

```
kiit@BT-210558: ~/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-2105585:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  os2.txt  thinclient_drives
```

```
kiit@BT-2105585:~$ whoami  
kiit
```

```
kiit@BT-2105585:~$ echo I am Suvankar\\\\\\\\  
> am suvankar  
I am Suvankar\\am suvankar
```

```
kiit@BT-2105585:~$ echo my name is suvankar >>os3.txt
kiit@BT-2105585:~$ cat os3.txt
my name is suvankar
```

```
kiit@BT-2105585:~$ cmp os3.txt os4.txt  
os3.txt os4.txt differ: byte 1, line 1
```

```
kiit@BT-2105585:~$ diff os3.txt os4.txt
1c1
< my name is suvankar
---
> i read in kiit
```

```
kiit@BT-2105585:~$ 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 [&]
(( expression ))
. filename [arguments]
:
[ arg... ]
[[ expression ]]
alias [-p] [name[=value] ... ]
bg [job_spec ...]
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name] [-u name] >
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN [| PATTERN]...] COMMANDS ;;)... esac
cd [-L|[-P [-e]] [-@]] [dir]
command [-pVv] command [arg ...]
compgen [-abcdefgjkusv] [-o option] [-A action] [-G globpat] [->
complete [-abcdefgjkusv] [-pr] [-DEI] [-o option] [-A action] [->
comptopt [-o|+o option] [-DEI] [name ...]
continue [n]
coproc [NAME] command [redirections]
declare [-aAfFgIlNrtux] [-p] [name[=value] ...]
dirs [-clpv] [+N] [-N]
disown [-h] [-ar] [jobspec ... | pid ...]

history [-c] [-d offset] [n] or history -anrw [filename] or hi>
if COMMANDS; then COMMANDS; [ elif COMMANDS; then COMMANDS; ].>
jobs [-lnprs] [jobspec ...] or jobs -x command [args]
kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or >
let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count] [-t] [-u >
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 nc>
readarray [-d delim] [-n count] [-O origin] [-s count] [-t] [->
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 ...]
source filename [arguments]
suspend [-f]
test [expr]
```



```
kiit@BT-2105585:~$ dirs
```

```
~
```

```
kiit@BT-2105585:~$ cd Desktop
kiit@BT-2105585:~/Desktop$ mkdir oslab
kiit@BT-2105585:~/Desktop$ echo I am souvik >>oslab.txt
kiit@BT-2105585:~/Desktop$ cat oslab.txt
I am souvik
kiit@BT-2105585:~/Desktop$ wc -c oslab.txt
12 oslab.txt
```

```
kiit@BT-2105585:~/Desktop$ time
```

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

```
kiit@BT-2105585:~/Desktop$ times
0m0.024s 0m0.059s
0m0.007s 0m0.003s
```

```
kiit@BT-2105585:~/Desktop$ pwd  
/home/kiit/Desktop
```

```
kiit@BT-2105585:~/Desktop$ mkdir new
kiit@BT-2105585:~/Desktop$ mkdir new_directory
kiit@BT-2105585:~/Desktop$ rmdir new_directory
kiit@BT-2105585:~/Desktop$ cd Documents
-bash: cd: Documents: No such file or directory
kiit@BT-2105585:~/Desktop$
```

```
kiit@BT-2105585:~/Desktop$ cd Windows-SSD
-bash: cd: Windows-SSD: No such file or directory
```

```
kiit@BT-2105585:~/Desktop$ touch Demo.txt
kiit@BT-2105585:~/Desktop$ ls
Demo.txt  new  os6.txt  oslab  oslab.txt  oslab1
```



```
R11T@BT-2105585:~/Desktop$ date
```

```
Thu Jan 12 13:38:44 IST 2023
```

```
kiit@BT-2105585:~/Desktop$ cd  
kiit@BT-2105585:~$ cd Documents  
kiit@BT-2105585:~/Documents$
```

```
kiit@87-2105583:~/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$ comm oslab.txt Demo1.txt
I m Souvik
comm: file 1 is not in sorted order
I am Spiderman
```

```
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
00000000 49 20 6d 20 53 6f 75 76 69 6b 0a 49 20 61 6d 20
00000020 53 70 69 64 65 72 6d 61 6e 0a
00000032
```



```
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$ 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$ 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

