

```
kiit@BT-2105583:~$ cd Desktop
```

```
kiit@BT-2105583:~/Desktop$ mkdir oslab
```

```
kiit@BT-2105583:~/Desktop$ echo I m Souvik >>oslab.txt
```

```
kiit@BT-2105583:~/Desktop$ cat oslab.txt  
I m Souvik
```

```
kiit@BT-2105583:~/Desktop$ wc -c oslab.txt
11 oslab.txt
```

```

kiit@BT-2105583:~$ --help
--help: command not found
kiit@BT-2105583:~$ help
GNU bash, version 5.0.17(1)-release (x86_64-pc-linux-gnu)
These shell commands are defined internally. Type 'help' to see this list.
Type 'help name' to find out more about the function 'name'.
Use 'info bash' to find out more about the shell in general.
Use 'man -k' or 'info' to find out more about commands not in this list.

A star (*) next to a name means that the command is disabled.

job_spec [&]
s arg [arg...>
(( expression ))
e COMMANDS; >
. filename [arguments]
:
[sigspec]
[ arg... ]
[[ expression ]]
alias [-p] [name[=value] ... ]
bg [job_spec ...]
callback [->
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name] [-u name] [-r keyseq] [-x keys>
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN]...) COMMANDS ;;... esac
p prompt] [->
cd [-L|[-P [-e]] [-@]] [dir]
C callback] >
command [-pVv] command [arg ...]
compgen [-abcdefgjkuv] [-o option] [-A action] [-G globpat] [-W wordlist] [-F fun>
complete [-abcdefgjkuv] [-pr] [-DEI] [-o option] [-A action] [-G globpat] [-W word>
comptop [-o|+o option] [-DEI] [name ...]
continue [n]
coproc [NAME] command [redirections]

history [-c] [-d offset] [n] or history -anrw [filename] or history -p

if COMMANDS; then COMMANDS; [ elif COMMANDS; then COMMANDS; ]... [ els

jobs [-lnprs] [jobspec ...] or jobs -x command [args]
kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l

let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count] [-t] [-u fd] [-C

popd [-n] [+N | -N]
printf [-v var] format [arguments]
pushd [-n] [+N | -N | dir]
pwd [-LP]
read [-ers] [-a array] [-d delim] [-i text] [-n nchars] [-N nchars] [-

readarray [-d delim] [-n count] [-O origin] [-s count] [-t] [-u fd] [-

readonly [-aAf] [name[=value] ...] or readonly -p
return [n]
select NAME [in WORDS ... ;] do COMMANDS; done
set [-abefhkmnptuvxBCHP] [-o option-name] [--] [arg ...]
shift [n]
shopt [-pqsu] [-o] [optname ...]

