

```
untu@ubuntu:~/assignment2$ make clean
clean:
-f process_creation output_program simple_program
c -Wall -Wextra -O2 process_creation.c -o process_creation
c -Wall -Wextra -O2 file1.c file2.c -o output_program
c -Wall -Wextra -O2 simple_program.c -o simple_program
```

```
ubuntu@ubuntu:~/assignment2$ sleep 300 &
jobs
ps aux | grep '[s]leep'
[1] 8545
[1]+  Running                  sleep 300 &
ubuntu      8545  0.0  0.0  17380  1928 pts/0    S    17:48   0:00 sleep 300
```

```
ldd ./output_program
ldd ./simple_program
    linux-vdso.so.1 (0x00007f33b425d000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007f33b4030000)
    /lib64/ld-linux-x86-64.so.2 (0x00007f33b425f000)
[1]+ Done                  sleep 300
    linux-vdso.so.1 (0x00007fb9b23e4000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007fb9b21b7000)
    /lib64/ld-linux-x86-64.so.2 (0x00007fb9b23e6000)
    linux-vdso.so.1 (0x00007b1c9dd70000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007b1c9db43000)
    /lib64/ld-linux-x86-64.so.2 (0x00007b1c9dd72000)
ubuntu@ubuntu:~/assignment2$ 
```

```
ubuntu@ubuntu:~/assignment2$ make run-process_creation
make run-output_program
make run-simple_program
./process_creation
This is the parent process. PID: 7907
This is the child process. PID: 7908
./output_program
Hello from file1!
./simple_program
This is a simple program.
ubuntu@ubuntu:~/assignment2$
```

```
[1]+  Running                      sleep 300 &
ubuntu      8545  0.0  0.0  17380  1928 pts/0      S     17:48   0:00 sleep 300
ubuntu@ubuntu:~/assignment2$ sleep 300 &
jobs
ps aux | grep '[s]leep'
kill -STOP 8545
ps aux | grep '[s]leep'
kill -CONT 8545
ps aux | grep '[s]leep'
kill 8545
ps aux | grep '[s]leep'
[2] 8553
[1]-  Running                      sleep 300 &
[2]+  Running                      sleep 300 &
ubuntu      8545  0.0  0.0  17380  1928 pts/0      S     17:48   0:00 sleep 300
ubuntu      8553  0.0  0.0  17380  1912 pts/0      S     17:49   0:00 sleep 300
ubuntu      8545  0.0  0.0  17380  1928 pts/0      T     17:48   0:00 sleep 300
ubuntu      8553  0.0  0.0  17380  1912 pts/0      S     17:49   0:00 sleep 300

[1]+  Stopped                      sleep 300
ubuntu      8545  0.0  0.0  17380  1928 pts/0      S     17:48   0:00 sleep 300
ubuntu      8553  0.0  0.0  17380  1912 pts/0      S     17:49   0:00 sleep 300
ubuntu      8553  0.0  0.0  17380  1912 pts/0      S     17:49   0:00 sleep 300
[1]-  Terminated                  _sleep 300
```

```
#include <stdio.h>
void hello(){
printf("Hello from file1 \n");
}
```

```
mariam@mariam-VMware-Virtual-Platform:~$ nano p.c
mariam@mariam-VMware-Virtual-Platform:~$ gcc p.c -o out
mariam@mariam-VMware-Virtual-Platform:~$ ./out
this is the parent process. PID: 3237
this is the child process. PID: 3238
mariam@mariam-VMware-Virtual-Platform:~$ sleep 200 &
[1] 3243
mariam@mariam-VMware-Virtual-Platform:~$ sleep 100 &
[2] 3247
mariam@mariam-VMware-Virtual-Platform:~$ jobs
[1]- Running sleep 200 &
[2]+ Running sleep 100 &
mariam@mariam-VMware-Virtual-Platform:~$ kill -STOP 3243
bash: kill: (3243) - No such process
[1]- Done sleep 200
[2]+ Done sleep 100
mariam@mariam-VMware-Virtual-Platform:~$ jobs
mariam@mariam-VMware-Virtual-Platform:~$ kill -CONT 3243
bash: kill: (3243) - No such process
mariam@mariam-VMware-Virtual-Platform:~$ jobs
mariam@mariam-VMware-Virtual-Platform:~$ nano file.c
mariam@mariam-VMware-Virtual-Platform:~$ nano file1.c
mariam@mariam-VMware-Virtual-Platform:~$ nano file2.c
mariam@mariam-VMware-Virtual-Platform:~$ gcc file1.c file2.c -o out
mariam@mariam-VMware-Virtual-Platform:~$ # it is connects between two files linker take the
objects in file 1 and file2 and put them in the executable file
```

```
void hello();
int main(){
    hello();
    return 0;}
```

```
GNU nano 7.2
#include <stdio.h>
int main(){
printf("this is a simple program.\n");
return 0;■
```

```
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ ./out
this is the parent process. PID: 3237
this is the child process. PID: 3238
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ sleep 200 &
[1] 3243
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ sleep 100 &
[2] 3247
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ jobs
[1]-  Running                  sleep 200 &
[2]+  Running                  sleep 100 &
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ kill -STOP 3243
bash: kill: (3243) - No such process
[1]-  Done                    sleep 200
[2]+  Done                    sleep 100
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ jobs
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ kill -CONT 3243
bash: kill: (3243) - No such process
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ jobs
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file1.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file2.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ gcc file1.c file2.c -o out
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ #it is connects between two files linker take the
objects in file 1 and file2 and put them in the executable file
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file1.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file2.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ nano file5.c
mariam@mariam-VMware-Virtual-Platform:~/Desktop$ ldd out
    linux-vdso.so.1 (0x00007cf6ee287000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007cf6ee000000)
    /lib64/ld-linux-x86-64.so.2 (0x00007cf6ee289000)
mariam@mariam-VMware-Virtual-Platform:~/Desktop$
```