

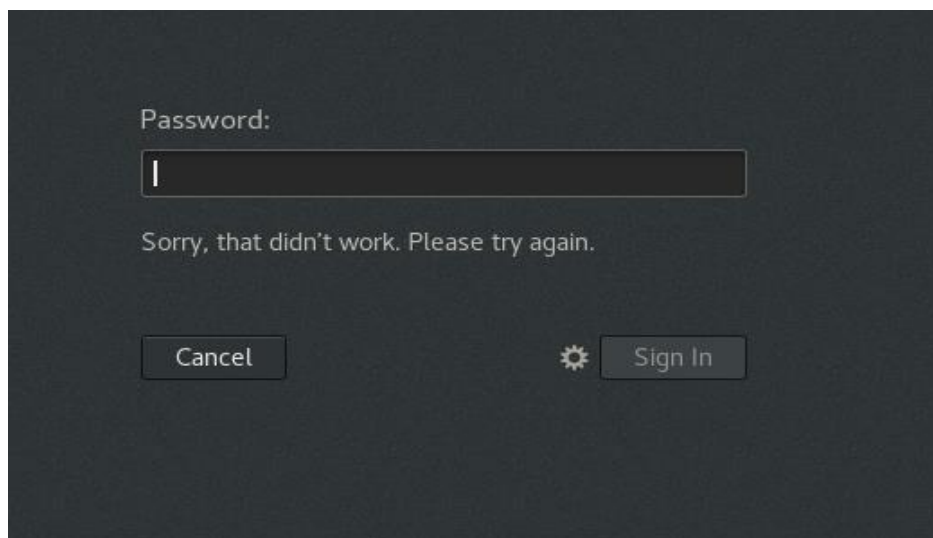
Basic Linux Commands Assignments

Assignment-1

Answer: -

To log in to any operating system a username should be created on that system. I tried to login to system with a non-existent username and password, CentOS thrown an error stating that **“Sorry, that didn’t work. Please try again”**

Please find the below screenshot for reference.



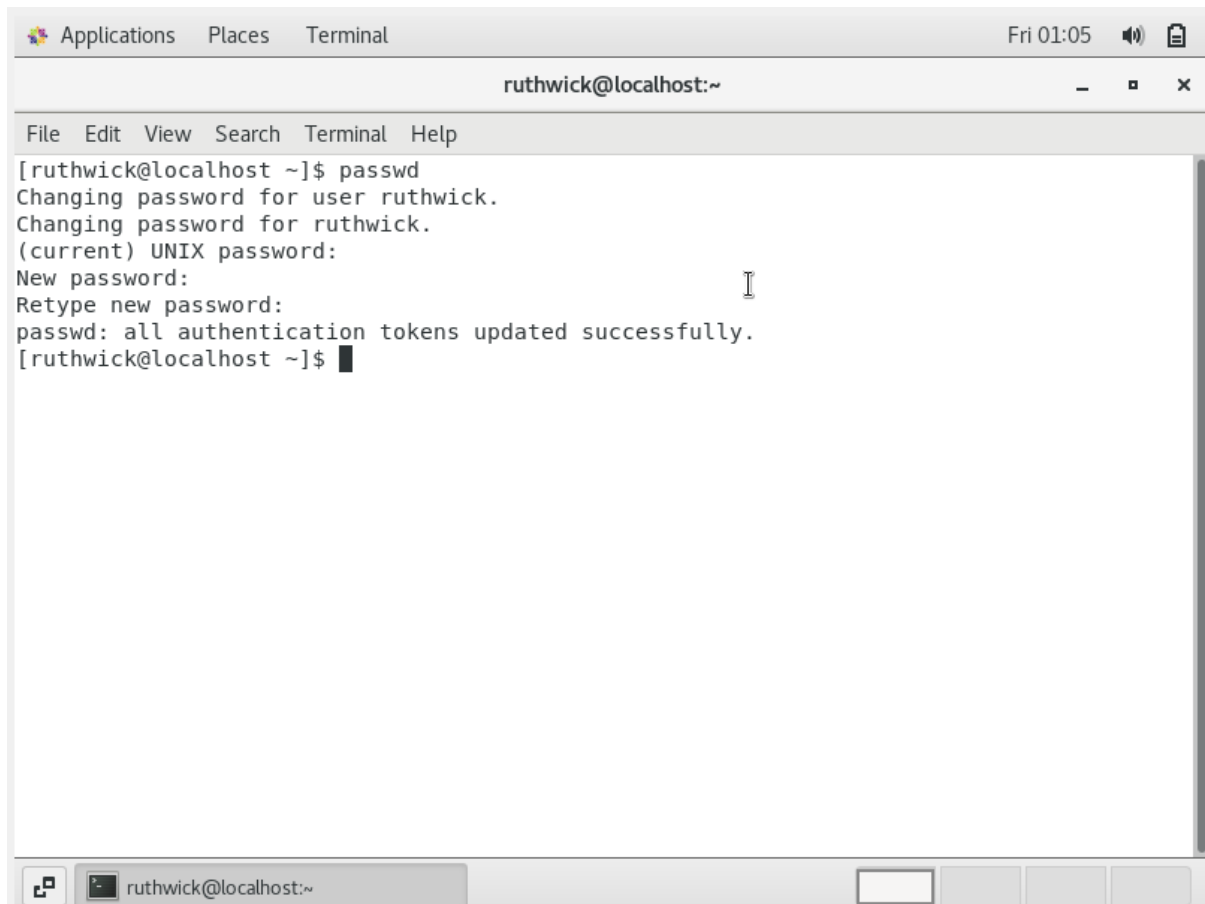
Assignment-2

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?

