Error! Filename not specified.

National Textile University

Department of Computer Science

Subject

Operating System

Submitted to:

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Submitted by:

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Registration Number

23-NTU-CS-1167

Lab No.

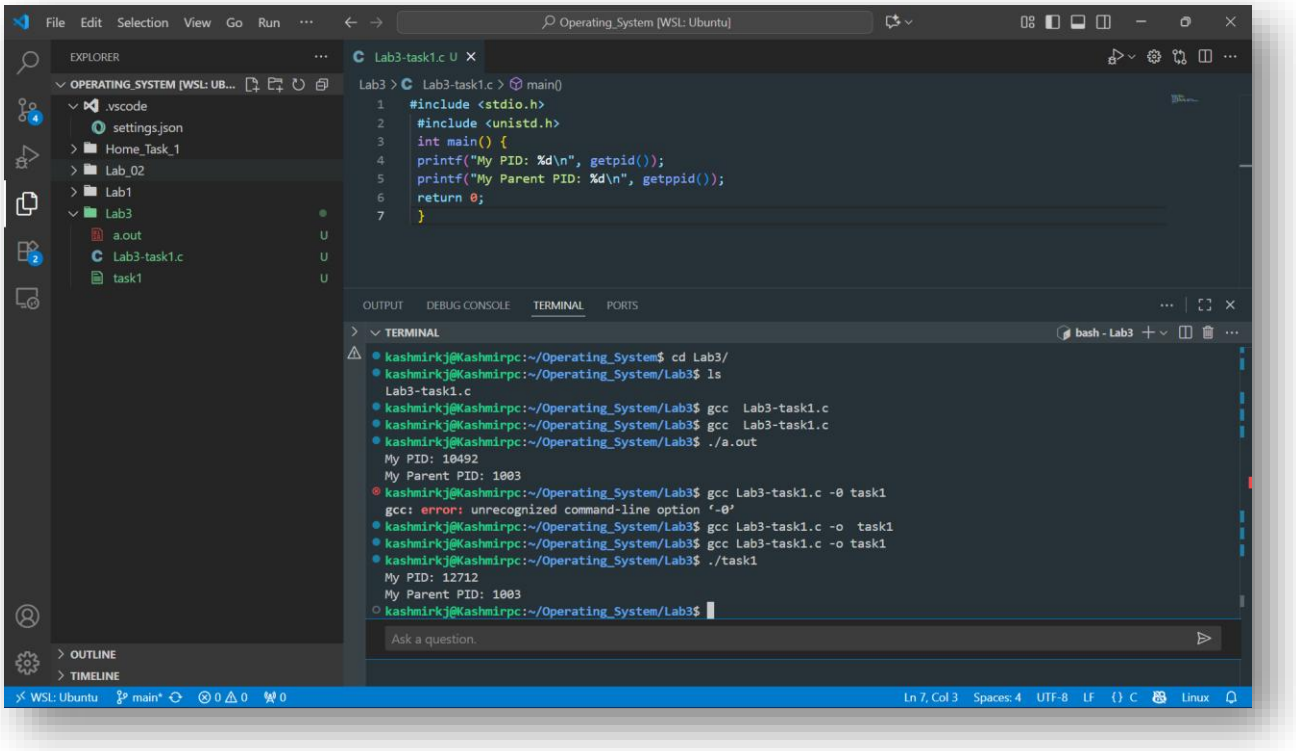
03

Semester

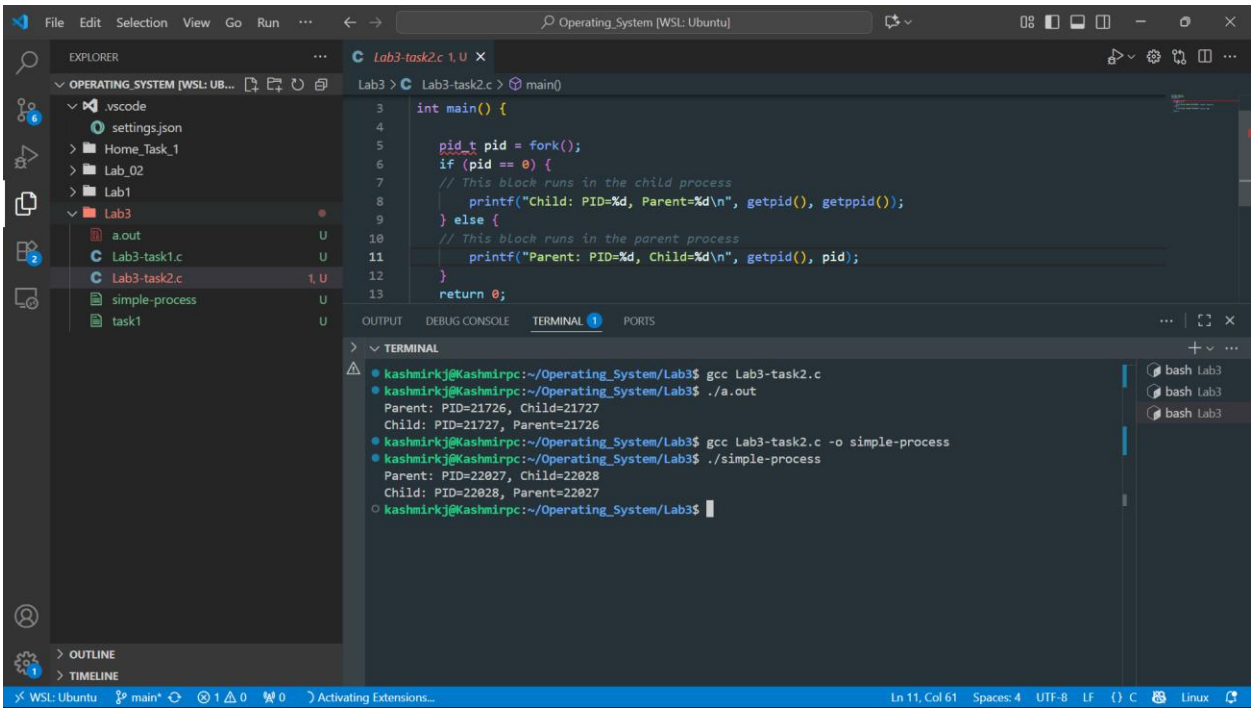
5th

C Programs on Processes

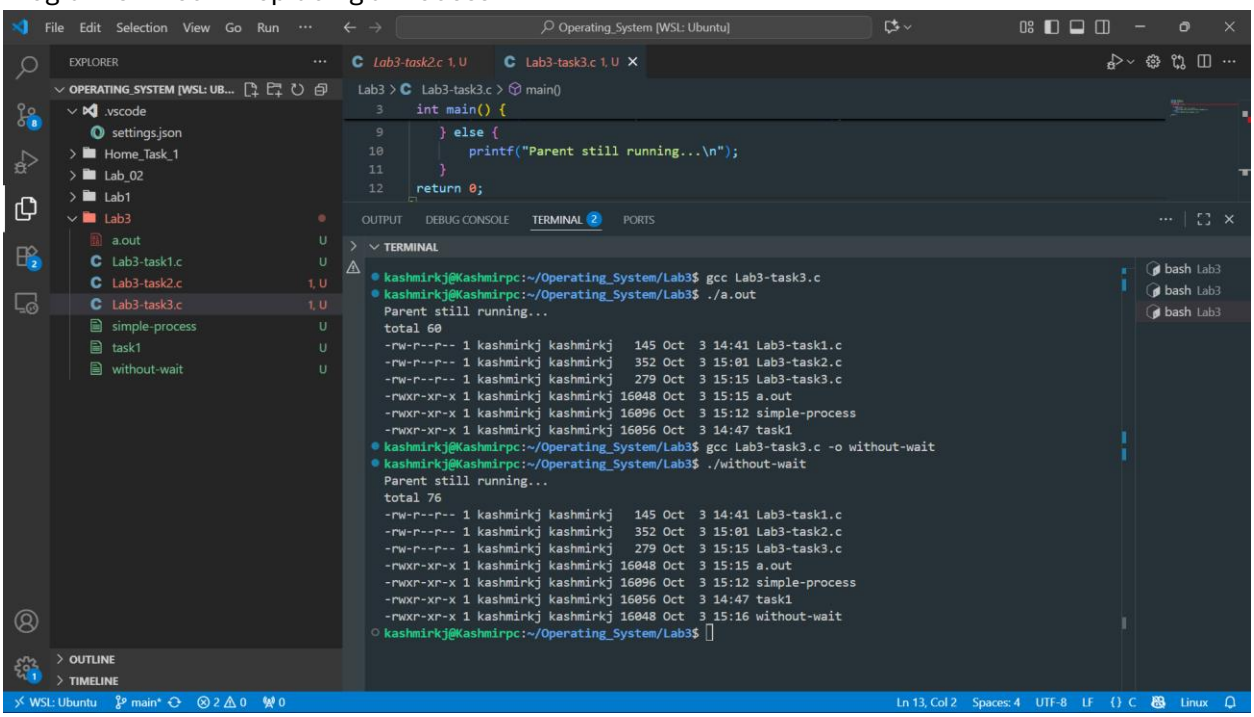
Program 1: Print PID and PPID:



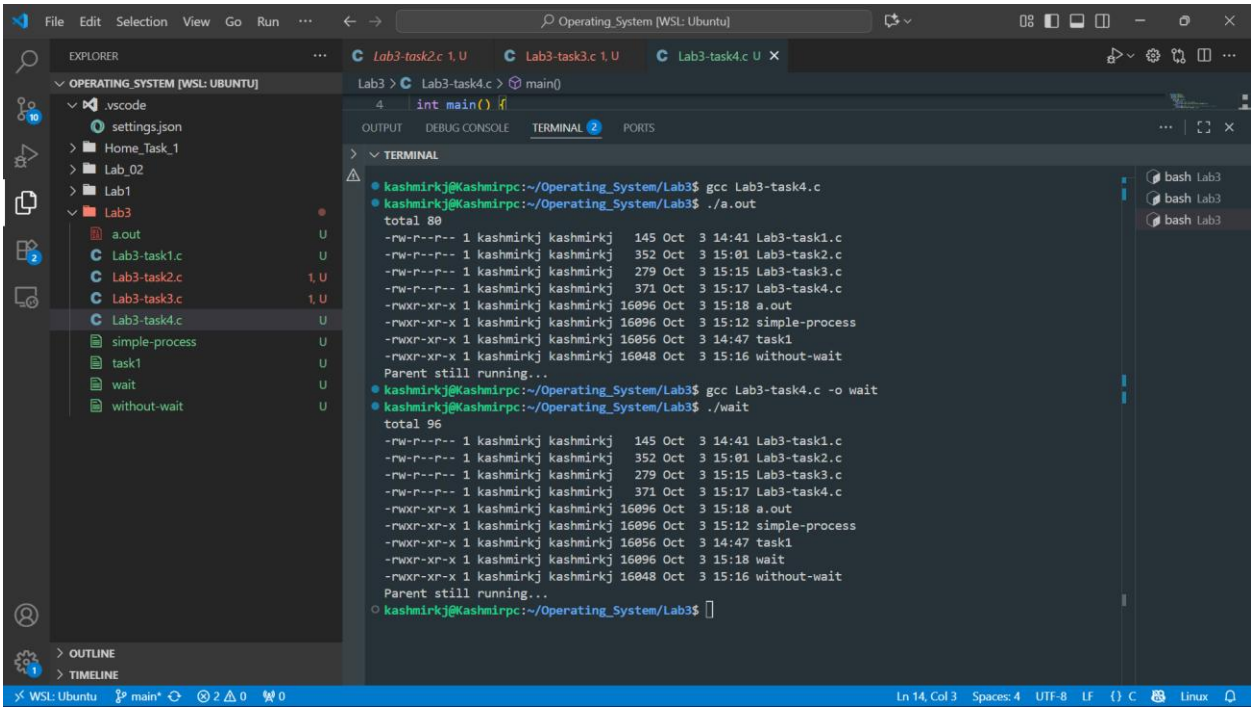
Program 2: Fork – Creating Child Process:



