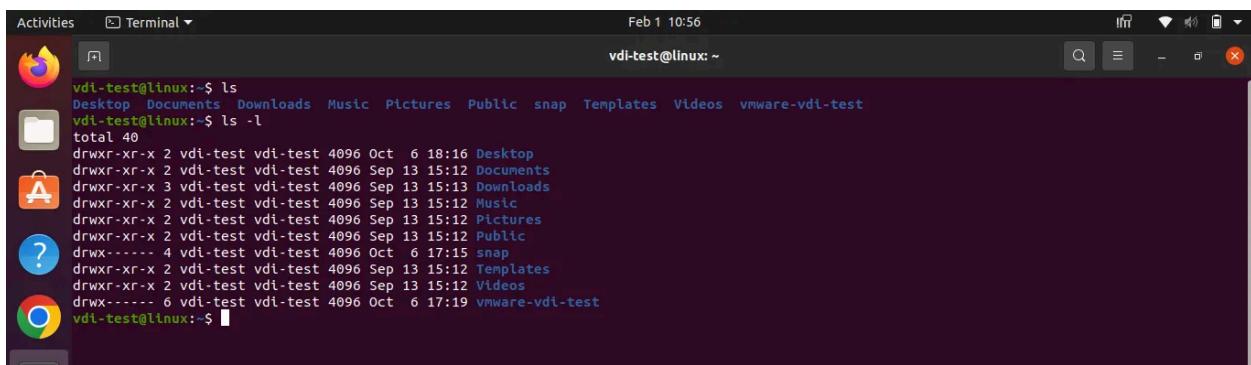




# Linux Commands

ls - List all files or folders

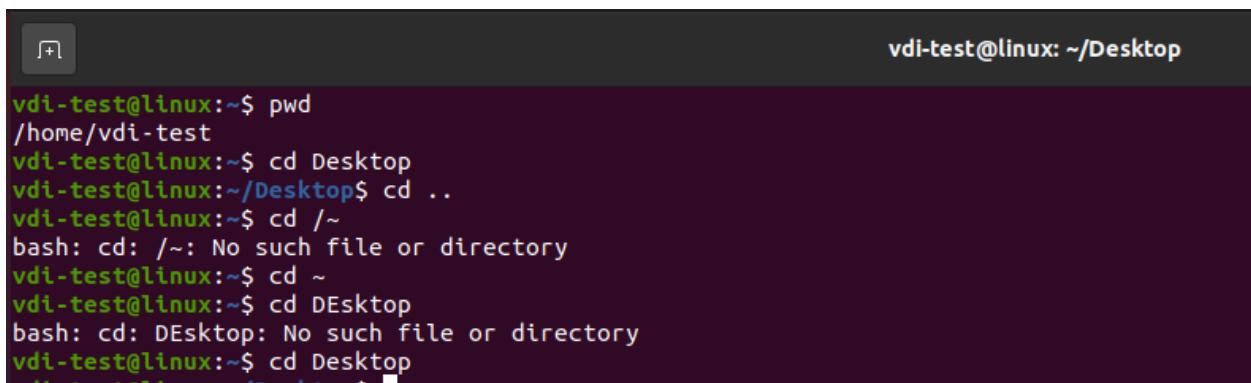


```
vdi-test@linux:~$ ls
Desktop Documents Downloads Music Pictures Public snap Templates Videos vmware-vdi-test
vdi-test@linux:~$ ls -l
total 40
drwxr-xr-x 2 vdi-test vdi-test 4096 Oct  6 18:16 Desktop
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Documents
drwxr-xr-x 3 vdi-test vdi-test 4096 Sep 13 15:13 Downloads
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Music
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Pictures
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Public
drwx----- 4 vdi-test vdi-test 4096 Oct  6 17:15 snap
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Templates
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Videos
drwxr-xr-x 6 vdi-test vdi-test 4096 Oct  6 17:19 vmware-vdi-test
vdi-test@linux:~$
```

ls -l displays the results in a list format

the initial 10 characters give information about if the item is a directory or a file and what permissions the file or directory has