Answer: -

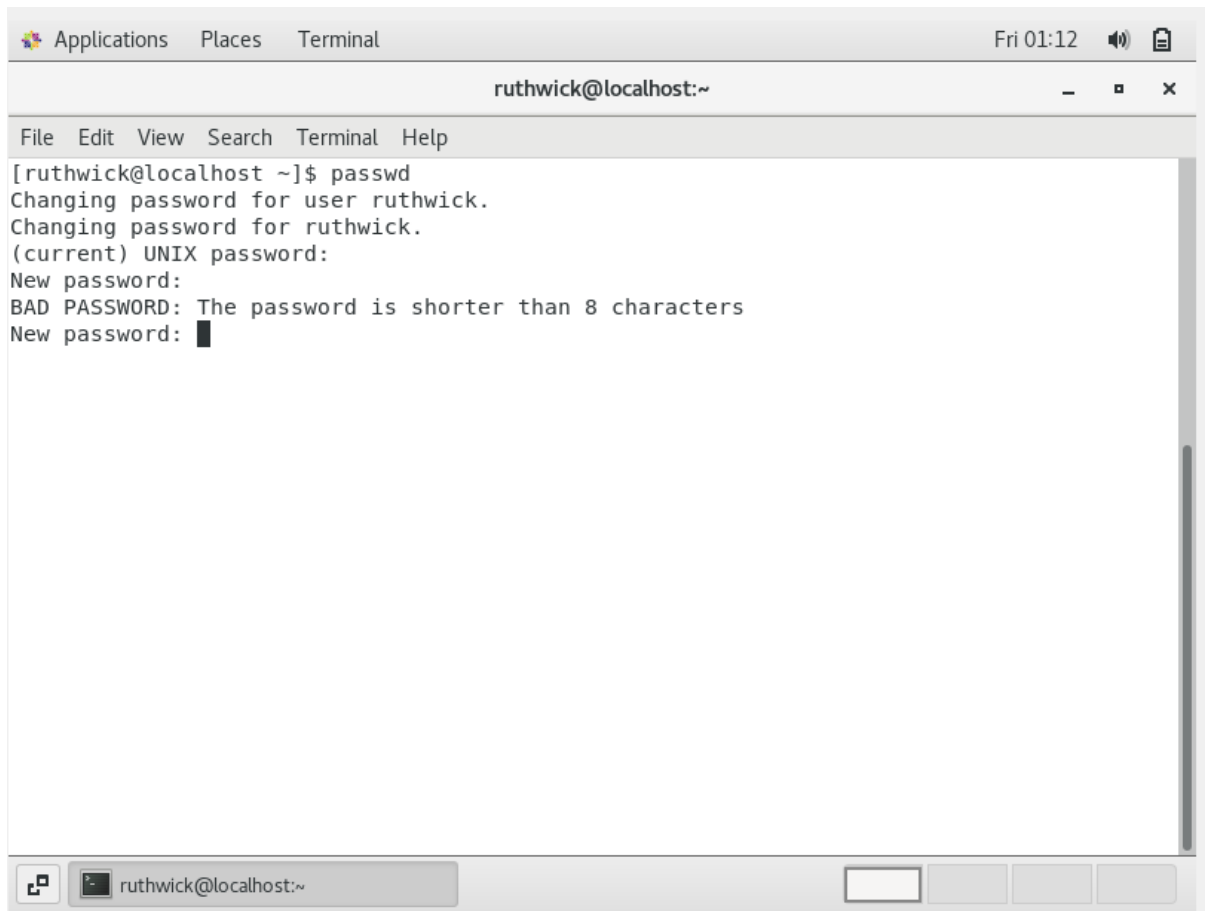
Tried to change password of user ruthwick, used command passwd in terminal, it prompted to provide the current password first. Once that is provided it prompted to enter a new password, then retype the new password. Once I hit 'Enter' key I got the message as **“all authentication tokens updated successfully”**. Please find the below screenshot for reference.



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

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

Answer: - Tried same procedure as above mentioned and able to set the new password to **1234**. And then tried to set the password to **abcd**. Then CentOS thrown an error stating that “**The password is shorter than 8 characters**” Please find the below screenshot for reference.



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

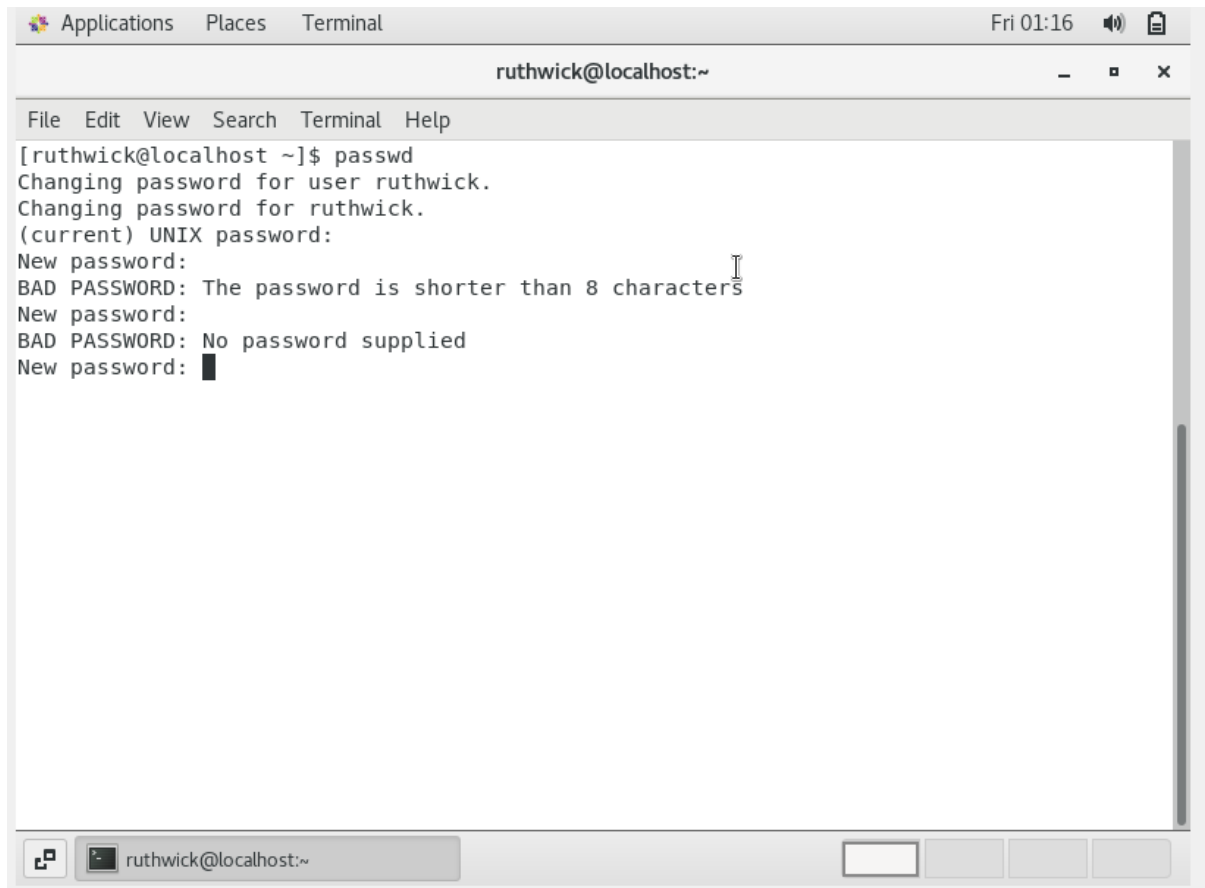
```
[ruthwick@localhost ~]$ passwd
Changing password for user ruthwick.
Changing password for ruthwick.
(current) UNIX password:
New password:
BAD PASSWORD: The password is shorter than 8 characters
New password: █
```