```

```
kiit@BT-2105583:~/Desktop$ time
```

```
real    0m0.000s
user    0m0.000s
sys     0m0.000s
```

```
kiit@BT-2105583:~/Desktop$ times
```

```
0m0.065s 0m0.103s
```

```
0m0.370s 0m0.109s
```



```
kiit@BT-2105583:~/Desktop$ pwd
/home/kiit/Desktop
```

```
kiit@BT-2105583:~/Desktop$ mkdir new_directory
```

```
kiit@BT-2105583:~/Desktop$ rmdir new_directory
```

```
kiit@BT-2105583:~/Desktop$ touch Demo.txt
```

```
kiit@BT-2105583:~/Desktop$ ls
Demo.txt  oslab  oslab.txt
kiit@BT-2105583:~/Desktop$
```

```
kiit@BT-2105583:~/Desktop$ rm Demo.txt
```

```
kiit@BT-2105583:~/Desktop$ cp Demo1.txt Demo2.txt
kiit@BT-2105583:~/Desktop$ cp Demo1.txt Documents
```

```
kiit@BT-2105583:~/Desktop$ mv Demo3.txt Documents
```



```
kiit@BT-2105583:~/Desktop$ head oslab.txt
```

```
I m Souvik
```

```
I am Spiderman
```

```
kiit@BT-2105583:~/Desktop$ tail oslab.txt  
I m Souvik  
I am Spiderman
```

```
kiit@BT-2105583:~/Desktop$ date
Thu Jan 12 13:38:38 IST 2023
```

```
kiit@BT-2105583:~/Desktop$ cd
kiit@BT-2105583:~$ cd Documents
kiit@BT-2105583:~/Documents$ █
```

```
kiit@BT-2105583:~/Desktop$ tac oslab.txt
```

```
I am Spiderman
```

```
I m Souvik
```

```
kiit@BT-2105583:~/Desktop$ id
uid=1000(kiit) gid=1000(kiit) groups=1000(kiit),4(adm),20(dialout),24(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),117(netdev)
```

```
kiit@BT-2105583:~/Desktop$ cat oslab.txt | grep Souvik  
I m Souvik
```

```
kiit@BT-2105583:~/Desktop$ comm oslab.txt Demo1.txt
I m Souvik
comm: file 1 is not in sorted order
I am Spiderman
```



```
kiit@BT-2105583:~/Desktop$ cat oslab.txt |tee new.txt |cat
I m Souvik
I am Spiderman
```

```
kiit@BT-2105583:~/Desktop$ cat oslab.txt|tr 'Smdo' 'sMDO'  
I M sOuvik  
I aM spiDerMan
```

```
kiit@BT-2105583:~/Desktop$ sort oslab.txt|uniq
I am Spiderman
I m Souvik
```

```
kiit@BT-2105583:~/Desktop$ wc oslab.txt
2  6 26 oslab.txt
```

```
kiit@BT-2105583:~/Desktop$ od -b oslab.txt
0000000 111 040 155 040 123 157 165 166 151 153 012 111 040 141 155 040
0000020 123 160 151 144 145 162 155 141 156 012
0000032
```

```
kiit@BT-2105583:~/Desktop$ od -c oslab.txt
0000000  I      m      S  o  u  v  i  k  \n  I      a  m
0000020  S  p  i  d  e  r  m  a  n  \n
0000032
```

```
kiit@BT-2105583:~/Desktop$ od -t x1 oslab.txt
0000000 49 20 6d 20 53 6f 75 76 69 6b 0a 49 20 61 6d 20
0000020 53 70 69 64 65 72 6d 61 6e 0a
0000032
```

```
kiit@BT-2105583:~/Desktop$ sort oslab.txt
I am Spiderman
I m Souvik
```



```
kiit@BT-2105583:~/Desktop$ gzip Demo1.txt
```

```
kiit@BT-2105583:~/Desktop$ ls
```

```
Demo1.txt.gz Demo2.txt Documents new.txt oslab oslab.txt
```

```
kiit@BT-2105583:~/Desktop$ gunzip Demo1.txt
kiit@BT-2105583:~/Desktop$ ls
Demo1.txt  Demo2.txt  Documents  new.txt  oslab  oslab.txt
```

```
kiit@BT-2105583:~/Desktop$ find / -name "*.pdf"
find: '/etc/polkit-1/localauthority': Permission denied
find: '/etc/ssl/private': Permission denied
find: '/root': Permission denied
find: '/mnt/c': Input/output error
/usr/share/cups/data/default-testpage.pdf
/usr/share/cups/data/default.pdf
/usr/share/cups/data/form_english.pdf
/usr/share/cups/data/classified.pdf
/usr/share/cups/data/secret.pdf
/usr/share/cups/data/topsecret.pdf
/usr/share/cups/data/unclassified.pdf
/usr/share/cups/data/confidential.pdf
/usr/share/cups/data/form_russian.pdf
/usr/share/cups/data/standard.pdf
/usr/share/doc/shared-mime-info/shared-mime-info-spec.pdf
find: '/run/sudo': Permission denied
find: '/proc/tty/driver': Permission denied
find: '/proc/1/task/1/fd': Permission denied
find: '/proc/1/task/1/fdinfo': Permission denied
find: '/proc/1/task/1/ns': Permission denied
find: '/proc/1/task/6/fd': Permission denied
find: '/proc/1/task/6/fdinfo': Permission denied
find: '/proc/1/task/6/ns': Permission denied
find: '/proc/1/fd': Permission denied
find: '/proc/1/map_files': Permission denied
find: '/proc/1/fdinfo': Permission denied
find: '/proc/1/ns': Permission denied
find: '/proc/68/task/68/fd': Permission denied
find: '/proc/68/task/68/fdinfo': Permission denied
find: '/proc/68/task/68/ns': Permission denied
find: '/proc/68/fd': Permission denied
find: '/proc/68/map_files': Permission denied
find: '/proc/68/fdinfo': Permission denied
find: '/proc/68/ns': Permission denied
find: '/proc/69/task/69/fd': Permission denied
find: '/proc/69/task/69/fdinfo': Permission denied
```

```
kiit@BT-2105583:~/Desktop$ date
Thu Jan 12 18:00:18 IST 2023
```

```
kiit@BT-2105583:~/Desktop$ cal
```

