oct 12 22:12 yum.repos.d
[sreedhar@localhost etc]$ ls -i
34633720 abrt                                3017894 mcelog
17393382 adjtime                            17226857 mke2fs.conf
16778346 aliases                           17323441 modprobe.d
17917177 aliases.db                       1245608 modules-load.d
 1660114 alsa                               16778360 motd
33927986 alternatives                      16777284 mtab
17475497 anacrontab                       17025593 mtools.conf
17165423 asound.conf                      17588497 multipath
17838408 at.deny                           17331440 my.cnf
51117558 audisp                            17331441 my.cnf.d
17462101 audit                               17955936 nanorc
35375867 avahi                            34633508 ndctl
  77924 bash_completion.d                 17226878 netconfig
16778347 bashrc                           34650994 NetworkManager
50944298 binfmt.d                             17393361 networks
51025409 bluetooth                           17475479 nfs.conf
17588061 brltty                                17475480 nfsmount.conf
17588062 brltty.conf                       17323964 nsswitch.conf
16778345 centos-release                   16884143 nsswitch.conf.bak
```

ls -i Displays inode number of all files and directories

- 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
[sreedhar@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
-f                        do not sort, enable -aU, disable -ls --color
-F, --classify            append indicator (one of */=>@|) to entries
    --file-type            likewise, except do not append '*'

sreedhar@localhost:/etc/
```

ls --help displays all information about the other commands and details.

Assignment5:

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

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

PWD – displays the present working directory

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

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

/var directory contains Variable data files such as logs, audit data and temporary files.

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

```
[sreedhar@localhost var]$ ls -l
total 20
drwxr-xr-x.  2 root root   19 Oct 10 21:52 account
drwxr-xr-x.  2 root root    6 Apr 11  2018 adm
drwxr-xr-x. 12 root root 141 Oct 10 22:16 cache
drwxr-xr-x.  2 root root    6 Oct  1  2020 crash
drwxr-xr-x.  3 root root   34 Oct 12 22:13 db
drwxr-xr-x.  3 root root   18 Oct 10 21:52 empty
drwxr-xr-x.  2 root root    6 Apr 11  2018 games
drwxr-xr-x.  3 root root   18 Apr 11  2018 gopher
drwxr-xr-x.  3 root root   18 Jun 28 21:01 kerberos
drwxr-xr-x. 57 root root 4096 Oct 10 22:03 lib
drwxr-xr-x.  2 root root    6 Apr 11  2018 local
lrwxrwxrwx.  1 root root    11 Oct 10 21:28 lock -> ../run/lock
drwxr-xr-x. 18 root root 4096 Oct 14 22:41 log
lrwxrwxrwx.  1 root root    10 Oct 10 21:28 mail -> spool/mail
drwxr-xr-x.  2 root root    6 Apr 11  2018 nis
drwxr-xr-x.  2 root root    6 Apr 11  2018 opt
drwxr-xr-x.  2 root root    6 Apr 11  2018 preserve
lrwxrwxrwx.  1 root root    6 Oct 10 21:28 run -> ../run
drwxr-xr-x. 12 root root  140 Oct 10 21:52 spool
drwxrwxrwt. 72 root root 8192 Oct 14 22:45 tmp
drwxr-xr-x.  2 root root    6 Apr 11  2018 yp
[sreedhar@localhost var]$
```