The terminal window also shows a status bar at the bottom with the prompt 'ruthwick@localhost:~' and several icons.

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

Answer: -

Tried setting up a blank password. CentOS thrown an error stating that “**BAD PASSWORD: No password supplied**” So, there should be a password set up for each user with minimum 8 characters. Please find the below screenshot for reference.



The screenshot shows a terminal window titled 'ruthwick@localhost:~'. The terminal output is as follows:

```
[ruthwick@localhost ~]$ passwd
Changing password for user ruthwick.
Changing password for ruthwick.
(current) UNIX password:
New password:
BAD PASSWORD: The password is shorter than 8 characters
New password:
BAD PASSWORD: No password supplied
New password: 
```

The terminal window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The status bar at the bottom shows the user 'ruthwick@localhost:~' and some system icons.

Assignment-3

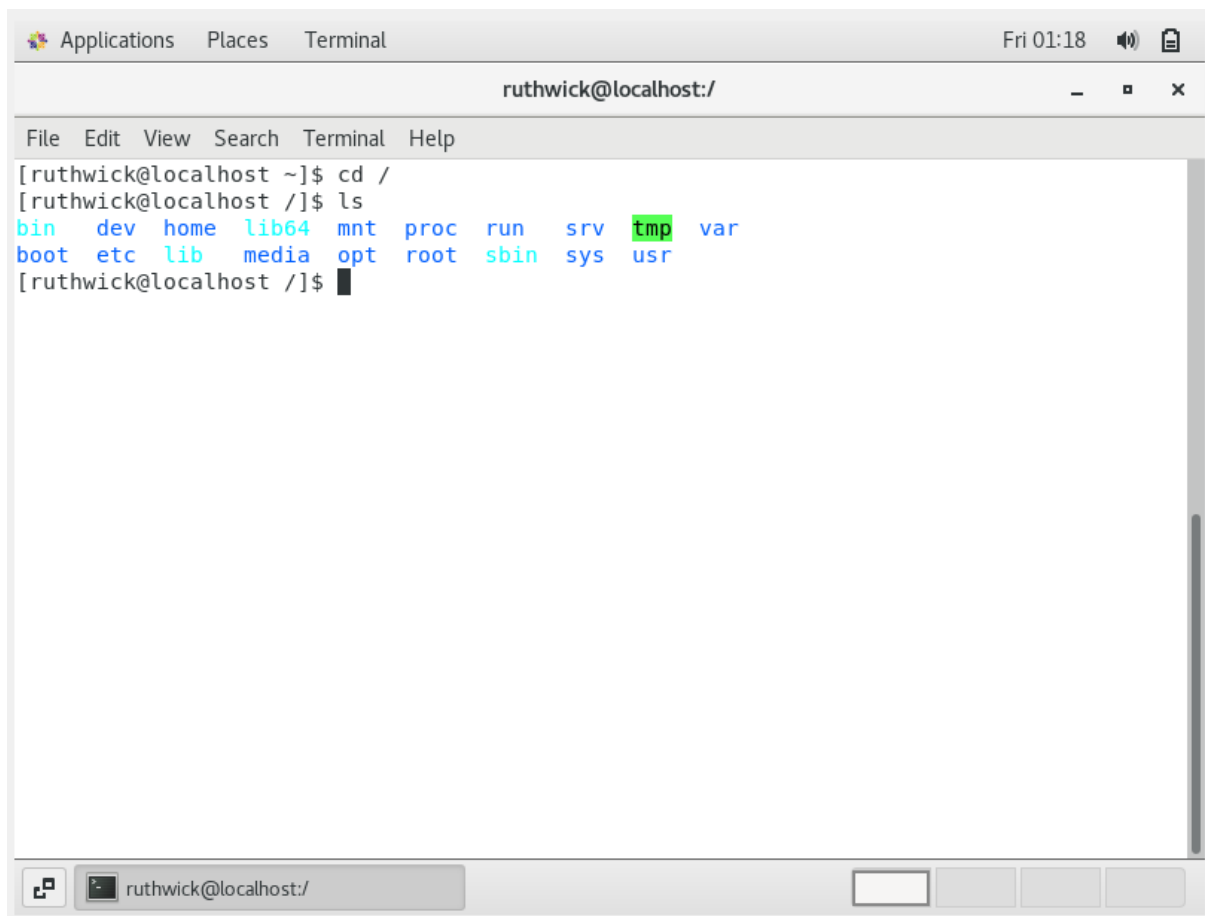
Working with Directories

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

Answer: -

cd / command changes our current directory to root directory of the user. Root directory is just like C drive in Windows.

