

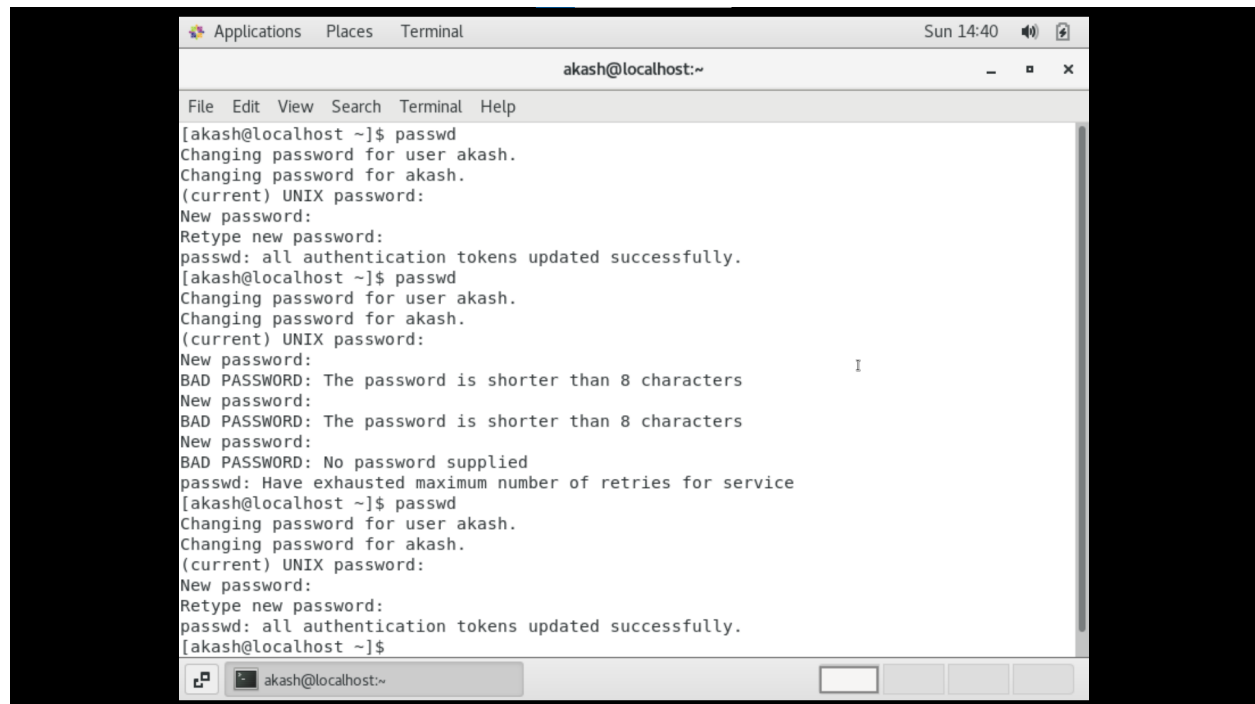
## Assignment-1: Connect and Disconnect with Login Access

```
[akash@localhost ~]$ su - guest
su: user guest does not exist
[akash@localhost ~]$ █
```

**Ans:**

When I try to login a non-existent users or username. It shows me a message that the user does not exist.

## Assignment-2: Password Changing

A screenshot of a terminal window titled 'akash@localhost:~'. The window shows the process of changing a password using the 'passwd' command. The user enters their current password, then a new password, and retypes it. The system successfully updates the authentication tokens. The user then attempts to change the password again, but fails three times: first because the password is shorter than 8 characters, then again for the same reason, and finally because no password was supplied. After these failures, the system indicates that the maximum number of retries has been exhausted. The user then successfully changes the password a second time, and the system again updates the authentication tokens successfully.

```
File Edit View Search Terminal Help
akash@localhost:~
[akash@localhost ~]$ passwd
Changing password for user akash.
Changing password for akash.
(current) UNIX password:
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[akash@localhost ~]$ passwd
Changing password for user akash.
Changing password for akash.
(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
[akash@localhost ~]$ passwd
Changing password for user akash.
Changing password for akash.
(current) UNIX password:
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[akash@localhost ~]$
```

- Changed my password to **IneuR0n#42**. It got accepted.
- Changed my password to 1234 and tried with abcd as well. It shows a message that the password is shorter than 8 characters. Indicating that the password should atleast contain 8 characters.

- I tried to change my password with nothing, a simple enter. It shows me a message that BAD PASSWORD: No password is supplied. We must provide a password.

### Assignment-3: Working with Directories

```
File Edit View Search Terminal Help
[akash@localhost ~]$ cd /
[akash@localhost /]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[akash@localhost /]$ cd /home
[akash@localhost home]$ ls
akash
[akash@localhost home]$ cd ..
[akash@localhost /]$ ls
bin  dev  home  lib64  mnt  proc  run  srv  tmp  var
boot  etc  lib  media  opt  root  sbin  sys  usr
[akash@localhost /]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[akash@localhost /]$ cd
[akash@localhost ~]$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
[akash@localhost ~]$ cd /root
bash: cd: /root: Permission denied
[akash@localhost ~]$ su - root
Password:
Last login: Sat Oct 15 20:12:13 IST 2022 on pts/0
[root@localhost ~]# cd /root
[root@localhost ~]# ls
anaconda-ks.cfg  initial-setup-ks.cfg
[root@localhost ~]# su - akash
Last login: Sun Oct 16 14:35:07 IST 2022 on :0
```

Last login: Sun Oct 16 14:35:07 IST 2022 on :0

```
[akash@localhost ~]$ cd /root
-bash: cd: /root: Permission denied
[akash@localhost ~]$
```

### Ans:

- cd / command is to navigate to the root directory.
- cd /home command is to navigate to the home directory where the user's directories are present.
- cd .. command is to take you to one step back of the present directory.
- /var/www/html is created when you install Apache HTTP server. cd /var/www/html command is to navigate to the folder. Since I did not install apache server, for me it is showing no directory is found.
- cd /root command is to navigate to the root user's directory. For that we have to login as root user.

