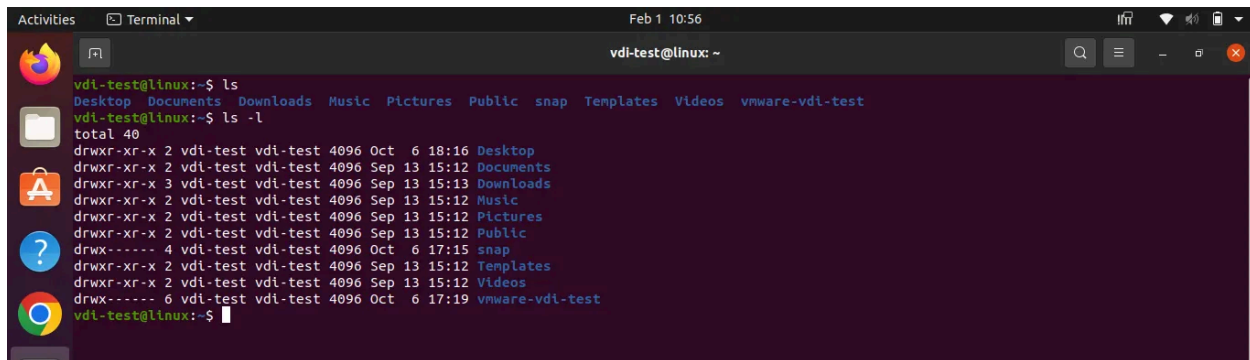




# Linux Commands

`ls` - List all files or folders

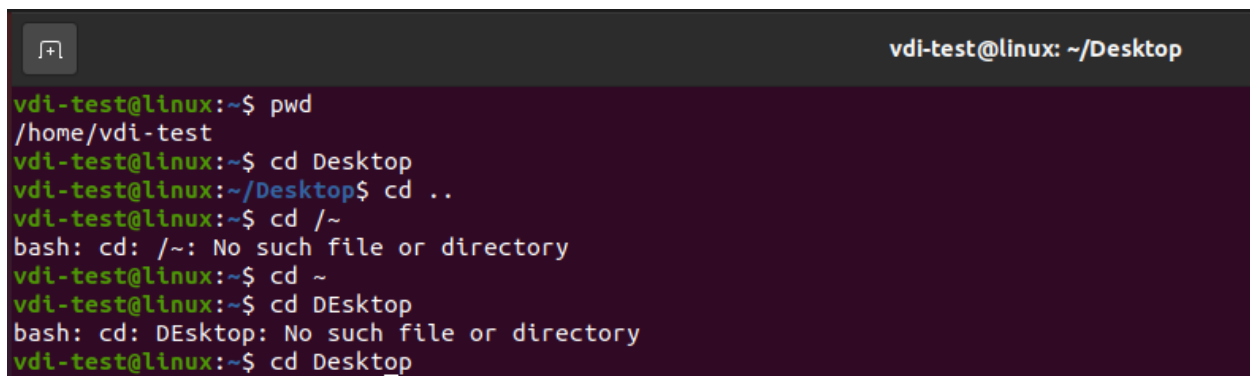


```
vdi-test@linux:~$ ls
Desktop Documents Downloads Music Pictures Public snap Templates Videos vmware-vdi-test
vdi-test@linux:~$ ls -l
total 40
drwxr-xr-x 2 vdi-test vdi-test 4096 Oct  6 18:16 Desktop
drwxr-xr-x 2 vdi-test vdi-test 4096 Sep 13 15:12 Documents
drwxr-xr-x 3 vdi-test vdi-test 4096 Sep 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
drwx----- 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:~/Desktop$ pwd
/home/vdi-test
vdi-test@linux:~/Desktop$ cd Desktop
vdi-test@linux:~/Desktop$ cd ..
vdi-test@linux:~/Desktop$ cd /~
bash: cd: /~: No such file or directory
vdi-test@linux:~/Desktop$ cd ~
vdi-test@linux:~/Desktop$ cd Desktop
bash: cd: Desktop: No such file or directory
vdi-test@linux:~/Desktop$ cd 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 terminal window with a dark purple background and a title bar that reads "vdi-test@linux: ~/Desktop/test". The terminal shows a series of commands and their outputs. The commands are: touch testfile.txt, cat testfile.txt, which cat, cp testfile.txt testfile2.txt, cat testfile2.txt, diff testfile.txt testfile2.txt, rm testfile2.txt, mkdir test, mv testfile.txt test, and pwd. The outputs are: "Hello this is a text file which i have made" for the first cat command, "/usr/bin/cat" for the which command, "1a2" for the diff command, and "/home/vdi-test/Desktop/test" for the pwd command.

```
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 doesnt 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

vdi-test@linux:~/Desktop/test$ free
              total        used        free      shared  buff/cache   available
Mem:           7918432       1110832       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

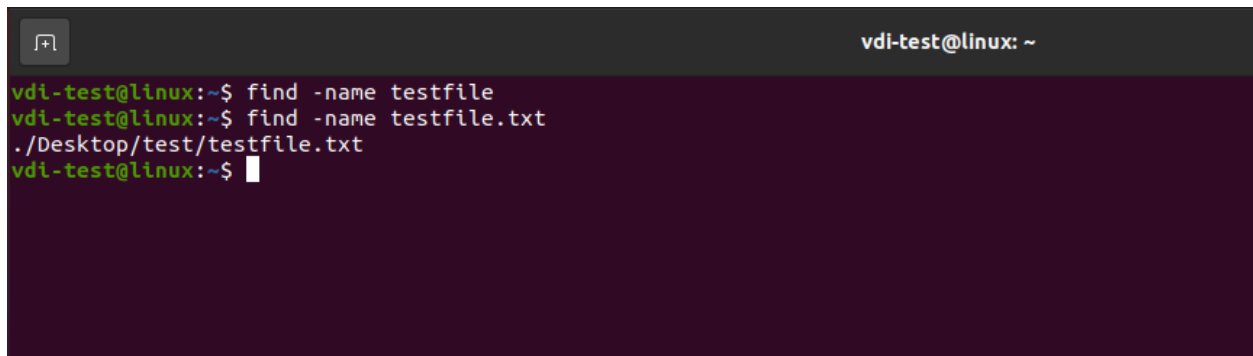
```

vdi-test@linux: ~/Desktop/test
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

A terminal window with a dark purple background. The title bar at the top right says "vdi-test@linux: ~". The terminal shows three lines of commands and their output: the first command is "find -name testfile" with no output; the second is "find -name testfile.txt" with output "./Desktop/test/testfile.txt"; the third is a prompt "vdi-test@linux:~\$" with a cursor.

```
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 |