Ls command will list all the files and directories available within the directory that we are in now. IN this scenario it is / directory. Please find the below screenshot for reference.



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

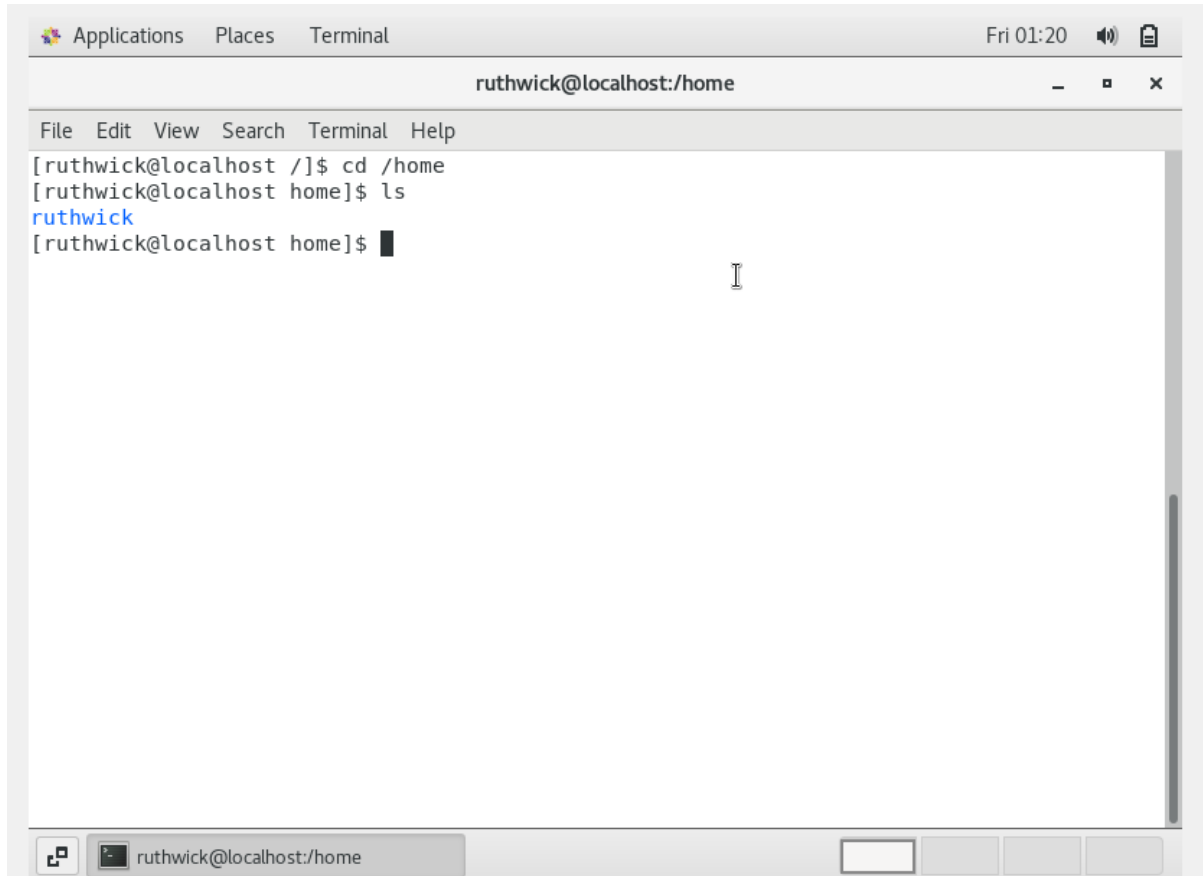
```
[ruthwick@localhost ~]$ cd /  
[ruthwick@localhost /]$ ls  
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var  
boot  etc  lib  media  opt  root  sbin  sys  usr
```

The terminal window has a status bar at the bottom showing the current directory as 'ruthwick@localhost:/'.

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

Answer: -

Tried checking the files in home directory. It is the user's home directory.



The screenshot shows a terminal window titled "ruthwick@localhost:/home". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal output shows the following commands and their results:

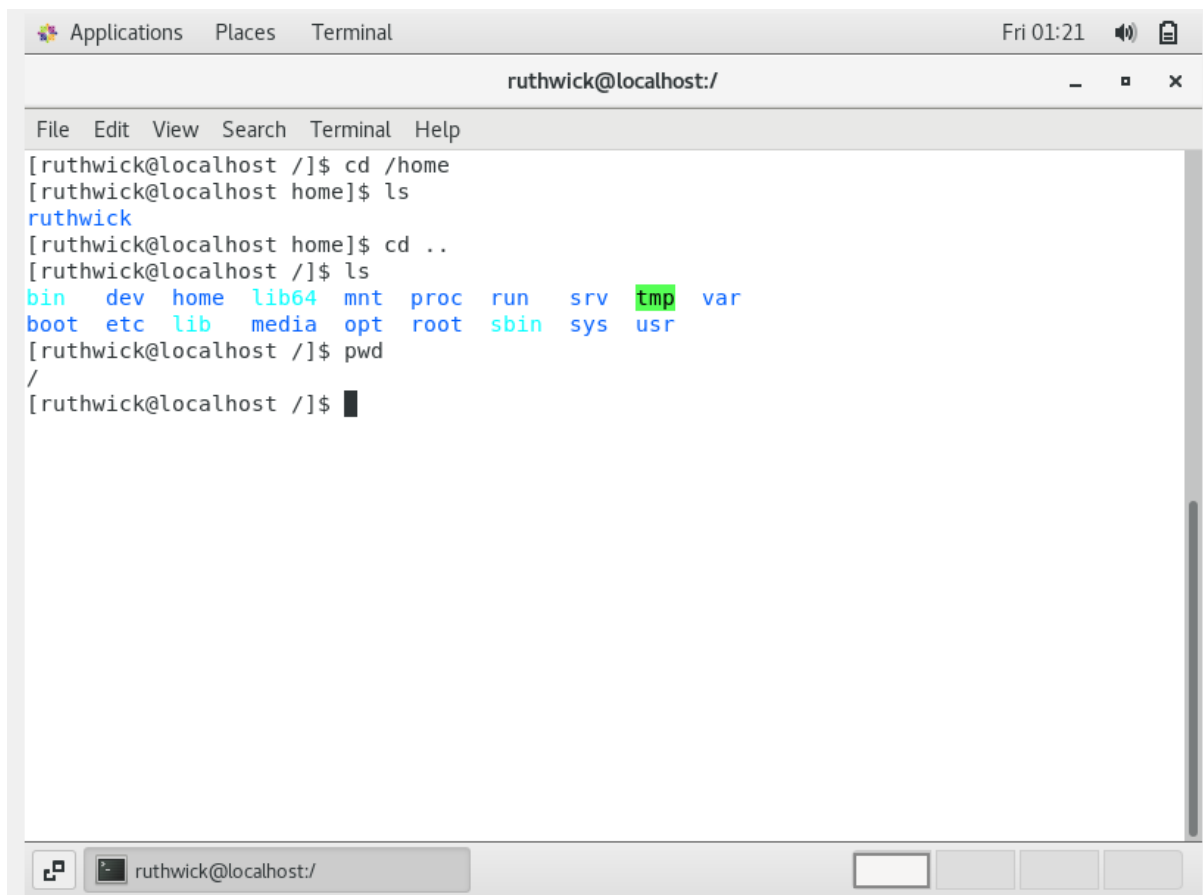
```
[ruthwick@localhost ~]$ cd /home
[ruthwick@localhost home]$ ls
ruthwick
[ruthwick@localhost home]$
```

The terminal window also shows a status bar at the bottom with the text "ruthwick@localhost:/home" and a cursor icon.

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

Answer: -

Cd .. is the command used to come back to the previous directory. When we are in home directory and tried cd .. command, we came back to the / directory.



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

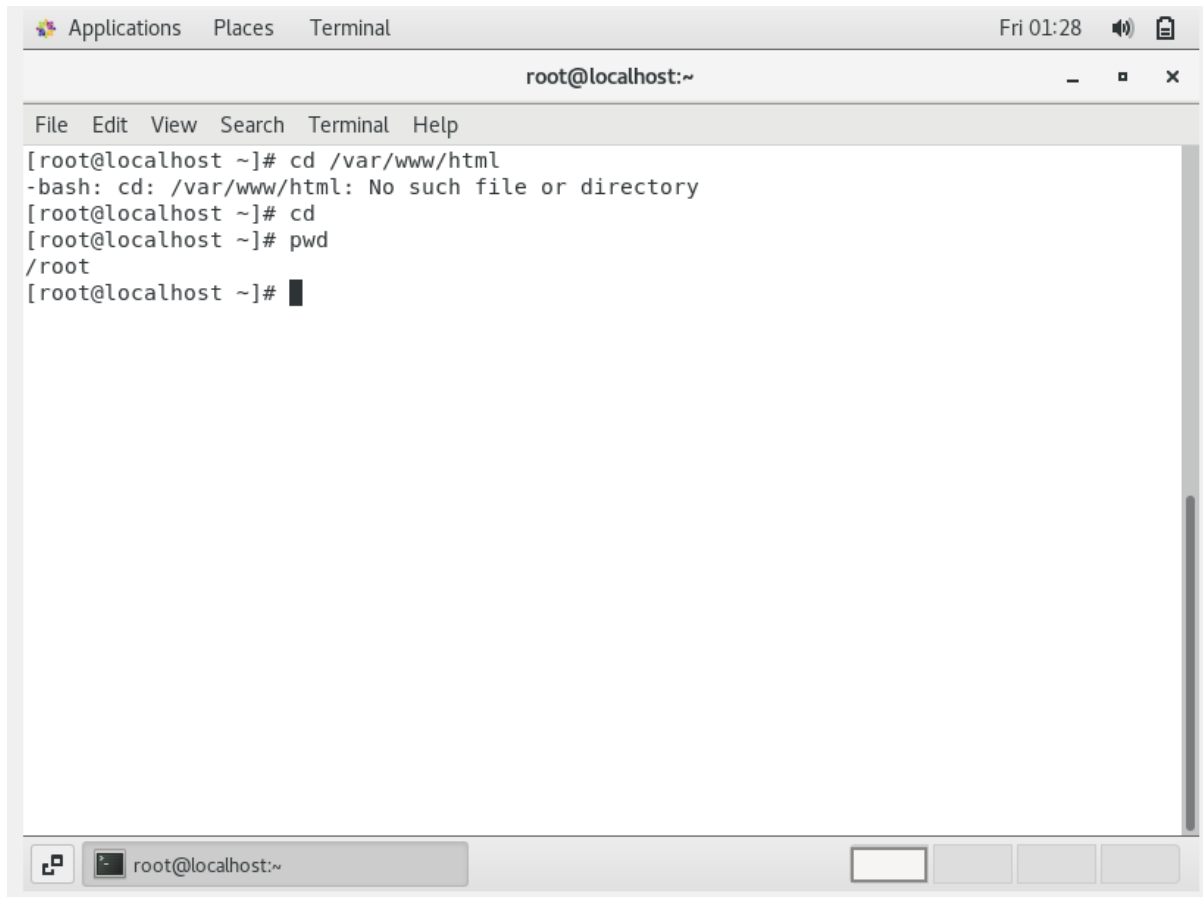
```
[ruthwick@localhost ~]$ cd /home
[ruthwick@localhost home]$ ls
ruthwick
[ruthwick@localhost home]$ cd ..
[ruthwick@localhost ~]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[ruthwick@localhost ~]$ pwd
/
[ruthwick@localhost ~]$
```

The terminal window has a status bar at the bottom showing the current directory as 'ruthwick@localhost:/'.