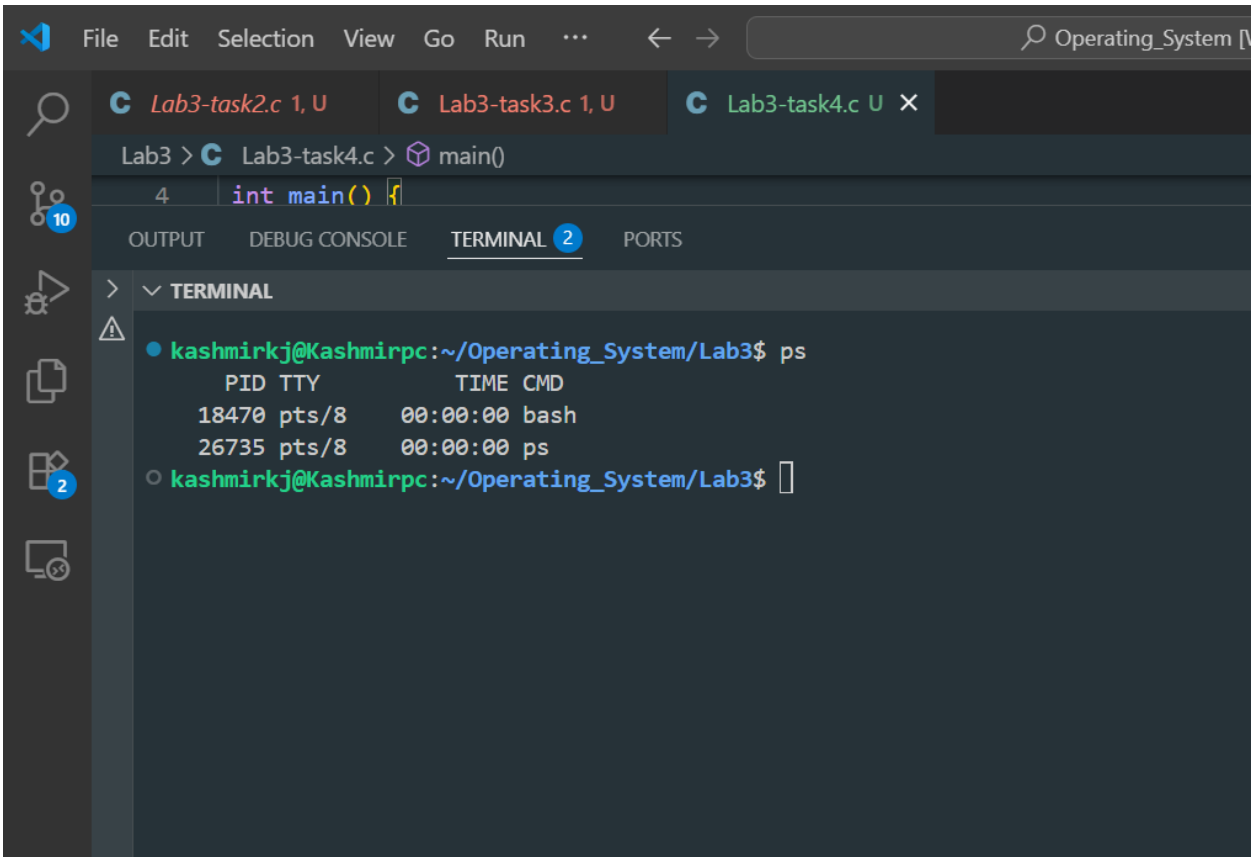
Program 3: Execl – Replacing a Process:



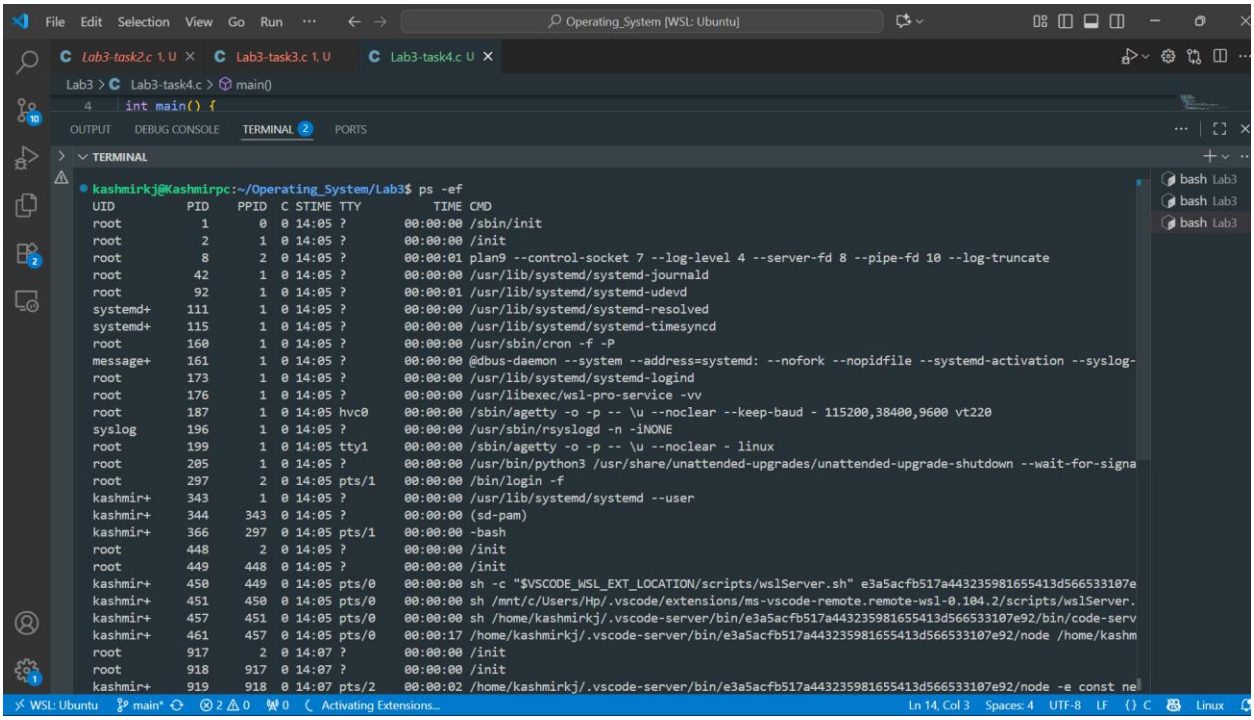
Program 4: Wait – Synchronization:


File Edit Selection View Go Run
Operating_System [WSL: Ubuntu]
EXPLORER
OPERATING_SYSTEM [WSL: UBUNTU]
.vscode
settings.json
Home_Task_1
Lab_02
Lab1
Lab3
a.out
Lab3-task1.c
Lab3-task2.c
Lab3-task3.c
Lab3-task4.c
simple-process
task1
wait
without-wait
Lab3-task2.c 1, U
Lab3-task3.c 1, U
Lab3-task4.c U
Lab3 > Lab3-task4.c > main()
4 int main() {
OUTPUT DEBUG CONSOLE TERMINAL 2 PORTS
TERMINAL
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ gcc Lab3-task4.c
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ ./a.out
total 80
-rw-r--r-- 1 kashmirkj kashmirkj 145 Oct 3 14:41 Lab3-task1.c
-rw-r--r-- 1 kashmirkj kashmirkj 352 Oct 3 15:01 Lab3-task2.c
-rw-r--r-- 1 kashmirkj kashmirkj 279 Oct 3 15:15 Lab3-task3.c
-rw-r--r-- 1 kashmirkj kashmirkj 371 Oct 3 15:17 Lab3-task4.c
-rwxr-xr-x 1 kashmirkj kashmirkj 16096 Oct 3 15:18 a.out
-rwxr-xr-x 1 kashmirkj kashmirkj 16096 Oct 3 15:12 simple-process
-rwxr-xr-x 1 kashmirkj kashmirkj 16056 Oct 3 14:47 task1
-rwxr-xr-x 1 kashmirkj kashmirkj 16048 Oct 3 15:16 without-wait
Parent still running...
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ gcc Lab3-task4.c -o wait
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ ./wait
total 96
-rw-r--r-- 1 kashmirkj kashmirkj 145 Oct 3 14:41 Lab3-task1.c
-rw-r--r-- 1 kashmirkj kashmirkj 352 Oct 3 15:01 Lab3-task2.c
-rw-r--r-- 1 kashmirkj kashmirkj 279 Oct 3 15:15 Lab3-task3.c
-rw-r--r-- 1 kashmirkj kashmirkj 371 Oct 3 15:17 Lab3-task4.c
-rwxr-xr-x 1 kashmirkj kashmirkj 16096 Oct 3 15:18 a.out
-rwxr-xr-x 1 kashmirkj kashmirkj 16096 Oct 3 15:12 simple-process
-rwxr-xr-x 1 kashmirkj kashmirkj 16056 Oct 3 14:47 task1
-rwxr-xr-x 1 kashmirkj kashmirkj 16096 Oct 3 15:18 wait
-rwxr-xr-x 1 kashmirkj kashmirkj 16048 Oct 3 15:16 without-wait
Parent still running...
kashmirkj@Kashmirpc:~/Operating_System/Lab3$
bash Lab3
bash Lab3
bash Lab3
OUTLINE
TIMELINE
WSL: Ubuntu main* 2 0 0
Ln 14, Col 3 Spaces: 4 UTF-8 LF C Linux

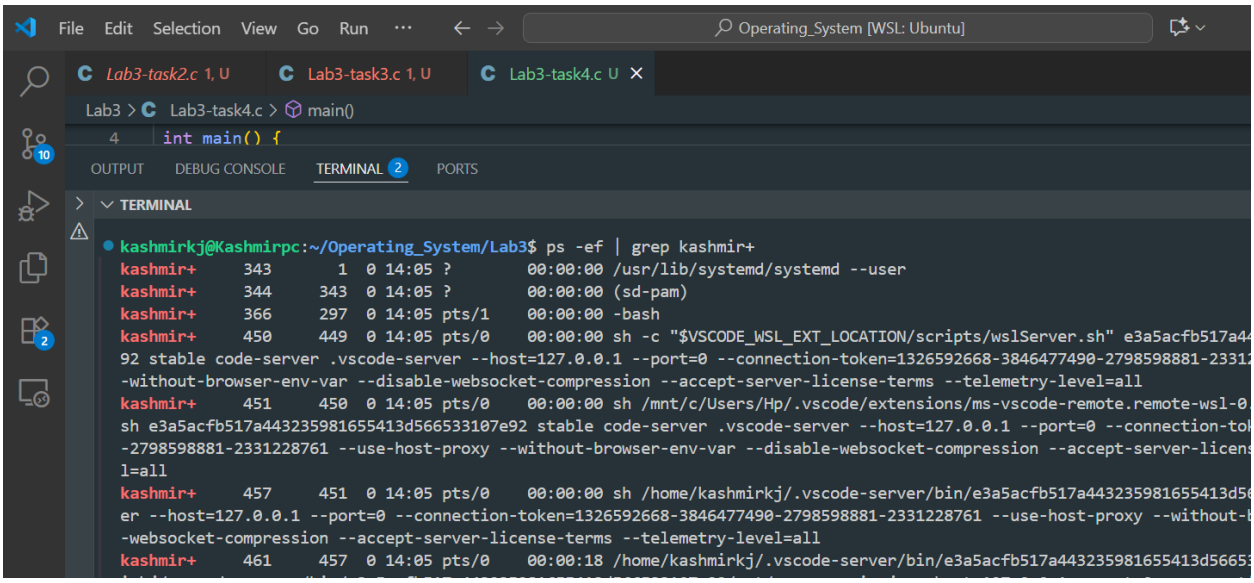
Ps Command:


File Edit Selection View Go Run
Operating_System [
Lab3-task2.c 1, U
Lab3-task3.c 1, U
Lab3-task4.c U
Lab3 > Lab3-task4.c > main()
4 int main() {
OUTPUT DEBUG CONSOLE TERMINAL 2 PORTS
TERMINAL
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ ps
PID TTY TIME CMD
18470 pts/8 00:00:00 bash
26735 pts/8 00:00:00 ps
kashmirkj@Kashmirpc:~/Operating_System/Lab3$

