

```
rvu@rvu-OptiPlex-SFF-7020: ~/Desktop/vaibhav
rvu@rvu-OptiPlex-SFF-7020:~$ ls
7                fibonacci.c.save    prg2.sh
7.c              fibonacci.c        prog12.c
abc              filename.txt       prog1.a.c
admin_lab        file.sh           prog1.c
anaconda3        file.txt.save     prog2.c
Ankush_SectionA fish             prog3.c
bashscript.txt   frog             prog.c
calculator.c      'include stdio h.c' Program3.c
chetana          jatin_secA       Public
chinmay          Jishnav          pyramid.c
chiru_DS         Kenoo            pyramid.c.save
cie3             lab8.txt         secc
cleaned_bashscript.txt log.sh           sectionA
cleaned_log.txt   log.txt          snap
Desktop          mdir             str.txt
documents         _mkdir_          sushanth.save
Documents         mkdir            swap.c
Downloads         _mkdir_RVUN25CSE293 system_admin_task.sh
draft_1.txt       Music            Templates
draft_2.txt       out1            test
error.c           p1.sh           titanic.ipynb
fibbo2.c          p2.sh           vaibhav
fibbo.c           Pictures         Videos
fibonacci.c       pr1.sh

rvu@rvu-OptiPlex-SFF-7020:~$ cd Desktop
rvu@rvu-OptiPlex-SFF-7020:~/Desktop$ cd vaibhav
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ pwd
/home/rvu/Desktop/vaibhav
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ls -l
total 24
-rw-rw-r-- 1 rvu rvu    79 Feb 10 14:21 a1
-rw-rw-r-- 1 rvu rvu   61 Feb 10 14:29 a1.c
-rwxrwxr-x 1 rvu rvu 15960 Feb 10 14:30 a.out
```

```
rvu@rvu-OptiPlex-SFF-7020: ~/Desktop/vaibhav
-rw-rw-r-- 1 rvu rvu    61 Feb 10 14:29 a1.c
-rwxrwxr-x 1 rvu rvu 15960 Feb 10 14:30 a.out
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ls -a
.  ..  a1  a1.c  a.out
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ nano a1.c
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ nano a1.c
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ gcc a1.c -o pro
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ./pro
Hello
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ sleep 30
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ sleep 1
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ sleep &
[1] 7998
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ sleep: missing operand
Try 'sleep --help' for more information.
^C
[1]+  Exit 1                  sleep
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ sleep 30 &
[1] 8001
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ jobs
[1]+  Running                  sleep 30 &
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ notepad.exe
notepad.exe: command not found
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ jobs
[1]+  Done                     sleep 30
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ls
a1  a1.c  a.out  hello.c  pro
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ jobs
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ fg|bg
bash: bg: no job control
bash: fg: no job control
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ps
  PID TTY          TIME CMD
```

```
rvu@rvu-OptiPlex-SFF-7020: ~/Desktop/vaibhav
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ps
  PID TTY          TIME CMD
 7944 pts/0    00:00:00 bash
 8041 pts/0    00:00:00 ps
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ pstree
systemd├─ModemManager─3*[{ModemManager}]
      ├─NetworkManager─3*[{NetworkManager}]
      ├─accounts-daemon─3*[{accounts-daemon}]
      ├─avahi-daemon─avahi-daemon
      ├─bluetoothd
      ├─colord─3*[{colord}]
      ├─cron
      ├─cups-browsed─3*[{cups-browsed}]
      ├─cupsd
      ├─dbus-daemon
      ├─fwupd─5*[{fwupd}]
      ├─gdm3├─gdm-session-wor├─gdm-wayland-ses├─gnome-session-b─3*[{gnome-session-b}]
          │               │               │       │       └─3*[{gdm-wayland-ses}]
          │               │               └─3*[{gdm-session-wor}]
          └─3*[{gdm3}]
      ├─gnome-remote-de─3*[{gnome-remote-de}]
      ├─2*[kerneloops]
      ├─polkitd─3*[{polkitd}]
      ├─power-profiles-─3*[{power-profiles-}]
      ├─rsyslogd─3*[{rsyslogd}]
      ├─rtkit-daemon─2*[{rtkit-daemon}]
      ├─snapd─26*[{snapd}]
      ├─switcheroo-cont─3*[{switcheroo-cont}]
      └─systemd├─(sd-pam)
                ├─at-spi2-registr─3*[{at-spi2-registr}]
                ├─dbus-daemon
                ├─dconf-service─3*[{dconf-service}]
                ├─evolution-addre─6*[{evolution-addre}]
                └─evolution-calen─9*[{evolution-calen}]
```

```
└─upowerd(1407)─┬─{upowerd}(1409)
                 └─{upowerd}(1410)
                 └─{upowerd}(1411)
└─wpa_supplicant(1253)
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ps -o pid
```

```
PID
```

```
7944
```

```
8070
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ps -o ppid
```

```
PPID
```

```
7937
```

```
7944
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ps -o cmd
```

```
CMD
```

```
bash
```

```
ps -o cmd
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ nano a1.sh
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ chmod +a1.sh
```

```
chmod: missing operand after '+a1.sh'
```

```
Try 'chmod --help' for more information.
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ chmod
```

```
chmod: missing operand
```

```
Try 'chmod --help' for more information.
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ chmod +x a1.sh
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$ ./a1.sh
```

```
parent PID:8227
```

```
PID PPID CMD
```

```
7944 7937 bash
```

```
8227 7944 /bin/bash ./a1.sh
```

```
8228 8227 sleep 20
```

```
8229 8227 ps -o pid,ppid,cmd
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$
```

```
rvu@rvu-OptiPlex-SFF-7020:~/Desktop/vaibhav$
```

rvu@rvu-OptiPlex-SFF-7020: ~/Desktop/vaibhav

GNU nano 7.2a1.sh

```
#!/bin/bash
echo "parent PID:$$"
sleep 20 &
ps -o pid,ppid,cmd
```

[ Read 4 lines ]

<b>^G</b> Help	<b>^O</b> Write Out	<b>^W</b> Where Is	<b>^K</b> Cut	<b>^T</b> Execute	<b>^C</b> Location	<b>M-U</b> Undo	<b>M-A</b> Set Mark	<b>M-]</b> To Bracket
<b>^X</b> Exit	<b>^R</b> Read File	<b>^_\</b> Replace	<b>^U</b> Paste	<b>^J</b> Justify	<b>^/</b> Go To Line	<b>M-E</b> Redo	<b>M-6</b> Copy	<b>^Q</b> Where Was



rvu@rvu-OptiPlex-SFF-7020: ~/Desktop/vaibhav

GNU nano 7.2a1.c

```
#include <stdio.h>
int main()
{
printf("Hello");
return 0;
}
```

^G Help

^X Exit

^O Write Out

^R Read File

^W Where Is

^\_ Replace

^K Cut

^U Paste

[ Read 6 lines ]

^T Execute

^J Justify

^C Location

^/ Go To Line

M-U Undo

M-E Redo

M-A Set Mark

M-6 Copy

M-] To Bracket

^Q Where Was