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

Answer: -

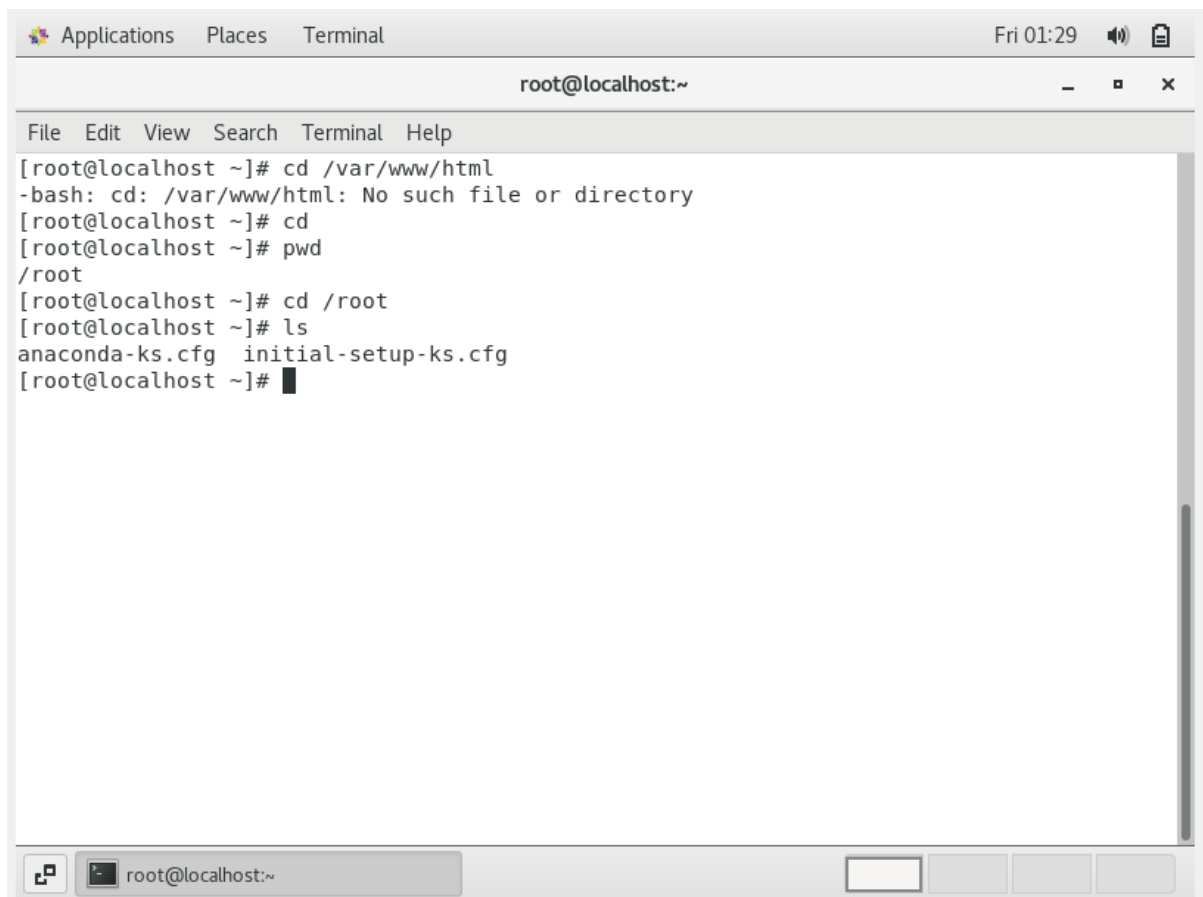
Tried above command and it seems there is no such directory found. When tried cd and enter it brings back to me to Ruthwick user home directory.



```
Applications  Places  Terminal  Fri 01:28  [Speaker Icon]  [File Icon]
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# cd /var/www/html
-bash: cd: /var/www/html: No such file or directory
[root@localhost ~]# cd
[root@localhost ~]# pwd
/root
[root@localhost ~]#
```


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

Answer: **cd /root** brings us to root directory and **ls** shows the files inside the directory.



The screenshot shows a terminal window titled "root@localhost:~". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal output is as follows:

```
[root@localhost ~]# cd /var/www/html
-bash: cd: /var/www/html: No such file or directory
[root@localhost ~]# cd
[root@localhost ~]# pwd
/root
[root@localhost ~]# cd /root
[root@localhost ~]# ls
anaconda-ks.cfg  initial-setup-ks.cfg
[root@localhost ~]#
```

