

UBUNTU

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1. cd:

The "ls" is list command. "cd" command used to change directory using "cd" I can go to any directory(location). Folder will be in "blue" colour while files will be seen in "white" colour in terminal and "light blue" is for shared folder.

```
user@user-virtual-machine: ~/Desktop
user@user-virtual-machine:~$ cd Desktop
user@user-virtual-machine:~/Desktop$
```

The 'cd ~ and cd /':

Use "cd ~" will give send you in local home directory which is denoted by "~" in terminal while use "cd /" will give you root home directory which is denoted by "/" root directories can be seen by anyone but can't be accessed by anyone.

```
user@user-virtual-machine: ~
user@user-virtual-machine:~$ cd Desktop
user@user-virtual-machine:~/Desktop$ cd /
user@user-virtual-machine:/$ ls
bin  dev  lib  libx32  mnt  root  snap  sys  var
boot  etc  lib32  lost+found  opt  run  srv  tmp
cdrom  home  lib64  media  proc /sbin  swapfile  usr
user@user-virtual-machine:/$ cd ~
user@user-virtual-machine:~$
```

'cd .' And 'cd ..':

Use "cd ." will get you present folder while "cd.." will give you previous folder/directory.

```
user@user-virtual-machine: /home
user@user-virtual-machine:~$ cd Desktop
user@user-virtual-machine:~/Desktop$ cd /
user@user-virtual-machine:/$ ls
bin  dev  lib  libx32  mnt  root  snap  sys  var
boot  etc  lib32  lost+found  opt  run  srv  tmp
cdrom  home  lib64  media  proc /sbin  swapfile  usr
user@user-virtual-machine:/$ cd ~
user@user-virtual-machine:~$ cd .
user@user-virtual-machine:~$ cd ..
user@user-virtual-machine:/home$
```

To jump to root user use this "sudo -i" it will ask you password and want to get out of root use type "exit".

```
root@user-virtual-machine: ~
user@user-virtual-machine:/home$ sudo -i
[sudo] password for user:
root@user-virtual-machine:~# ls
snap
root@user-virtual-machine:~# exit
```

After exit:

```
user@user-virtual-machine: /home
user@user-virtual-machine:/home$ sudo -i
[sudo] password for user:
root@user-virtual-machine:~# ls
snap
root@user-virtual-machine:~# exit
logout
user@user-virtual-machine:/home$
user@user-virtual-machine:/home$
user@user-virtual-machine:/home$
user@user-virtual-machine:/home$
```

"pwd" will tell me my present working directory.

```
user@user-virtual-machine:~$ cd ..
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$ pwd
/home
user@user-virtual-machine:~/home$
```

Use "echo 'something'" to print something in terminal.

```
user@user-virtual-machine:~/home$ echo 'something'
something
user@user-virtual-machine:~/home$
```

Clear command:

Before clear

```
user@user-virtual-machine: ~/home
user@user-virtual-machine:~/home$ sudo -i
[sudo] password for user:
root@user-virtual-machine:~# ls
snap
root@user-virtual-machine:~# exit
logout
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$
user@user-virtual-machine:~/home$ echo 'something'
something
user@user-virtual-machine:~/home$ clear
```

After clear command:

```
user@user-virtual-machine: ~/home
user@user-virtual-machine:~/home$
```

The ls command:

1. Use "ls -a" to show all folder and file even hidden folder, in linux if a folder/file starts with "." it is a hidden folder.

```
user@user-virtual-machine: ~/home
user@user-virtual-machine:~/home$ ls
user
user@user-virtual-machine:~/home$ ls -a
.  ..  user
user@user-virtual-machine:~/home$ ls -A
user
user@user-virtual-machine:~/home$
```

2. Use "ls -l" to show all folder/ file in list format, with all info about files and the accessibility like 'drwxr-xr-x'.

```
user@user-virtual-machine: ~
user@user-virtual-machine:~/home$ cd ~
user@user-virtual-machine:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
user@user-virtual-machine:~$ ls -l
total 32
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Desktop
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Documents
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Downloads
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Music
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Pictures
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Public
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Templates
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Videos
user@user-virtual-machine:~$ ls
```

3. Use "ls -lh" to show all things that shows in "ls -l" but in human readable format.

```
user@user-virtual-machine: ~  
user@user-virtual-machine:/home$ cd ~  
user@user-virtual-machine:~$ ls  
Desktop Documents Downloads Music Pictures Public Templates Videos  
user@user-virtual-machine:~$ ls -l  
total 32  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Desktop  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Documents  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Downloads  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Music  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Pictures  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Public  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Templates  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Videos  
user@user-virtual-machine:~$ ls -lh  
total 32K  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Desktop  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Documents  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Downloads  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Music  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Pictures  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Public  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Templates  
drwxr-xr-x 2 user user 4.0K Aug 21 17:21 Videos  
user@user-virtual-machine:~$
```