January 2023

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

```
kiit@BT-2105583:~/Desktop$ sleep 4
```

```
kiit@BT-2105583:~/Desktop$ df
```

```
df: /mnt/c: Input/output error
```

Filesystem	1K-blocks	Used	Available	Use%	Mounted on
/dev/sdb	263174212	2556196	247179860	2%	/
tmpfs	6280632	0	6280632	0%	/mnt/wsl
tools	498799612	310599396	188200216	63%	/init
none	6278548	0	6278548	0%	/dev
none	6280632	8	6280624	1%	/run
none	6280632	0	6280632	0%	/run/lock
none	6280632	0	6280632	0%	/run/shm
none	6280632	0	6280632	0%	/run/user
tmpfs	6280632	0	6280632	0%	/sys/fs/cgroup
drivers	498799612	310599396	188200216	63%	/usr/lib/wsl/drivers
lib	498799612	310599396	188200216	63%	/usr/lib/wsl/lib

```
kiit@BT-2105583:~/Desktop$ uname -a
Linux BT-2105583 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri Apr 2 22:23:49 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
```



```
kiit@BT-2105583:~/Desktop$ free
              total        used        free      shared  buff/cache   available
Mem:          12561268      120488      12304696           72       136084      12223012
Swap:          4194304           0       4194304
```

```
kiit@BT-2105583:~/Desktop$ groups kiit
kiit : kiit adm dialout cdrom floppy sudo audio dip video plugdev netdev
```

```
kiit@BT-2105583:~/Desktop$ top
top - 18:11:09 up 3:13, 0 users, load average: 0.00, 0.00, 0.00
Tasks: 5 total, 1 running, 4 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 12266.9 total, 12016.7 free, 117.2 used, 132.9 buff/cache
MiB Swap: 4096.0 total, 4096.0 free, 0.0 used, 11936.9 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	908	532	472	S	0.0	0.0	0:00.03	init
68	root	20	0	908	80	20	S	0.0	0.0	0:00.00	init
69	root	20	0	908	80	20	S	0.0	0.0	0:00.40	init
70	kiit	20	0	10036	5048	3340	S	0.0	0.0	0:00.41	bash
206	kiit	20	0	10888	3704	3176	R	0.0	0.0	0:00.01	top

kiit@BT-2105583:~/Desktop\$ history

