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

[Read 4 lines]

```
            └─wpa_supplicant
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ pstree -p
systemd(1)─┬─ModemManager(1288)─┬─{ModemManager}(1310)
           │                     ├─{ModemManager}(1311)
           │                     └─{ModemManager}(1314)
           ├─NetworkManager(1253)─┬─{NetworkManager}(1315)
           │                      ├─{NetworkManager}(1316)
           │                      └─{NetworkManager}(1317)
           ├─accounts-daemon(1146)─┬─{accounts-daemon}(1190)
           │                       ├─{accounts-daemon}(1191)
           │                       └─{accounts-daemon}(1237)
           ├─avahi-daemon(1114)───avahi-daemon(1168)
           ├─bluetoothd(1115)
           ├─colord(1433)─┬─{colord}(1446)
           │              ├─{colord}(1447)
           │              └─{colord}(1449)
           ├─cron(1148)
           ├─cups-browsed(3130)─┬─{cups-browsed}(3139)
           │                    ├─{cups-browsed}(3140)
           │                    └─{cups-browsed}(3141)
           ├─cupsd(1410)
           ├─dbus-daemon(1116)
           ├─fwupd(6262)─┬─{fwupd}(6263)
           │             ├─{fwupd}(6264)
           │             ├─{fwupd}(6265)
           │             ├─{fwupd}(6266)
           │             └─{fwupd}(6268)
           ├─gdm3(1431)─┬─gdm-session-wor(2102)─┬─gdm-wayland-ses(2254)─┬─gnome-session-b(2264)─┬─{gnome-session-b}(2320)
           │            │                       │                       │                       ├─{gnome-session-b}(2321)
           │            │                       │                       │                       └─{gnome-session-b}(2322)
           │            │                       │                       ├─{gdm-wayland-ses}(2261)
           │            │                       │                       ├─{gdm-wayland-ses}(2262)
           │            │                       │                       └─{gdm-wayland-ses}(2263)
           │            │                       ├─{gdm-session-wor}(2103)
           │            │                       ├─{gdm-session-wor}(2104)
           │            │                       └─{gdm-session-wor}(2106)
           │            ├─{gdm3}(1434)
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ hello.c
hello.c: command not found
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ad
Command 'ad' not found, but can be installed with:
sudo apt install netatalk
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ raghu
raghu: command not found
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ hello
Command 'hello' not found, but can be installed with:
sudo snap install hello              # version 2.10, or
sudo apt  install hello              # version 2.10-3
sudo apt  install hello-traditional  # version 2.10-6
See 'snap info hello' for additional versions.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ cat hello.c
#include<stdio.h>
int main(){
printf("Hello");
return 0;
}
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ jobs
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg
bash: fg: current: no such job
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bg
bash: bg: current: no such job
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg & bg
[1] 9859
bash: bg: job 1 already in background
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bash: fg: no job control
^C
[1]+  Exit 1                       fg
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg & bg
[1] 9867
bash: bg: job 1 already in background
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bash: fg: no job control
^C
[1]+  Exit 1                       fg
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ 
```

```
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Command 'ad' not found, but can be installed with:
sudo apt install netatalk
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raghu: command not found
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See 'snap info hello' for additional versions.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ cat hello.c
#include<stdio.h>
int main(){
printf("Hello");
return 0;
}
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ jobs
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg
bash: fg: current: no such job
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bg
bash: bg: current: no such job
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg & bg
[1] 9859
bash: bg: job 1 already in background
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bash: fg: no job control
^C
[1]+  Exit 1                    fg
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg & bg
[1] 9867
bash: bg: job 1 already in background
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bash: fg: no job control
^C
[1]+  Exit 1                    fg
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ fg & bg
[1] 9867
bash: bg: job 1 already in background
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ bash: fg: no job control
^C
[1]+  Exit 1                  fg
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps
    PID TTY          TIME CMD
   8769 pts/0    00:00:00 bash
   9940 pts/0    00:00:00 ps
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps
    PID TTY          TIME CMD
   8769 pts/0    00:00:00 bash
   9949 pts/0    00:00:00 ps
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$  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}]
```

```
        ├─systemd-resolve(858)
        ├─systemd-timesyn(859)──{systemd-timesyn}(866)
        ├─systemd-udevd(527)
        ├─thermald(1153)─┬─{thermald}(1219)
        │                ├─{thermald}(1220)
        │                ├─{thermald}(1234)
        │                └─{thermald}(1335)
        ├─udisksd(1155)─┬─{udisksd}(1215)
        │               ├─{udisksd}(1216)
        │               ├─{udisksd}(1236)
        │               ├─{udisksd}(1306)
        │               └─{udisksd}(1322)
        ├─unattended-upgr(1413)──{unattended-upgr}(1439)
        ├─upowerd(1327)─┬─{upowerd}(1330)
        │               ├─{upowerd}(1331)
        │               └─{upowerd}(1332)
        └─wpa_supplicant(1255)
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sudo install gcc
[sudo] password for rvu:
sudo: a password is required
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps -o pid
    PID
   8769
  10078
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps -o ppid
   PPID
   8762
   8769
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps -o cmd
CMD
bash
ps -o cmd
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ps -o pid,ppid,cmd
    PID    PPID CMD
   8769    8762 bash
  10087    8769 ps -o pid,ppid,cmd
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ 
```

```
hello.c:4:8: error: 'o' undeclared (first use in this function)
    4 | return o;
      |        ^
hello.c:4:8: note: each undeclared identifier is reported only once for each function it appears in
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano hello.c
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ./ad
Hello(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 1/0
sleep: invalid time interval '1/0'
Try 'sleep --help' for more information.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 1000000
^C
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 30
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 1
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep &
[1] 9667
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep: missing operand
Try 'sleep --help' for more information.
