

# Basic Linux command assignments

## Assignment-1

Connect and disconnect with login access

What happens when you log in a non-existent users or username

- I don't have any user other than root and dpatel, but I will try to log in to devd user
- Its gives message sh - user devd does not exist

```
File Edit View Search Terminal Help
[dpatel@localhost ~]$ su devd
su: user devd does not exist
[dpatel@localhost ~]$
```

- It means that we don't have a user created in this system whose user name is devd so we can not log in with this user name
- We can verify this by checking the command `cat /etc/passwd | grep devd`

```
postfix:x:89:89::/var/spool/postfix:/sbin/nologin
ntp:x:38:38::/etc/ntp:/sbin/nologin
tcpdump:x:72:72::/sbin/nologin
dpatel:x:1000:1000:dpatel:/home/dpatel:/bin/bash
vboxadd:x:988:1::/var/run/vboxadd:/bin/false
[dpatel@localhost ~]$
```

## Assignment-2

Password Changing

- Login in to your account and then change password
- Change your password into **lneuR0n#42** and hit enter key

```
File Edit View Search Terminal Help
[root@localhost ~]# passwd test
Changing password for user test.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]#
```

This looks like a good and healthy password for a user. System took this password without giving any warning. It successfully changed the password for test user

- Try again to change password but use like password 1234 or abcd

```
[root@localhost ~]# passwd test
Changing password for user test.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# █
```

This password is too short and not healthy. System gave warning as it's a bad password and a normal password should be more than 8 characters as recommendation

- Try again to change password but now don't use any password just hit Enter key

```
[root@localhost ~]# passwd test
Changing password for user test.
New password:
BAD PASSWORD: No password supplied
Retype new password:
No password supplied
passwd: Authentication token manipulation error
[root@localhost ~]# █
```

System gave a clear message that no password was supplied and hence after hitting enter twice it could not generate an authentication token which results in no change in old password. Password remains 1234.

### **Assignment-3**

#### **Working with directories**

- Enter the command `cd /` and then `ls` then hit enter key
- It will list all the items under `/` folder. `/` is the root folder of the file system.

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

- Enter the command now `cd /home` and then hit enter key
- This command will change the directory to home directory

```
[dpatel@localhost ~]$ cd /home
[dpatel@localhost home]$
```

- Enter `cd ..` and hit Enter key
- It will change the directory to previous working directory

```
[dpatel@localhost ~]$ cd /home
[dpatel@localhost home]$ cd ..
[dpatel@localhost ~]$
```

- Now enter `cd /var/www/html` and then type `cd` and hit enter key
- It will try to find html directory to change folder but As html is not a folder it will throw an error as shown in screenshot

```
[dpatel@localhost ~]$ cd /var/www/html
bash: cd: /var/www/html: No such file or directory
[dpatel@localhost ~]$
```

- Now type `cd /root` and then hit Enter key
- /root is home location of root user and no other user can access this folder

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

## Assignment-4

### Working with file Listing

- Go to `cd /etc` and Type `ls`
- It will list all the items from /etc directory

```
[dpatel@localhost ~]$ cd /etc
[dpatel@localhost etc]$ ls
abrt                dhcp                group               libpaper.d          oddjobd.conf.d      rc.local            sudo.conf
adjtime             DIR_COLORS          group-              libreport            openldap            rdma                sudoers
aliases             DIR_COLORS.256color grub2.cfg           libuser.conf        opt                 redhat-release     sudoers.d
aliases.db          DIR_COLORS.lightbgcolor grub.d              libvirt              os-release          request-key.conf    sudo-ldap.conf
alsa                dleyna-server-service.conf gshadow             locale.conf         PackageKit          request-key.d       sysconfig
alternatives        dnsmasq.conf        gshadow-           localtime           pam.d               resolv.conf         sysctl.conf
anacrontab          dnsmasq.d           gss                 login.defs          papersize            rpc                 systemd
asound.conf         dracut.conf         gssproxy           logrotate.conf     passwd              rpm                 system-release
at.deny             dracut.conf.d       hosts               logrotate.d         passw               rsyncd.conf        system-release-cpe
audisp              e2fsck.conf         hostname            lsm                 pbm2ppa.conf        rsyslog.conf       tcad.conf
avahi               environment         hosts               lvm                 pinforc             rwtab              terminfo
bash_completion.d  envsubst            hosts.allow         machine-id          pki                 rwtab.d            tmpfiles.d
bashrc              ethertypes          hosts.deny          magic               plymouth            samba               trusted-key.key
```

- Then type `ls -al` and hit enter key
- It will list all the items in present directory including all hidden file and folders and give all permission level details

```
[dpatel@localhost etc]$ ls -al
total 1376
drwxr-xr-x. 139 root root      8192 Oct 11 00:54 .
dr-xr-xr-x.  17 root root       224 Oct 10 11:35 ..
drwxr-xr-x.   3 root root       101 Oct 10 11:22 abrt
-rw-r--r--.   1 root root        16 Oct 10 11:35 adjtime
-rw-r--r--.   1 root root     1529 Apr  1  2020 aliases
-rw-r--r--.   1 root root    12288 Oct 10 11:38 aliases.db
drwxr-xr-x.   3 root root        65 Oct 10 11:27 alsa
drwxr-xr-x.   2 root root     4096 Oct 10 12:05 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 May 18 21:24 at.deny
drwxr-x---.   3 root root        43 Oct 10 11:23 audisp
drwxr-x---.   3 root root        83 Oct 10 11:38 audit
drwxr-xr-x.   4 root root        71 Oct 10 11:27 avahi
drwxr-xr-x.   2 root root     4096 Oct 10 12:01 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 11:22 bluetooth
drwxr-xr-x.   2 root root    12288 Oct 10 11:24 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
```

- Then use `ls -i` and hit Enter Key
- It will list all file along with their inode number

```
[dpatel@localhost etc]$ ls -i
34591160 abrt
17391942 adjtime
16778346 aliases
17920323 aliases.db
1687858 alsa
33928018 alternatives
17473545 anacrontab
17179791 asound.conf
17508972 at.deny
51188918 audisp
17495445 audit
35228571 avahi
123752 gcrypt
17223537 gdbinit
17223538 gdbinit.d
51547707 gdm
51458628 geoclue
17337055 GeoIP.conf
17591184 ghostscript
16789675 glvnd
34450028 gnupg
16891973 GREP_COLORS
50375318 groff
17554401 group
17223529 mke2fs.conf
17328849 modprobe.d
1170952 modules-load.d
16778360 motd
16777284 mtab
17039097 mtools.conf
17569425 multipath
17337072 my.cnf
17337073 my.cnf.d
17623296 nanorc
34589604 ndctl
17223550 netconfig
33750425 rpm
17464591 rsyncd.conf
17623667 rsyslog.conf
34478822 rsyslog.d
16884124 rwtab
50890845 rwtab.d
51037441 samba
1370710 sane.d
893371 sasl2
17940732 scl
16778365 security
34374634 security
```

- Then use `ls -help` and see other options about `ls` command

```
[dpatel@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 are you 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

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```
[dpatel@localhost ~]$ pwd
/home/dpatel
[dpatel@localhost ~]$
```

- Now use `cd /var` and hit Enter Key

-

```
[dpatel@localhost ~]$ cd /var
[dpatel@localhost var]$
```

- Do `ls` and see what output comes

-

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

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

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