pwd - Print Working Directory



```
vdi-test@linux:~$ pwd
/home/vdi-test
vdi-test@linux:~$ cd Desktop
vdi-test@linux:~/Desktop$ cd ..
vdi-test@linux:~$ cd /
bash: cd: /: No such file or directory
vdi-test@linux:~$ cd ~
vdi-test@linux:~$ cd DEsktop
bash: cd: DEsktop: No such file or directory
vdi-test@linux:~$ cd Desktop
vdi-test@linux:~/Desktop$
```

pwd is used to display which directory the terminal is in

Usually ~ refers to home or default directory

cd - Change Directory used to change the working directory

cd .. means go back one directory



A screenshot of a terminal window titled "vdi-test@linux: ~/Desktop/test". The session shows the following commands:

```
vdi-test@linux:~/Desktop$ touch testfile.txt
vdi-test@linux:~/Desktop$ cat testfile.txt
Hello this is a text file which i have made
vdi-test@linux:~/Desktop$ which cat
/usr/bin/cat
vdi-test@linux:~/Desktop$ cp testfile.txt testfile2.txt
vdi-test@linux:~/Desktop$ cat testfile2.txt
Hello this is a text file which i have made
vdi-test@linux:~/Desktop$ diff testfile.txt testfile2.txt
1a2
> THIS IS A NEW FILE
vdi-test@linux:~/Desktop$ rm testfile2.txt
vdi-test@linux:~/Desktop$ mkdir test
vdi-test@linux:~/Desktop$ mv testfile.txt test
vdi-test@linux:~/Desktop$ cd test
vdi-test@linux:~/Desktop/test$ pwd
/home/vdi-test/Desktop/test
vdi-test@linux:~/Desktop/test$ █
```

touch testfile.txt creates a file if it doesn't exist and will do nothing if it exists

cat testfile.txt shows the content of the file

which cat tell me where a certain command is located and if it exists or not

cp testfile.txt testfile2.txt copies the contents of testfile into testfile2

diff testfile.txt testfile2.txt gives me all the differences in both the files

rm testfile2.txt removes the file permanently

rm -r if you are removing a directory

mkdir test makes a directory called test inside the pwd which is Desktop

mv testfile.txt test moves said file into the test directory

## Permissions in LINUX

drwxrwxr-x

First character tells you type of file d is directory f is file  
then next 3 characters are permissions of the User

r w x means read write and execute respectively

so here user can read write and execute

then next 3 are for Group

and then last 3 are for other people

other people can read and execute but not write in this directory

For a directory x is just ability to cd into that directory in terminal

```
vdi-test@linux:~/Desktop/test$ free
total        used         free      shared  buff/cache   available
Mem:    7918432     110832    5691320     201292     1116280    6347800
Swap:  2097148          0   2097148
vdi-test@linux:~/Desktop/test$ free -m
total        used         free      shared  buff/cache   available
Mem:     7732       1070       5573        195      1089       6214
Swap:  2047          0       2047
vdi-test@linux:~/Desktop/test$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            3.8G   0    3.8G  0% /dev
tmpfs           774M  2.3M  772M  1% /run
/dev/sda2        916G  15G  855G  2% /
tmpfs           3.8G   0    3.8G  0% /dev/shm
tmpfs           5.0M  4.0K  5.0M  1% /run/lock
tmpfs           3.8G   0    3.8G  0% /sys/fs/cgroup
/dev/loop1        62M   62M    0 100% /snap/core20/1611
/dev/loop5        92M   92M    0 100% /snap/gtk-common-themes/1535
/dev/loop10       55M   55M    0 100% /snap/snap-store/558
/dev/loop3        64M   64M    0 100% /snap/core20/x1
/dev/loop7       203M  203M    0 100% /snap/thincast-client/x1
/dev/loop0       128K  128K    0 100% /snap/bare/5
/dev/loop13       49M   49M    0 100% /snap/snapd/25935
/dev/loop8       100M  100M    0 100% /snap/remmina/x1
/dev/loop2        75M   75M    0 100% /snap/core22/x1
/dev/loop9        51M   51M    0 100% /snap/snapd/25577
/dev/loop12       13M   13M    0 100% /snap/snap-store/1216
/dev/loop11       347M  347M    0 100% /snap/gnome-3-38-2004/115
/dev/loop4        350M  350M    0 100% /snap/gnome-3-38-2004/143
/dev/loop6       506M  506M    0 100% /snap/gnome-42-2204/x1
/dev/sda1        511M  6.1M  505M   2% /boot/efi
tmpfs           774M  16K  774M   1% /run/user/125
tmpfs           774M  32K  774M   1% /run/user/1000
vdi-test@linux:~/Desktop/test$ uptime
 11:04:24 up 12 min,  1 user,  load average: 0.01, 0.39, 0.51
vdi-test@linux:~/Desktop/test$
```