## Assignment-4: Working with File Listing

```
[akash@localhost ~]$ cd /etc
[akash@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
```

**Ans:**

/etc folder contains system's configuration files. There are more than 200 files.

```
[akash@localhost etc]$ ls -al
total 1372
drwxr-xr-x. 139 root root      8192 Oct 16 14:40 .
dr-xr-xr-x. 17 root root       224 Oct 14 15:18 ..
drwxr-xr-x. 3 root root       101 Oct 14 15:12 abrt
-rw-r--r--. 1 root root        16 Oct 14 15:18 adjtime
-rw-r--r--. 1 root root     1529 Apr 1 2020 aliases
-rw-r--r--. 1 root root    12288 Oct 14 16:27 aliases.db
drwxr-xr-x. 3 root root        65 Oct 14 15:14 alsa
drwxr-xr-x. 2 root root     4096 Oct 15 20:16 alternatives
-rw-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         1 May 18 21:24 at.deny
drwxr-x---. 3 root root        43 Oct 14 15:13 audisp
drwxr-x---. 3 root root        83 Oct 14 16:27 audit
drwxr-xr-x. 4 root root        71 Oct 14 15:14 avahi
drwxr-xr-x. 2 root root     4096 Oct 15 20:15 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 binfo.d
drwxr-xr-x. 2 root root        23 Oct 14 15:12 bluetooth
drwxr-xr-x. 2 root root    12288 Oct 14 15:13 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
```

**Ans:**

Lists all the files including hidden files as well with their permissions over the user, group and others (accessibility).

```
[akash@localhost etc]$ ls -i
34482584 abrt
17349638 adjtime
16777834 aliases
18034416 aliases.db
1705682 alsa
33821938 alternatives
17417097 anacrontab
17165423 asound.conf
17171413 at.deny
51227478 audisp
17462677 audit
35016763 avahi
74276 bash_completion.d
16777835 bashrc
51109322 binfo.d
51162913 bluetooth
17562365 brltty
17562366 brltty.conf
16777833 centos-release
16777320 centos-release-upstream
2720614 mcelog
17184073 mke2fs.conf
17348337 modprobe.d
1128520 modules-load.d
16777848 motd
16777284 mtab
17014297 mtools.conf
17562801 multipath
17243920 my.cnf
17243921 my.cnf.d
18072768 nanorc
34356228 ndctl
17184094 netconfig
34327282 NetworkManager
17349639 networks
17564113 nfs.conf
17564114 nfsmount.conf
17348540 nsswitch.conf
16792847 nsswitch.conf.bak
51911709 ntp
```

**Ans:**

Lists the files along with their index numbers.

```
[akash@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
      --classify            append indicator (one of *-/=) to entries
```

**Ans :**

Lists the total files in the directory and subdirectories, the names of the files in the current directory, their permissions, the number of subdirectories in directories listed, the size of the file, and the date of last modification.

**Assignment-5: Know where you are and where you working**

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

**Ans:**

- The `pwd` command gives us the path from the home directory to the current location we are in.
- `/var` contains **variable data files**. This includes spool directories and files, administrative and logging data, and transient and temporary files.

## Saksham Class Assignments

### Assignment: Update your CentOS Machine

```
[akash@localhost ~]$ sudo yum -y update
[sudo] password for akash:
akash is not in the sudoers file. This incident will be reported.
[akash@localhost ~]$ su - root
Password:
Last login: Sun Oct 16 14:50:25 IST 2022 on pts/0
[root@localhost ~]# sudo yum -y update
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: repo.extreme-ix.org
 * extras: repo.extreme-ix.org
 * updates: repo.extreme-ix.org
http://mirrors.nxtgen.com/centos-mirror/7.9.2009/os/x86_64/repodata/repomd.xml: [Errno 14] curl#6 - "Could not resolve host: mirrors.nxtgen.com; Unknown error"
Trying other mirror.
curl#6 - "Could not resolve host: mirror.xeonbd.com; Unknown error"
Trying other mirror.
http://mirrors.nhanhoa.com/centos/7.9.2009/updates/x86_64/repodata/repomd.xml: [Errno 14] curl#6 - "Could not resolve host: mirrors.nhanhoa.com; Unknown error"
Trying other mirror.
http://mirrors.vhost.vn/centos/7.9.2009/updates/x86_64/repodata/repomd.xml: [Errno 14] curl#6 - "Could not resolve host: mirrors.vhost.vn; Unknown error"
Trying other mirror.
http://mirrors.hostever.com/centos/7.9.2009/updates/x86_64/repodata/repomd.xml: [Errno 14] curl#6 - "Could not resolve host: mirrors.hostever.com; Unknown error"
Trying other mirror.
http://centos.excellmedia.net/7.9.2009/updates/x86_64/repodata/repomd.xml: [Errno 14] curl#6 - "Could not resolve host: centos.excellmedia.net; Unknown error"
Trying other mirror.
No packages marked for update
[root@localhost ~]#
```

**Ans:**

Updated the CentOS. By logging to root user by the command `su - root` and then using `sudo yum -y update`.