

Assignment 2_3 Execution 1 Output:

First we see all running processes. And kill the processes under parent group. All processes die and is confirmed by snap of running processes at the end.

```
Activities Terminal Jul 22
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1      00:00:00 Xorg
 1244 tty1      00:00:00 gnome-session-b
 1714 tty2      00:01:19 Xorg
 2094 tty2      00:00:00 gnome-session-b
 4346 pts/0      00:00:00 a.out
 4347 pts/0      00:00:00 a.out
 4348 pts/1      00:00:00 ps
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_sendsignal.c
aryan@pop-os:~/assignment/signal$ ./a.out
Enter Process Id to which the signal needs to be sent: 4346
Enter 1 to send signal to process or 2 to for process group: 2
aryan@pop-os:~/assignment/signal$ |
```

```
4:06 PM en_2
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_receivesignal_samegrp.c
aryan@pop-os:~/assignment/signal$ ./a.out
Parent PID = 4346, PGID = 4346
Child PID = 4347, PGID = 4346
Process id 4347 received SIGINT signal
Process id 4346 received SIGINT signal
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1      00:00:00 Xorg
 1244 tty1      00:00:00 gnome-session-b
 1714 tty2      00:01:19 Xorg
 2094 tty2      00:00:00 gnome-session-b
 4357 pts/0      00:00:00 ps
aryan@pop-os:~/assignment/signal$ |
```

Assignment 2_3 Execution 2 Output:

First we see all running processes. And kill the parent process. Child process remains and is confirmed by snap of running processes at the end. We kill the child using kill. Similar results are seen if we send the signal to the child, it dies and the parent remains and needs to be killed using kill.

```
Activities Terminal ▾ Jul 22
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_sendsignal.c
aryan@pop-os:~/assignment/signal$ ./a.out
Enter Process Id to which the signal needs to be sent: 4556
Enter 1 to send signal to process or 2 to for process group: 1
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1          00:00:00 Xorg
 1244 tty1          00:00:00 gnome-session-b
 1714 tty2          00:01:45 Xorg
 2094 tty2          00:00:00 gnome-session-b
 4557 pts/0          00:00:00 a.out
 4625 pts/1          00:00:00 ps
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1          00:00:00 Xorg
 1244 tty1          00:00:00 gnome-session-b
 1714 tty2          00:01:46 Xorg
 2094 tty2          00:00:00 gnome-session-b
 4629 pts/1          00:00:00 ps
aryan@pop-os:~/assignment/signal$ |
```

```
4:14 PM en_2
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_receivesignal_samegrp.c
aryan@pop-os:~/assignment/signal$ ./a.out
Parent PID = 4556, PGID = 4556
Child PID = 4557, PGID = 4556
Process id 4556 received SIGINT signal
aryan@pop-os:~/assignment/signal$ kill 4557
aryan@pop-os:~/assignment/signal$ |
```

Assignment 2_3 Execution 3 Output:

First we see all running processes. Since parent and child belong to different groups the child will not die even if we send the signal to all processes under the parent group. It is confirmed by the snap of running processes.

```
Activities Terminal ▾ Jul 22
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1        00:00:00 Xorg
 1244 tty1        00:00:00 gnome-session-b
 1714 tty2        00:01:54 Xorg
 2094 tty2        00:00:00 gnome-session-b
 4757 pts/0        00:00:00 a.out
 4758 pts/0        00:00:00 a.out
 4761 pts/1        00:00:00 ps
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_sendsignal.c
aryan@pop-os:~/assignment/signal$ ./a.out
Enter Process Id to which the signal needs to be sent: 4757
Enter 1 to send signal to process or 2 to for process group: 2
aryan@pop-os:~/assignment/signal$ |
```

```
4:18 PM en_2
aryan@pop-os: ~/assignment/signal
aryan@pop-os:~/assignment/signal$ gcc 201801015_signals_3_receivesignal_diffpgrp.c
aryan@pop-os:~/assignment/signal$ ./a.out
Parent PID = 4757, PGID = 4757
Child PID = 4758, PGID = 4758
Process id 4757 received SIGINT signal
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1        00:00:00 Xorg
 1244 tty1        00:00:00 gnome-session-b
 1714 tty2        00:01:57 Xorg
 2094 tty2        00:00:00 gnome-session-b
 4758 pts/0        00:00:00 a.out
 4801 pts/0        00:00:00 ps
aryan@pop-os:~/assignment/signal$ kill 4758
aryan@pop-os:~/assignment/signal$ ps -a
  PID TTY          TIME CMD
 1080 tty1        00:00:00 Xorg
 1244 tty1        00:00:00 gnome-session-b
 1714 tty2        00:01:57 Xorg
 2094 tty2        00:00:00 gnome-session-b
 4802 pts/0        00:00:00 ps
aryan@pop-os:~/assignment/signal$ |
```