^C
[1]+  Exit 1                  sleep
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 30 &
[1] 9678
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 30 &
[2] 9681
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 30 &
[3] 9682
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 40 &
[4] 9684
[1]   Done                    sleep 30
[2]   Done                    sleep 30
[3]   Done                    sleep 30
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ jobs
[4]+  Done                    sleep 40
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ notepad.exe
notepad.exe: command not found
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ jobs
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ls
```

```
gcc: fatal error: no input files
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc -o RAGHU.c ./ff
/usr/bin/ld: cannot find ./ff: No such file or directory
collect2: error: ld returned 1 exit status
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc RAGHU.c -o a
cc1: fatal error: RAGHU.c: No such file or directory
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
hello.c:2:9: fatal error: conio.h: No such file or directory
    2 | #include<conio.h>
      |         ^~~~~~~~~
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano hello.c
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
hello.c: In function 'main':
hello.c:3:16: error: expected ';' before 'return'
    3 |    printf("Hello")
      |                   ^
      |                   ;
    4 |    return o;
      |    ~~~~~~
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano hello.c
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
hello.c: In function 'main':
hello.c:4:8: error: 'o' undeclared (first use in this function)
    4 |    return o;
      |           ^
hello.c:4:8: note: each undeclared identifier is reported only once for each function it appears in
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano hello.c
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ./ad
Hello(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ sleep 1/0
sleep: invalid time interval '1/0'
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ ls
aditi        Desktop      documents    Downloads   f2.c    hh         Music       Pictures   Public     RVUN25CSE416   temp          Videos
anaconda3    directory    Documents    f1.c        f.c     likitha    path        project    raghu      snap           Templates
(base) rvu@rvu-OptiPlex-SFF-7020:~$ mkdir desktop
(base) rvu@rvu-OptiPlex-SFF-7020:~$ cd desktop
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ cd raghu
bash: cd: raghu: No such file or directory
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ mkdir raghu
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ls
raghu
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ pwd
/home/rvu/desktop
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ls -l
total 4
drwxrwxr-x 2 rvu rvu 4096 Feb 10 14:10 raghu
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ ls -a
.  ..  raghu
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc -o RAGHU.c
gcc: fatal error: no input files
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc -o RAGHU.c ./ff
/usr/bin/ld: cannot find ./ff: No such file or directory
collect2: error: ld returned 1 exit status
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc RAGHU.c -o a
cc1: fatal error: RAGHU.c: No such file or directory
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ gcc hello.c -o ad
hello.c:2:9: fatal error: conio.h: No such file or directory
    2 | #include<conio.h>
      |         ^~~~~~~~~
compilation terminated.
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano
(base) rvu@rvu-OptiPlex-SFF-7020:~/desktop$ nano hello.c
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ touch poem.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ echo -e "There was once an alien from space.\nHe knew he was going to win the race.\nHe had a very handsome face.\nB
ut he left without a trace."> poem.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ wc poem.txt
  4  28 132 poem.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ touch plan.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ echo -e "Task 1:Make a HTML website\nTask 2: Make DLCO notes\nTask 3:Submit the C assignment"> plan.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ cat -n plan.txt
     1  Task 1:Make a HTML website
     2  Task 2: Make DLCO notes
     3  Task 3:Submit the C assignment
(base) rvu@rvu-OptiPlex-SFF-7020:~$
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ touch report.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ echo -e "This is a report.\nIt has two lines. "> report.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ wc report.txt
 2  8 37 report.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ 
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ touch todo.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ echo -e "Task 1:Study Linux\nTask 2: Write code\nTask 3: Submit Assignment">todo.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ cat -n todo.txt
     1  Task 1:Study Linux
     2  Task 2: Write code
     3  Task 3: Submit Assignment
(base) rvu@rvu-OptiPlex-SFF-7020:~$
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ mkdir linux
(base) rvu@rvu-OptiPlex-SFF-7020:~$ cd linux
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ touch file1.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ ls -l
total 0
-rw-rw-r-- 1 rvu rvu 0 Aug 28 12:31 file1.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ chmod file1.txt
chmod: missing operand after 'file1.txt'
Try 'chmod --help' for more information.
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ cat file1.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ chmod 440 file1.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ ls -l
total 0
-r--r----- 1 rvu rvu 0 Aug 28 12:31 file1.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~/linux$ 
```

```
(base) rvu@rvu-OptiPlex-SFF-7020:~$ touch dairy.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ ls -l dairy.txt
-rw-rw-r-- 1 rvu rvu 0 Aug 28 12:14 dairy.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ chmod 600 dairy.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$ ls -l dairy.txt
-rw------- 1 rvu rvu 0 Aug 28 12:14 dairy.txt
(base) rvu@rvu-OptiPlex-SFF-7020:~$
```