free amt of free memory available and used

free -m gives values in MB

df -h gives amount of free disk space and -h make it so that is human readable

uptime tells you the uptime of the computer

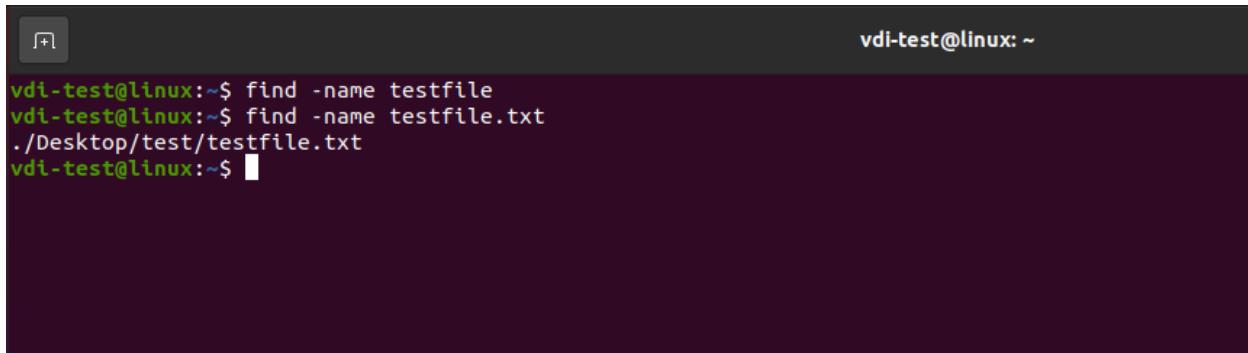
```
vdi-test@linux:~/Desktop/test$ history
1 sudo chmod +x ./dumbprep.sh
2 ./dumbprep.sh
3 ls
4 ls-l
5 ls -l
6 ll
7 clear
8 ls
9 ls -l
10 clear
11 pwd
12 cd Desktop
13 cd ..
14 cd /~
15 cd ~
16 cd DEsktop
17 cd Desktop
18 clear
19 touch testfile.txt
20 cat testfile.txt
```

history gives all the commands in that session

```
vdi-test@linux:~/Desktop/test$ history >history.txt
vdi-test@linux:~/Desktop/test$ cat history.txt
1 sudo chmod +x ./dumbprep.sh
2 ./dumbprep.sh
3 ls
4 ls-l
5 ls -l
6 ll
7 clear
8 ls
9 ls -l
10 clear
11 pwd
12 cd Desktop
13 cd ..
14 cd /~
15 cd ~
16 cd DEsktop
17 cd Desktop
18 clear
19 touch testfile.txt
20 cat testfile.txt
21 which cat
22 cp testfile.txt testfile2.txt
23 cat testfile2.txt
24 diff testfile.txt testfile2.txt
25 rm testfile2.txt
```

the output of history is now redirected in history.txt

history > history.txt



```
vdi-test@linux:~$ find -name testfile
vdi-test@linux:~$ find -name testfile.txt
./Desktop/test/testfile.txt
vdi-test@linux:~$
```

find command finds things

## Other commands i didnt execute

sudo or super user do makes it so that you can become GOD for that command

grep Searches for file name or content in the entire computer

echo print something

sudo install apt packagename

sudo adduser name

etc etc

you can let one command's output to be the input of another command using |