```
1 sudo apt-get purge xrdp
2 sudo apt install -y xrdp
3 sudo apt install -y xrdp
4 sudo apt install -y xrdp
5 sudo apt install -y xfce4
6 sudo apt install -y xfce4
7 sudo apt install -y xfce4-goodies
8 sudo nano /etc/xrdp/startwm.sh
9 sudo /etc/init.d/xrdp.start
10 sudo /etc/init.d/xrdp start
11 sudo cp /etc/xrdp/xrdp.ini /etc/xrdp/xrdp.ini.bak
12 sudo sed -i 's/3389/3390/g' /etc/xrdp/xrdp.ini
13 sudo sed -i 's/max_bpp=32/#max_bpp=32\nmax_bpp=128/g' /etc/xrdp/xrdp.ini
14 sudo sed -i 's/max_bpp=32/#max_bpp=32\nmax_bpp=128/g' /etc/xrdp/xrdp.ini
15 sudo sed -i 's/xserverbpp=24/#xserverbpp=24\nxserverbpp=128/g' /etc/xrdp/xrdp.ini
16 echo xfce4-session > ~/.xsession
17 sudo /etc/init.d/xrdp start
18 sudo apt update && sudo apt -y upgrade
19 sudo apt-get purge xrdp
20 sudo apt install -y xrdp
21 sudo apt install -y xfce4
22 sudo apt install -y xfce4-goodies
23 sudo cp /etc/xrdp/xrdp.ini /etc/xrdp/xrdp.ini.bak
24 sudo sed -i 's/3389/3390/g' /etc/xrdp/xrdp.ini
25 sudo sed -i 's/max_bpp=32/#max_bpp=32\nmax_bpp=128/g' /etc/xrdp/xrdp.ini
26 sudo sed -i 's/xserverbpp=24/#xserverbpp=24\nxserverbpp=128/g' /etc/xrdp/xrdp.ini
27 echo xfce4-session > ~/.xsession
28 sudo nano /etc/xrdp/startwm.sh
29 sudo apt install firefox
30 sudo /etc/init.d/xrdp start
31 Is
32 ls
33 pwd
34 clear
35 whoami
36 cmp
```

```
kiit@BT-2105583:~$ cmp os2.txt os3.txt
os2.txt os3.txt differ: byte 1, line 1
```

```
kiit@BT-2105583:~$ diff os2.txt os3.txt
```

```
1,3c1
```

```
< I am batman
```

```
< I am Lovable KIITIAN
```

```
< Spidey is back
```

```
---
```

```
> Where is my key
```

```
kiit@BT-2105583:~/Desktop$ man mkdir
```

```
kiit@BT-2105583:~/Desktop$ chmod +x new.txt
```



```
kiit@BT-2105583:~/Desktop$ ping google.com
```

```
PING google.com (142.250.182.46) 56(84) bytes of data.
```

```
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=1 ttl=112 time=104 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=2 ttl=112 time=143 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=3 ttl=112 time=101 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=4 ttl=112 time=98.2 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=5 ttl=112 time=102 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=6 ttl=112 time=93.6 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=7 ttl=112 time=113 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=8 ttl=112 time=142 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=9 ttl=112 time=88.3 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=10 ttl=112 time=87.2 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=11 ttl=112 time=96.1 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=12 ttl=112 time=148 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=13 ttl=112 time=105 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=14 ttl=112 time=99.5 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=15 ttl=112 time=105 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=16 ttl=112 time=108 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=17 ttl=112 time=95.1 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=18 ttl=112 time=96.4 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=19 ttl=112 time=131 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=20 ttl=112 time=119 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=21 ttl=112 time=110 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=22 ttl=112 time=118 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=23 ttl=112 time=124 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=24 ttl=112 time=103 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=25 ttl=112 time=109 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=26 ttl=112 time=118 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=27 ttl=112 time=114 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=28 ttl=112 time=107 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=29 ttl=112 time=90.8 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=30 ttl=112 time=111 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=31 ttl=112 time=125 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=32 ttl=112 time=109 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=33 ttl=112 time=95.8 ms
64 bytes from maa05s19-in-f14.1e100.net (142.250.182.46): icmp_seq=34 ttl=112 time=116 ms
```

```
kiit@BT-2105583:~/Desktop$ rm new.txt
kiit@BT-2105583:~/Desktop$ ls
Demo1.txt  Demo2.txt  Documents  oslab      oslab.txt
```