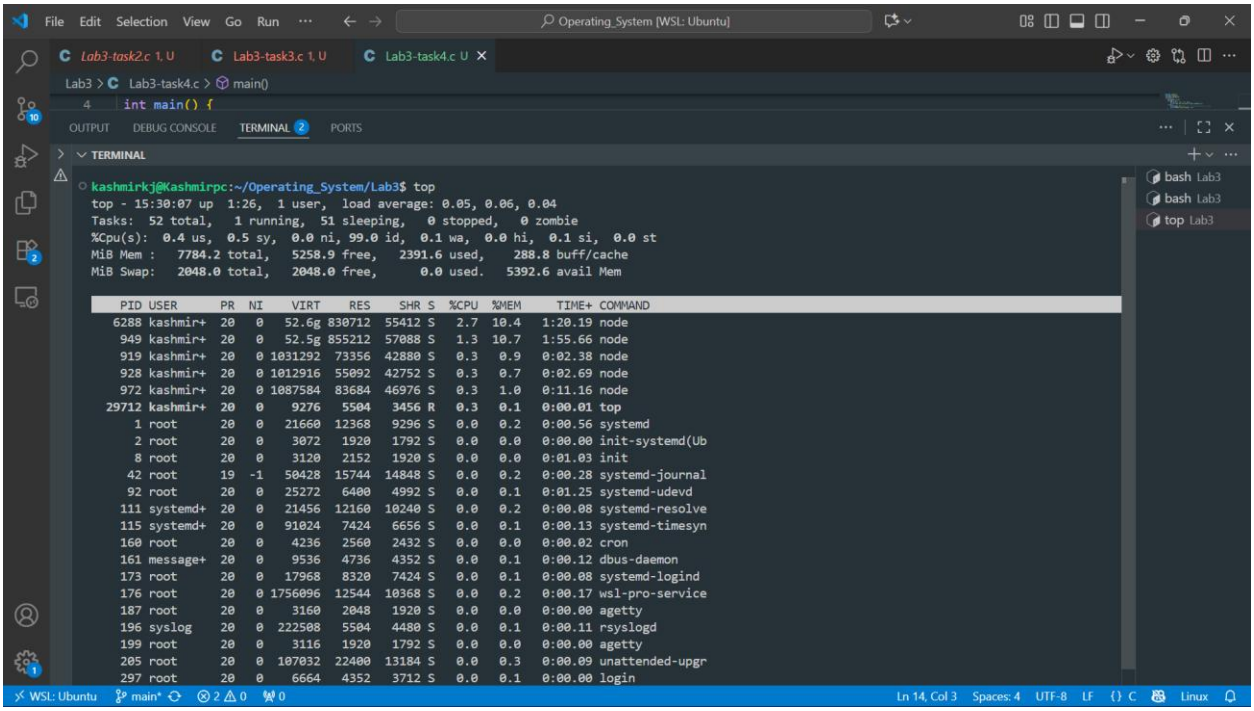
ps -ef → Full list of all processes:



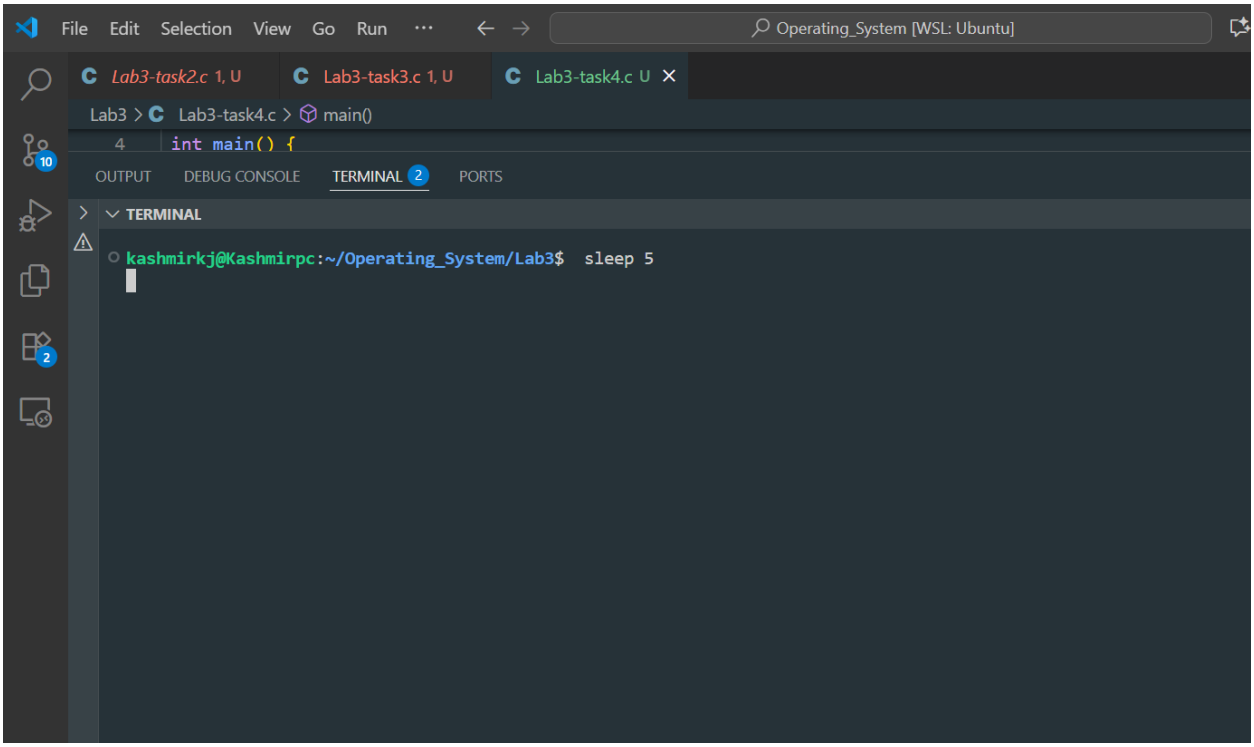
ps-ef | grep bash:

