National Textile University

Department of Computer Science

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Semester:

5th

Lab:

03

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LAB-03

1. Introduction

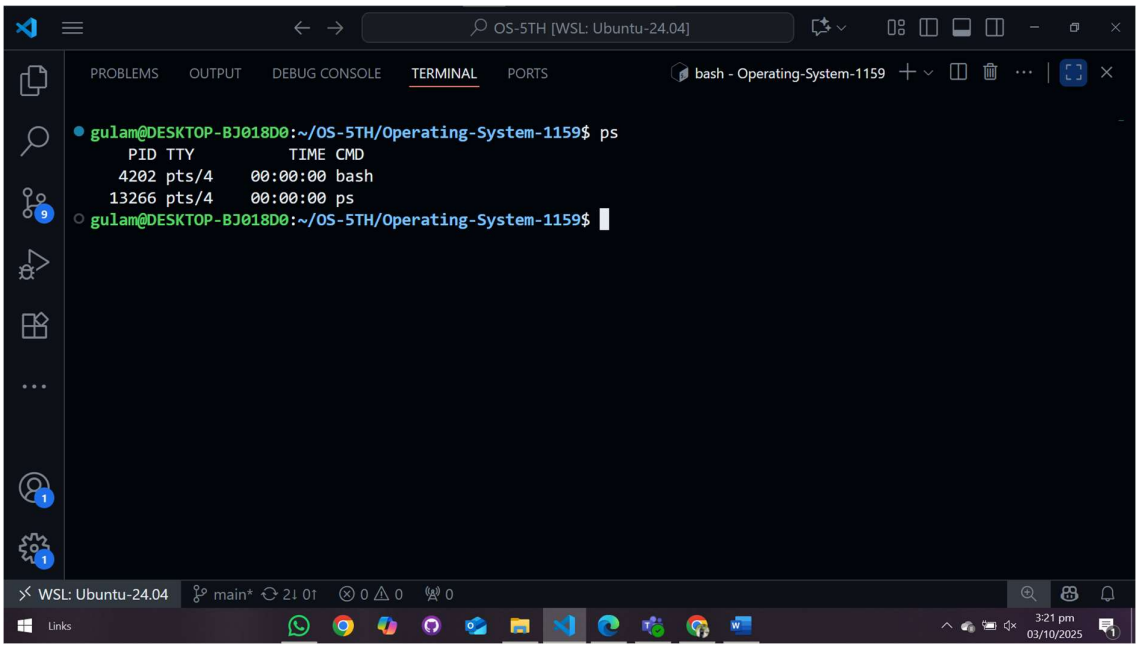
A process is simply a program in execution. When you type a command in Linux (like ls), the OS creates a process for it. Every process has:

- ***PID (Process ID)*** *→ unique number for each process.*
- ***PPID (Parent Process ID)*** *→ ID of the process that created it.*
- ***State*** *→ running, sleeping, stopped, zombie, etc*