```
kit@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
```

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

```
kiit@8T-2105583:~/Desktop$ groups kiit
kiit : kiit adm dialout cdrom floppy sudo audio dip video plugdev netdev
```



```
kiit@67-2105583:~/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-2105585:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  os2.txt  thinclient_drives
```

```
kiit@BT-2105585:~$ whoami  
kiit
```

```
kiit@BT-2105585:~$ echo I am Suvankar\\\\\\\\  
> am suvankar  
I am Suvankar\\am suvankar
```

```
kiit@BT-2105585:~$ echo my name is suvankar >>os3.txt
kiit@BT-2105585:~$ cat os3.txt
my name is suvankar
```

```
kiit@BT-2105585:~$ cmp os3.txt os4.txt  
os3.txt os4.txt differ: byte 1, line 1
```

```
kiit@BT-2105585:~$ diff os3.txt os4.txt
1c1
< my name is suvankar
---
> i read in kiit
```

```
kiit@BT-2105585:~$ 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.
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```

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Use 'info bash' to find out more about the shell in general.
```

```
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```

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

```
job_spec [&]
(( expression ))
. filename [arguments]
:
[ arg... ]
[[ expression ]]
alias [-p] [name[=value] ... ]
bg [job_spec ...]
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name] [-u name] >
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN [| PATTERN]...] COMMANDS ;;)... esac
cd [-L|[-P [-e]] [-@]] [dir]
command [-pVv] command [arg ...]
compgen [-abcdefgjkusv] [-o option] [-A action] [-G globpat] [->
complete [-abcdefgjkusv] [-pr] [-DEI] [-o option] [-A action] [->
comptopt [-o|+o option] [-DEI] [name ...]
continue [n]
coproc [NAME] command [redirections]
declare [-aAfFgIlNrtux] [-p] [name[=value] ...]
dirs [-clpv] [+N] [-N]
disown [-h] [-ar] [jobspec ... | pid ...]

history [-c] [-d offset] [n] or history -anrw [filename] or hi>
if COMMANDS; then COMMANDS; [ elif COMMANDS; then COMMANDS; ].>
jobs [-lnprs] [jobspec ...] or jobs -x command [args]
kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or >
let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count] [-t] [-u >
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 nc>
readarray [-d delim] [-n count] [-O origin] [-s count] [-t] [->
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 ...]
source filename [arguments]
suspend [-f]
test [expr]
```



```
kiit@BT-2105585:~/Desktop$ times
0m0.024s 0m0.059s
0m0.007s 0m0.003s
```

```
kiit@BT-2105585:~/Desktop$ times
0m0.024s 0m0.059s
0m0.007s 0m0.003s
```

```
kiit@BT-2105585:~/Desktop$ pwd  
/home/kiit/Desktop
```

```
kiit@BT-2105585:~/Desktop$ mkdir new
kiit@BT-2105585:~/Desktop$ mkdir new_directory
kiit@BT-2105585:~/Desktop$ rmdir new_directory
kiit@BT-2105585:~/Desktop$ cd Documents
-bash: cd: Documents: No such file or directory
kiit@BT-2105585:~/Desktop$
```

```
kiit@BT-2105585:~/Desktop$ cd Windows-SSD  
-bash: cd: Windows-SSD: No such file or directory
```

```
kiit@BT-2105585:~/Desktop$ touch Demo.txt
kiit@BT-2105585:~/Desktop$ ls
Demo.txt  new  os6.txt  oslab  oslab.txt  oslab1
```

```
R11T@BT-2105585:~/Desktop$ date
```

```
Thu Jan 12 13:38:44 IST 2023
```

```
kiit@BT-2105585:~/Desktop$ cd  
kiit@BT-2105585:~$ cd Documents  
kiit@BT-2105585:~/Documents$
```



```
kiit@BT-2105585:~$ 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
```

```
kiit@BT-2105585:~$ chmod +x new.txt
```