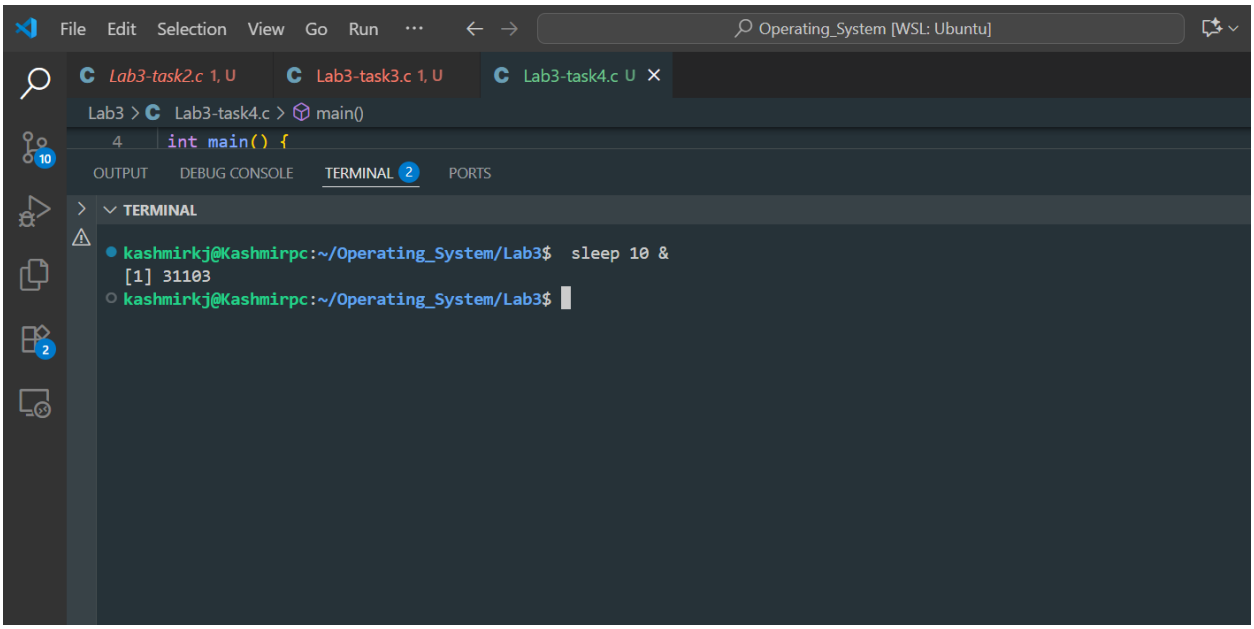


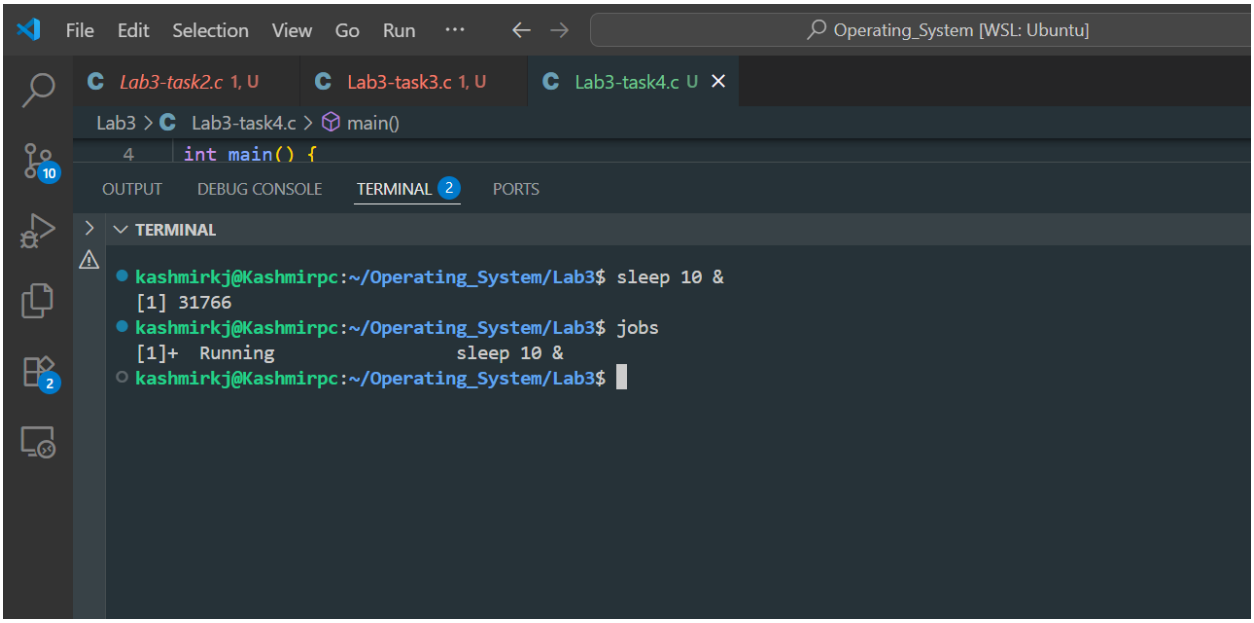
top → Dynamic process viewer:

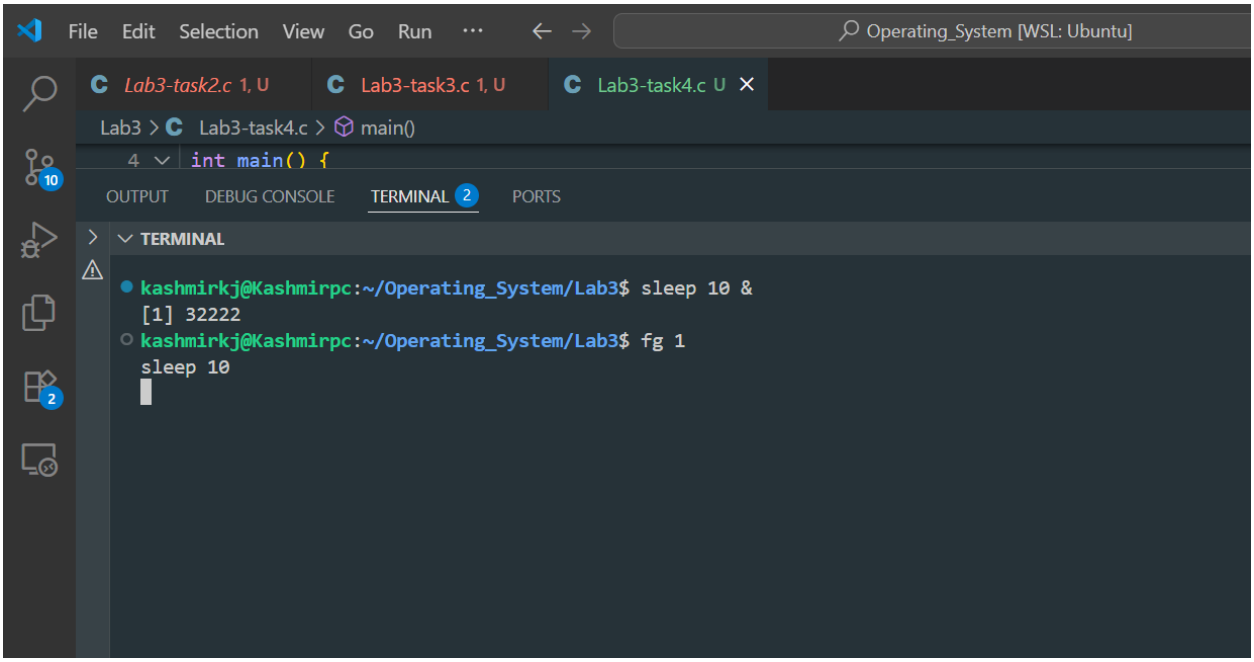


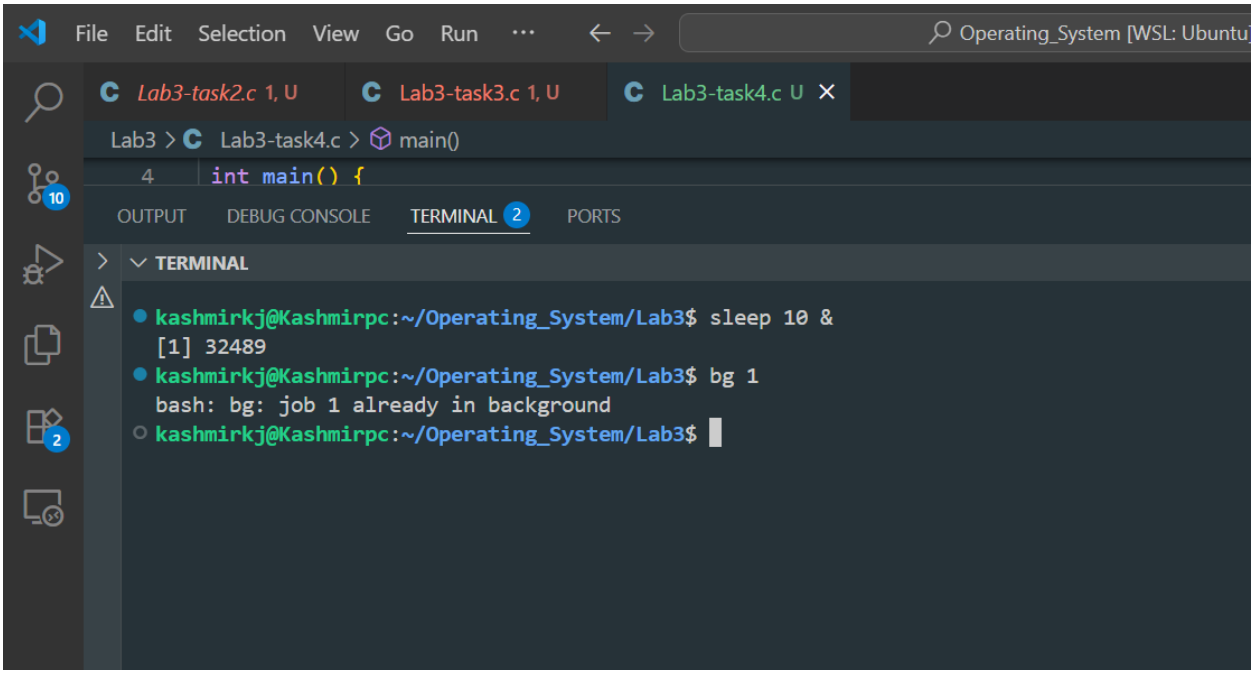
Foreground and Background Jobs:



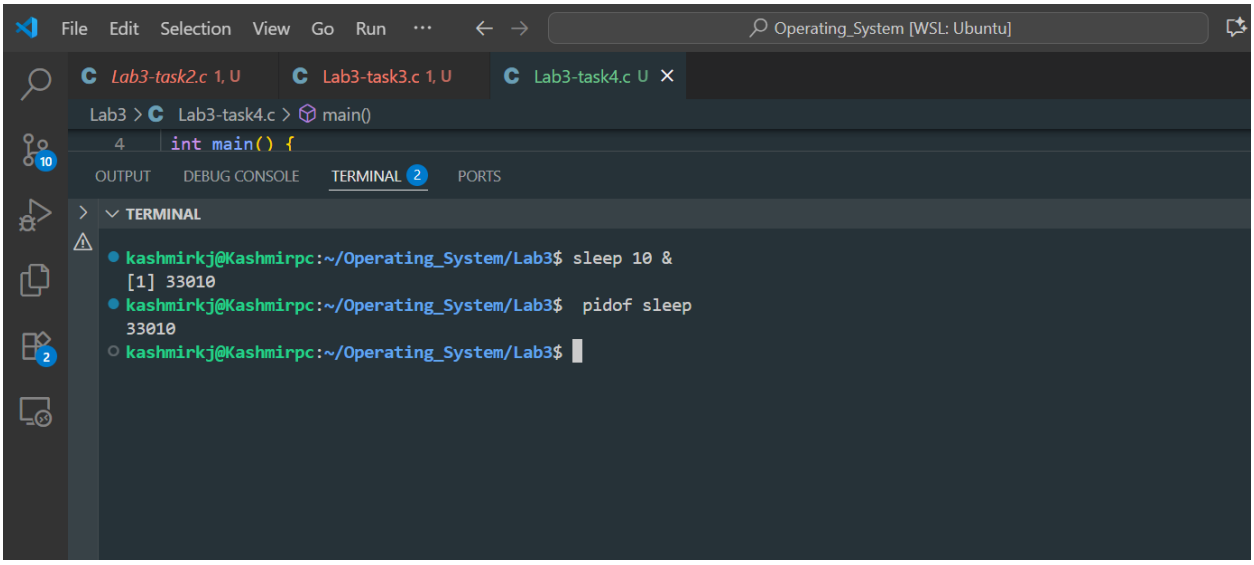

File Edit Selection View Go Run ···
Operating_System [WSL: Ubuntu]
Lab3-task2.c 1, U
Lab3-task3.c 1, U
Lab3-task4.c U
Lab3 > Lab3-task4.c > main()
4 int main() {
OUTPUT DEBUG CONSOLE TERMINAL 2 PORTS
TERMINAL
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ sleep 10 &
[1] 31103
kashmirkj@Kashmirpc:~/Operating_System/Lab3$