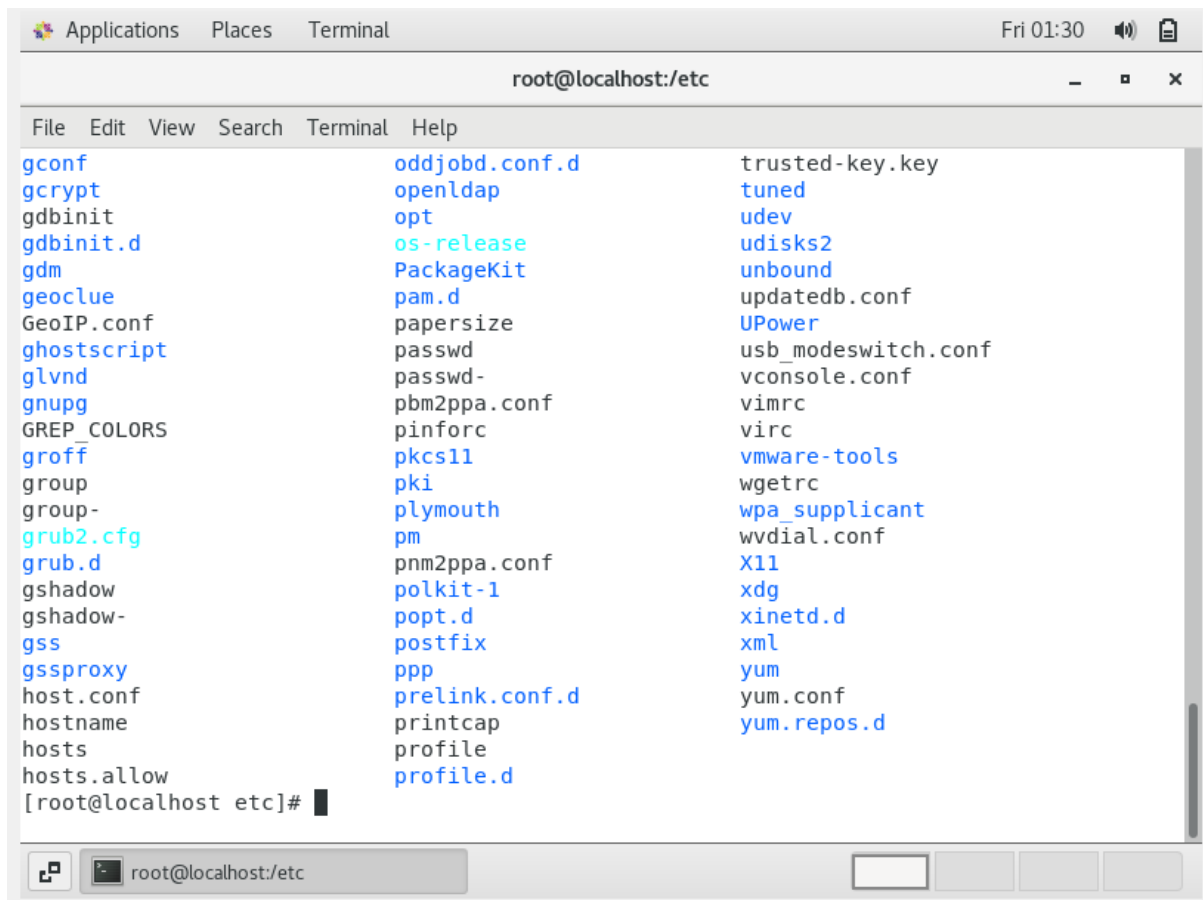
The terminal window also shows a taskbar at the bottom with a "root@localhost:~" button and several empty buttons.

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?

Answer: - cd /etc will bring us to /etc directory. This directory has many files and some of them are configuration files.



The screenshot shows a terminal window titled "root@localhost:/etc". The terminal displays the output of the 'ls' command, listing files in the /etc directory. The files are listed in three columns. The first column contains files like gconf, gcrypt, gdbinit, gdbinit.d, gdm, geoclue, GeoIP.conf, ghostscript, glvnd, gnupg, GREP_COLORS, groff, group, group-, grub2.cfg, grub.d, gshadow, gshadow-, gss, gssproxy, host.conf, hostname, hosts, hosts.allow, and [root@localhost etc]#. The second column contains files like oddjobd.conf.d, openldap, opt, os-release, PackageKit, pam.d, papersize, passwd, passwd-, pbm2ppa.conf, pinforc, pkcs11, pki, plymouth, pm, pnm2ppa.conf, polkit-1, popt.d, postfix, ppp, prelink.conf.d, printcap, profile, and profile.d. The third column contains files like trusted-key.key, tuned, udev, udisks2, unbound, updatedb.conf, UPower, usb_modeswitch.conf, vconsole.conf, vimrc, virg, vmware-tools, wgetrc, wpa_supplicant, wvdial.conf, X11, xdg, xinetd.d, xml, yum, yum.conf, and yum.repos.d.

```
root@localhost:/etc
File Edit View Search Terminal Help
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
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
[root@localhost etc]#
```

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

Answer: -

ls -al will show all files including the permissions of the each file.

The screenshot shows a terminal window titled 'root@localhost:/etc'. The terminal displays the output of the 'ls -al' command, listing files and directories in the /etc directory with their permissions, owner, group, size, date, and name. The files listed are: tmpfiles.d, trusted-key.key, tuned, udev, udisks2, unbound, .updated, updatedb.conf, UPower, usb_modeswitch.conf, vconsole.conf, vimrc, virc, vmware-tools, wgetrc, wpa_supplicant, wvdial.conf, X11, xdg, xinetd.d, xml, yum, yum.conf, and yum.repos.d. The terminal window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The status bar at the bottom shows the current directory as 'root@localhost:/etc'.

```

root@localhost:/etc
File Edit View Search Terminal Help
drwxr-xr-x. 2 root root    6 Oct 1 2020 tmpfiles.d
-rw-r--r--. 1 root root 750 Oct 13 2020 trusted-key.key
drwxr-xr-x. 3 root root 109 Oct 16 21:28 tuned
drwxr-xr-x. 3 root root  54 Oct 16 23:04 udev
drwxr-xr-x. 2 root root  26 Oct 16 21:27 udisks2
drwxr-xr-x. 2 root root  68 Oct 16 21:27 unbound
-rw-r--r--. 1 root root 163 Oct 16 21:25 .updated
-rw-r--r--. 1 root root 557 Apr 11 2018 updatedb.conf
drwxr-xr-x. 2 root root  25 Oct 16 21:27 UPower
-rw-r--r--. 1 root root 1523 Apr 11 2018 usb_modeswitch.conf
-rw-r--r--. 1 root root  37 Oct 16 21:32 vconsole.conf
-rw-r--r--. 1 root root 1982 Oct 13 2020 vimrc
-rw-r--r--. 1 root root 1982 Oct 13 2020 virc
drwxr-xr-x. 4 root root  208 Oct 16 21:26 vmware-tools
-rw-r--r--. 1 root root 4479 May 16 2019 wgetrc
drwxr-xr-x. 2 root root  33 Oct 16 21:26 wpa_supplicant
-rw-r--r--. 1 root root   0 Jun 10 2014 wvdial.conf
drwxr-xr-x. 6 root root 103 Oct 16 21:26 X11
drwxr-xr-x. 6 root root 116 Oct 16 21:26 xdg
drwxr-xr-x. 2 root root   6 Apr 11 2018 xinetd.d
drwxr-xr-x. 2 root root  21 Oct 16 21:25 xml
drwxr-xr-x. 6 root root 100 Oct 16 21:26 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
[root@localhost etc]#

