Name :: Ibrar Babar

Roll no. 19P-0104

Operating System

Section (4A)

LAB TASK # (6)

Q#1

#include <stdio.h>

#include <sys/types.h>

#include<signal.h>

#include <unistd.h>

int main()

{

int pid=fork();

if (pid != 0)

{

printf("parent of %d\n", pid);

printf("I am the parent with ppID= %d\n", getppid());

printf ("\nReady to murder the parent!\n");

kill(pid,SIGTERM);

sleep(120);

}

else if(pid==-1)

{

printf("Error");

}

else

```
{

printf("Child pid = %d\n", pid);

printf("I am the child with PID= %d\n",getpid() );

}

return 0;

}
```

OUTPUT

```
ibrar@ibrar-rajput:~$ gedit kill.c
ibrar@ibrar-rajput:~$ gcc kill.c -o a
ibrar@ibrar-rajput:~$ ./a
parent of 9796
I am the parent with ppID= 2979

Ready to murder the parent!
ibrar@ibrar-rajput:~$
```

(ps au) while sleeping

```
ibrar@ibrar-rajput:~$ ps au
USER         PID %CPU %MEM    VSZ    RSS TTY      STAT START   TIME COMMAND
ibrar       1447  0.0  0.0 164356   1552 tty2     Ssl+ 19:16   0:00 /usr/lib/gdm3/gdm-x-ses
ibrar       1449  1.7  1.1 820280  45152 tty2     Sl+  19:16   3:49 /usr/lib/xorg/Xorg vt2
ibrar       1473  0.0  0.0 188560   1624 tty2     Sl+  19:16   0:00 /usr/libexec/gnome-sess
ibrar       2979  0.0  0.0  11220   3408 pts/1    Ss   19:36   0:00 /bin/bash
ibrar       7989  0.0  0.1  11224   5212 pts/0    Ss+  22:24   0:00 /bin/bash
ibrar       9550  0.0  0.1  11220   5164 pts/2    Ss   22:52   0:00 /bin/bash
ibrar       9795  0.0  0.0   2496    592 pts/1    S+   22:55   0:00 ./a
ibrar       9796  0.0  0.0      0      0 pts/1    Z+   22:55   0:00 [a] <defunct>
ibrar       9798  0.0  0.0  11836   3520 pts/2    R+   22:55   0:00 ps au
ibrar@ibrar-rajput:~$
```

.

(ps au) after sleeping

```
ibrar@ibrar-rajput:~$ ps au
USER         PID %CPU %MEM    VSZ    RSS TTY      STAT START   TIME COMMAND
ibrar       1447  0.0  0.0 164356   1552 tty2     Ssl+ 19:16   0:00 /usr/lib/gdm3/gdm-x-sessic
ibrar       1449  1.7  1.0 817700  41088 tty2     Sl+  19:16   3:58 /usr/lib/xorg/Xorg vt2 -di
ibrar       1473  0.0  0.0 188560   1624 tty2     Sl+  19:16   0:00 /usr/libexec/gnome-session
ibrar       2979  0.0  0.0  11220   3408 pts/1    Ss+  19:36   0:00 /bin/bash
ibrar       9550  0.0  0.1  11220   5164 pts/2    Ss   22:52   0:00 /bin/bash
ibrar      10062  0.0  0.0  11836   3364 pts/2    R+   22:58   0:00 ps au
ibrar@ibrar-rajput:~$
```
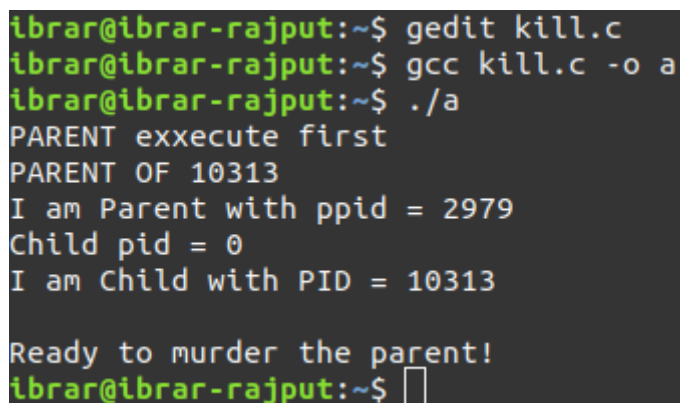
.

===

Q#2

```c
#include <stdio.h>

#include <unistd.h>

#include<signal.h>

#include <sys/types.h>

int main()

{

int pid;

pid=fork();

if(pid==0)

{printf("Child pid = %d\n", pid);

printf("I am Child with PID = %d\n", getpid());

printf ("\nReady to murder the parent!\n");

kill (getppid(), 9);

sleep(120);

}

else

{

printf("PARENT exxecute first \n");

printf("PARENT OF %d\n",pid);

printf("I am Parent with ppid = %d\n",getppid());

}

return 0;

}
```

OUTPUT

```
ibrar@ibrar-rajput:~$ gedit kill.c      .
ibrar@ibrar-rajput:~$ gcc kill.c -o a
ibrar@ibrar-rajput:~$ ./a
PARENT exxecute first
PARENT OF 10313
I am Parent with ppid = 2979
Child pid = 0
I am Child with PID = 10313

Ready to murder the parent!
ibrar@ibrar-rajput:~$ ▯
```

(**ps au**) while sleeping

```
ibrar@ibrar-rajput:~$ ps au
USER        PID %CPU %MEM    VSZ    RSS TTY      STAT START   TIME COMMAND
ibrar      1447  0.0  0.0 164356   1552 tty2     Ssl+ 19:16   0:00 /usr/lib/gdm3/gdm-x
ibrar      1449  1.9  1.1 824752  44320 tty2     Rl+  19:16   4:23 /usr/lib/xorg/Xorg
ibrar      1473  0.0  0.0 188560   1624 tty2     Sl+  19:16   0:00 /usr/libexec/gnome-
ibrar      2979  0.0  0.0  11220   3412 pts/1    Ss+  19:36   0:00 /bin/bash
ibrar      9550  0.0  0.1  11220   5164 pts/2    Ss   22:52   0:00 /bin/bash
ibrar     10313  0.0  0.0   2496     76 pts/1    S    23:04   0:00 ./a
ibrar     10359  0.0  0.0  11836   3460 pts/2    R+   23:05   0:00 ps au
```
.

(*ps au*) after sleeping

```
ibrar@ibrar-rajput:~$ ps au
USER        PID %CPU %MEM    VSZ    RSS TTY      STAT START   TIME COMMAND
ibrar      1447  0.0  0.0 164356   1552 tty2     Ssl+ 19:16   0:00 /usr/lib/gdm3/gdm-x
ibrar      1449  1.9  1.1 824752  44320 tty2     Rl+  19:16   4:23 /usr/lib/xorg/Xorg
ibrar      1473  0.0  0.0 188560   1624 tty2     Sl+  19:16   0:00 /usr/libexec/gnome-
ibrar      2979  0.0  0.0  11220   3412 pts/1    Ss+  19:36   0:00 /bin/bash
ibrar      9550  0.0  0.1  11220   5164 pts/2    Ss   22:52   0:00 /bin/bash
ibrar     10313  0.0  0.0   2496     76 pts/1    S    23:04   0:00 ./a
ibrar     10359  0.0  0.0  11836   3460 pts/2    R+   23:05   0:00 ps au
```
.

===