File Edit Selection View Go Run ···
Operating_System [WSL: Ubuntu]
Lab3-task2.c 1, U
Lab3-task3.c 1, U
Lab3-task4.c U
Lab3 > Lab3-task4.c > main()
4 int main() {
OUTPUT DEBUG CONSOLE TERMINAL 2 PORTS
TERMINAL
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ sleep 10 &
[1] 31766
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ jobs
[1]+ Running sleep 10 &
kashmirkj@Kashmirpc:~/Operating_System/Lab3$

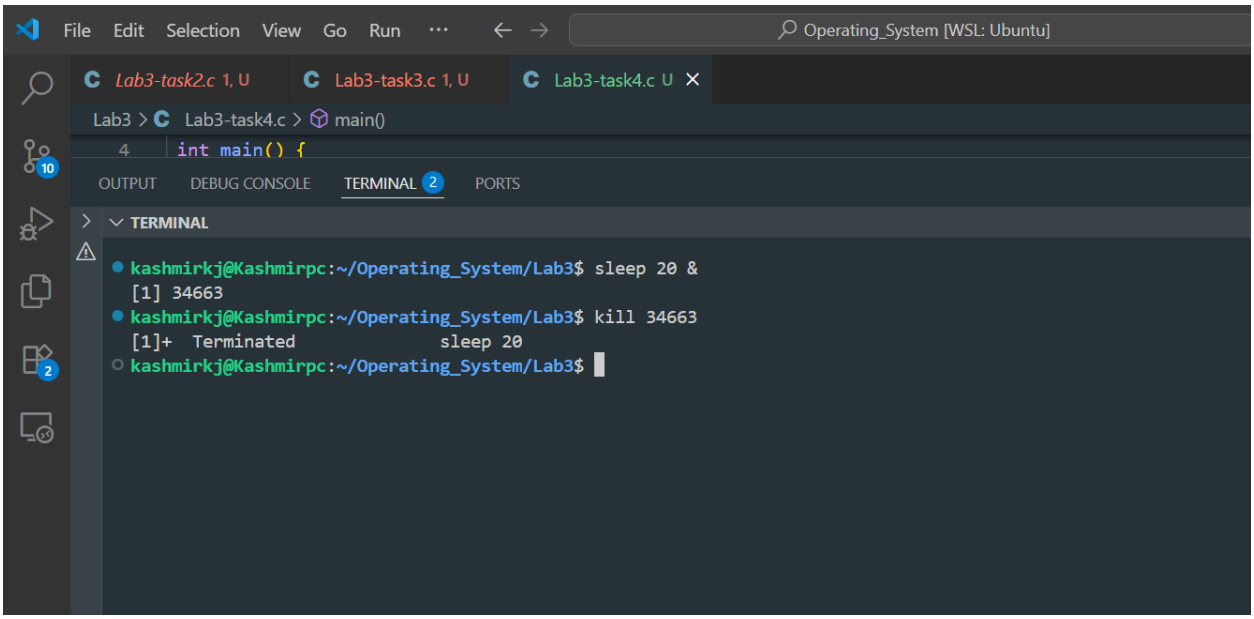


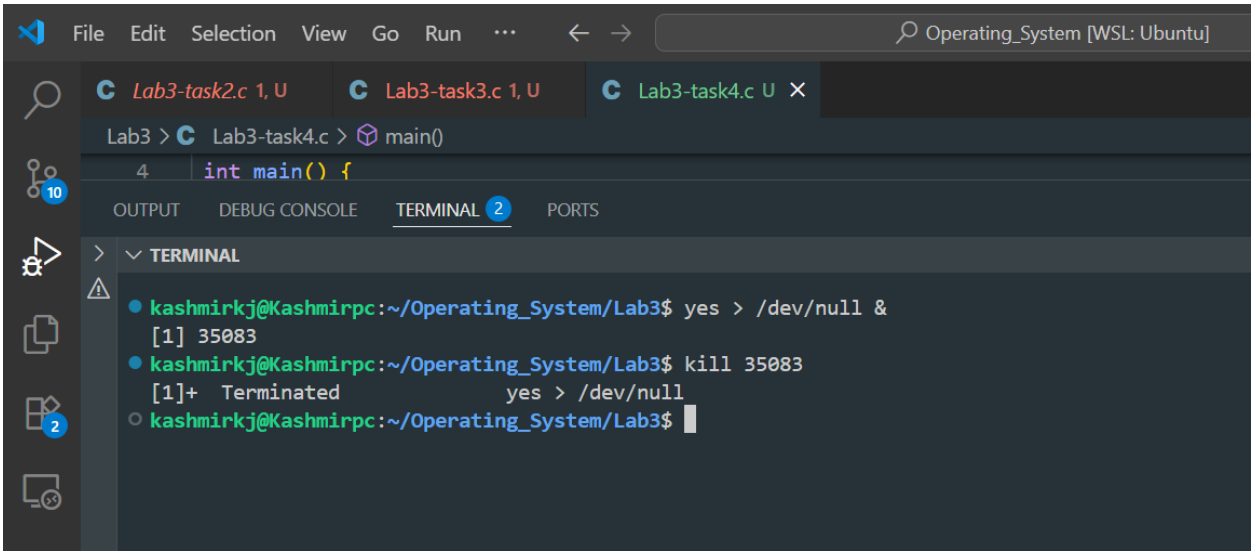


Process Identification:



Killing Processes:




File Edit Selection View Go Run ···
Operating_System [WSL: Ubuntu]
Lab3-task2.c 1, U
Lab3-task3.c 1, U
Lab3-task4.c U
Lab3 > Lab3-task4.c > main()
4 int main() {
OUTPUT DEBUG CONSOLE TERMINAL 2 PORTS
TERMINAL
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ yes > /dev/null &
[1] 35083
kashmirkj@Kashmirpc:~/Operating_System/Lab3$ kill 35083
[1]+ Terminated yes > /dev/null
kashmirkj@Kashmirpc:~/Operating_System/Lab3$