```

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

Answer: - ls -i shows the file information along with size of the files

```

root@localhost:/etc
File Edit View Search Terminal Help
17228379 ld.so.cache      80251 terminfo
16884846 ld.so.conf        17359301 tmpfiles.d
50358480 ld.so.conf.d         17925275 trusted-key.key
16884868 libaudit.conf    35263284 tuned
51011845 libblockdev        34528273 udev
17403040 libibverbs.d        2275415 udisks2
33927966 libnl           34791172 unbound
50704433 libpaper.d         17923768 updatedb.conf
50333593 libreport         34791430 UPower
17336357 libuser.conf       17481206 usb_modeswitch.conf
51341639 libvirt            16777286 vconsole.conf
16777293 locale.conf       17027154 vimrc
16777287 localtime         17026980 virc
17334222 login.defs         17443589 vmware-tools
17333737 logrotate.conf     17925456 wgetrc
1030570 logrotate.d       1363335 wpa_supplicant
1363143 lsm                17832590 wvdial.conf
34634469 lvm               16777411 X11
17359413 machine-id        74278 xdg
16899222 magic             33593544 xinetd.d
17336785 mail.rc           33939295 xml
17439242 makedumpfile.conf.sample 89 yum
17924252 man_db.conf      17334112 yum.conf
34481587 maven            50331734 yum.repos.d
[root@localhost etc]#

```

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

Answer: -

ls -help will show all the commands and their explanation in ls.

```

root@localhost:/etc
File Edit View Search Terminal Help
--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.
--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'
[root@localhost etc]#

```

Assignment-5

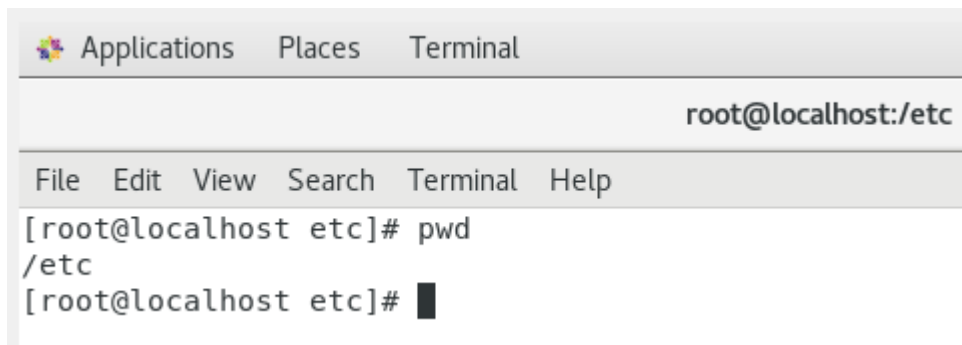
Know where you are and where you are working

*Here we use **pwd**, **cd** and **ls** as combine task to understand where you are working on terminal and how you can switch from one directory to another one.*

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

Answer: -

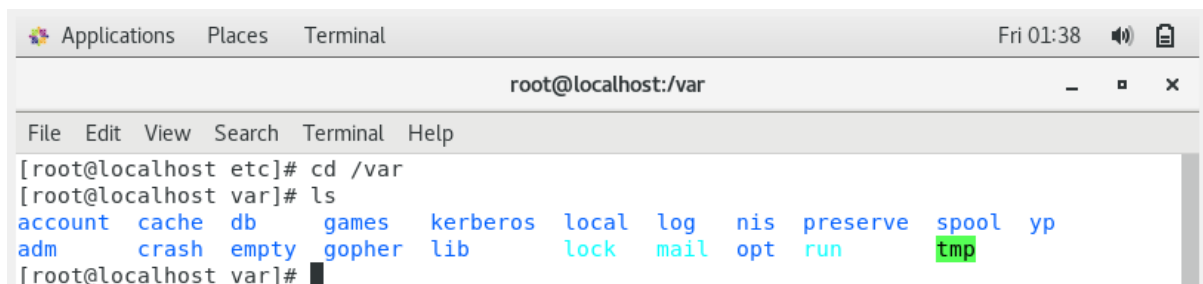
Pwd command shows the present working directory.



The screenshot shows a terminal window with a title bar containing 'Applications', 'Places', and 'Terminal'. The terminal title is 'root@localhost:/etc'. The menu bar includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal content shows the command '[root@localhost etc]# pwd' being executed, with the output '/etc' displayed on the next line. The prompt '[root@localhost etc]#' is followed by a black cursor block.

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

Answer: - /var contains variable data files.



The screenshot shows a terminal window titled 'root@localhost:/var'. The terminal has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The command prompt is '[root@localhost etc]#'. The user enters 'cd /var', and the prompt changes to '[root@localhost var]#'. Then, the user enters 'ls', and the output is displayed in two rows: 'account cache db games kerberos local log nis preserve spool yp' and 'adm crash empty gopher lib lock mail opt run tmp'. The 'tmp' directory is highlighted in green. The terminal window has a title bar with 'Applications', 'Places', and 'Terminal' tabs, and a status bar showing 'Fri 01:38'.

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

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