4. Use "ls -l -t" also "ls -lt" sort the list according to time and use "ls -lr" to show list in reverse order.

```
user@user-virtual-machine:~$ ls -lt  
total 32  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Desktop  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Documents  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Downloads  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Music  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Pictures  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Public  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Templates  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Videos  
user@user-virtual-machine:~$ ls -lr  
total 32  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Videos  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Templates  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Public  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Pictures  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Music  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Downloads  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Documents  
drwxr-xr-x 2 user user 4096 Aug 21 17:21 Desktop  
user@user-virtual-machine:~$
```

The ls -ls sort the file from largest to smallest and if used ls -f you won't be able to figure out folder, file.

```
user@user-virtual-machine: ~  
user@user-virtual-machine:~$ ls  
Desktop Documents Downloads Music Pictures Public Templates Videos  
user@user-virtual-machine:~$ ls -f  
Public .profile .ssh Music .bash_history  
Templates Videos .gnupg . .bash_logout  
Downloads .local .bashrc .sudo_as_admin_successful Desktop  
.config .cache .. Documents Pictures  
user@user-virtual-machine:~$ ls -A -f  
Public .profile .ssh Music .bash_history  
Templates Videos .gnupg . .bash_logout  
Downloads .local .bashrc .sudo_as_admin_successful Desktop  
.config .cache .. Documents Pictures  
user@user-virtual-machine:~$
```

Use "cat file_name" to display the content inside the file or "cat*" to print the content of every file present in that directory.

```
user@user-virtual-machine: ~  
user@user-virtual-machine:~$ cat filename  
hello  
this is filename  
hello  
user@user-virtual-machine:~$ cat *  
cat: Desktop: Is a directory  
cat: Documents: Is a directory  
cat: Downloads: Is a directory  
hello  
hello  
this is filename  
hello  
cat: Music: Is a directory  
cat: Pictures: Is a directory  
cat: Public: Is a directory  
cat: Templates: Is a directory  
cat: Videos: Is a directory  
user@user-virtual-machine:~$
```

Use "cat -n filename" to display the same thing as "cat file_name" but with numbers in beginning.

```
user@user-virtual-machine:~$ cat -n filename  
1 hello  
2 this is filename  
3 hello
```

Use echo 'some_data' > file_name to create a file in a directory.

```
user@user-virtual-machine:~$ echo 'somedata' > f2  
user@user-virtual-machine:~$ cat f2  
somedata
```

Use 'echo 'append_data' >> filename' to append give data into directory or create a file with given data in-case file is not created.

```
user@user-virtual-machine:~$ echo 'append_data' >> filename  
user@user-virtual-machine:~$ cat filename  
append_data  
user@user-virtual-machine:~$ echo 'append_data2' >> filename  
user@user-virtual-machine:~$ cat filename  
append_data  
append_data2  
user@user-virtual-machine:~$
```

Use "cat -s filename > filename" to clear common data in the file.

```
user@user-virtual-machine:~$ cat -s filename  
hello  
  
this is filename  
  
hello  
user@user-virtual-machine:~$ cat -s filename > filename
```

cat f1 > filename to paste data of f1 to filename by erasing available data in filename.

```
user@user-virtual-machine:~$ cat f1  
hello  
user@user-virtual-machine:~$ cat filename  
append_data  
append_data2  
user@user-virtual-machine:~$ cat f1 > filename  
user@user-virtual-machine:~$ cat filename  
hello  
user@user-virtual-machine:~$ cat f1  
hello  
user@user-virtual-machine:~$
```

cat f1 f2 > filename

```
user@user-virtual-machine:~$ cat f2  
somedata  
user@user-virtual-machine:~$ cat f1 filename  
hello  
hello  
user@user-virtual-machine:~$ cat f1 f2 > filename  
user@user-virtual-machine:~$ cat filename  
hello  
somedata  
user@user-virtual-machine:~$ cat f1 f2  
hello  
somedata  
user@user-virtual-machine:~$
```

cat f2 >> filename to append data of f2 to filename

```
user@user-virtual-machine:~$ cat f2 >> filename  
user@user-virtual-machine:~$ cat filename  
hello  
somedata  
somedata  
user@user-virtual-machine:~$
```

How to print n hello in terminal using shell commands?

-> echo \$k (echo variable)

echo Hello\${k}({1..10}) ({1..10}) it prints number from 1 to 10)

```
user@user-virtual-machine:~$ echo $k
```

```
user@user-virtual-machine:~$ echo Hello${k}({1..10})  
Hello Hello Hello Hello Hello Hello Hello Hello
```

What if you can to print hello in vertical?

--> printf 'Hello\n%.0s' {1..10} (we use %s bcoz wanted to print string and 0 in %.0s to reduce decimal value to 0)

```
l-machine:~$ printf 'hello\n%.0s' {1..10}
```

```
hello
hello
hello
hello
hello
hello
hello
hello
hello
hello
```