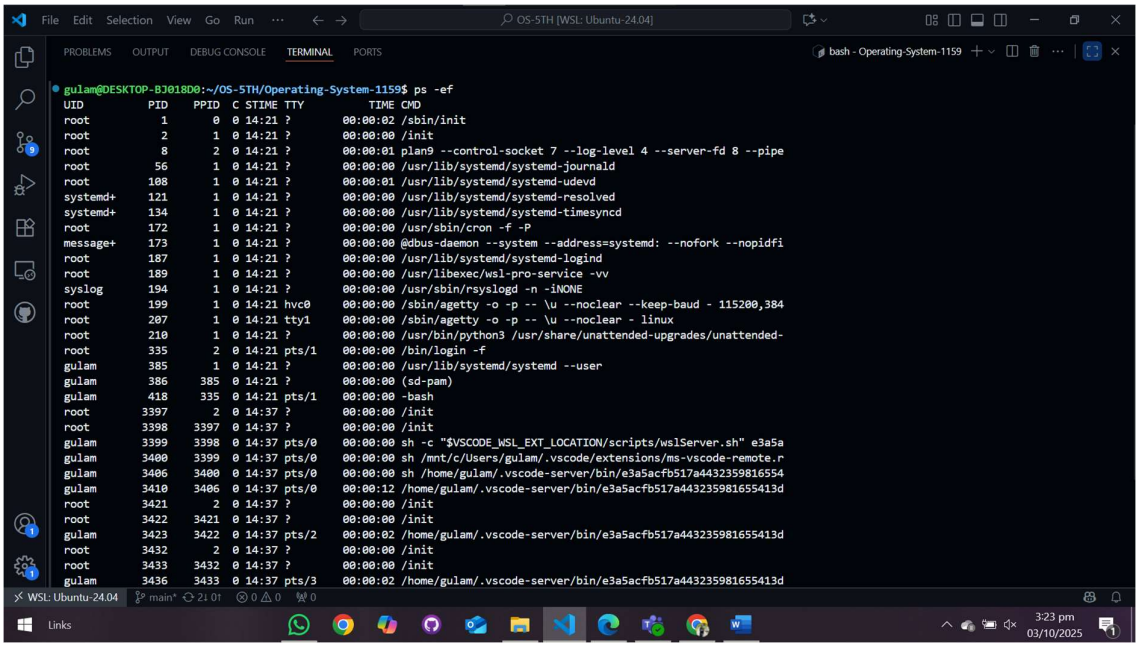
2. Linux Process Commands

2.1 Viewing Processes

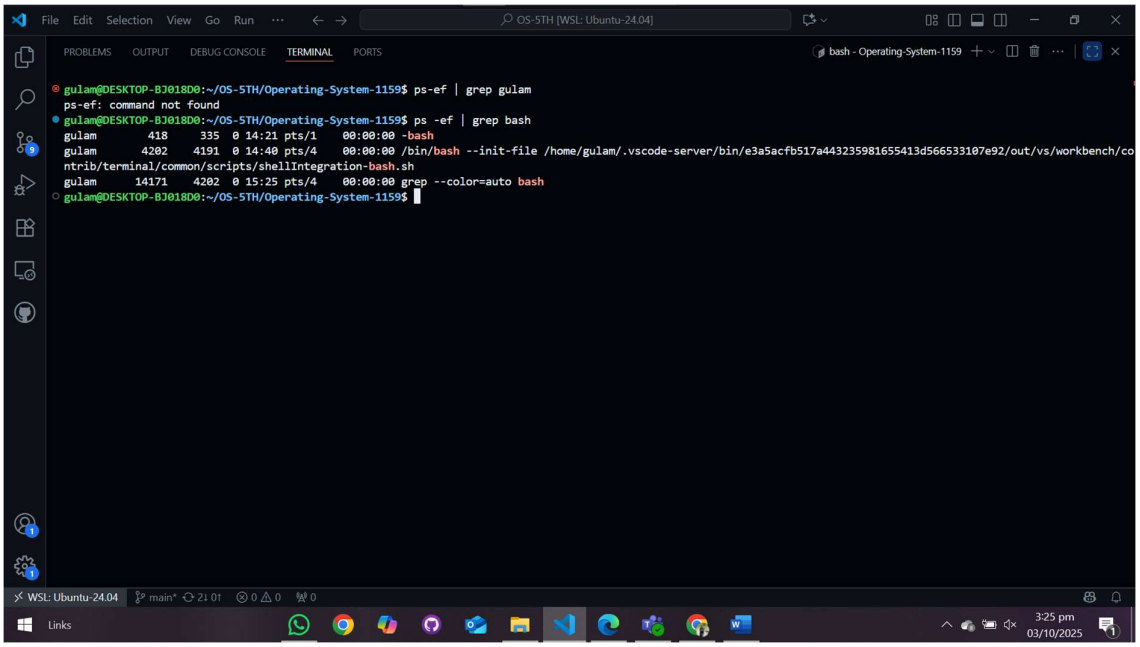
ps → Process Status



ps -ef → Full list of all processes

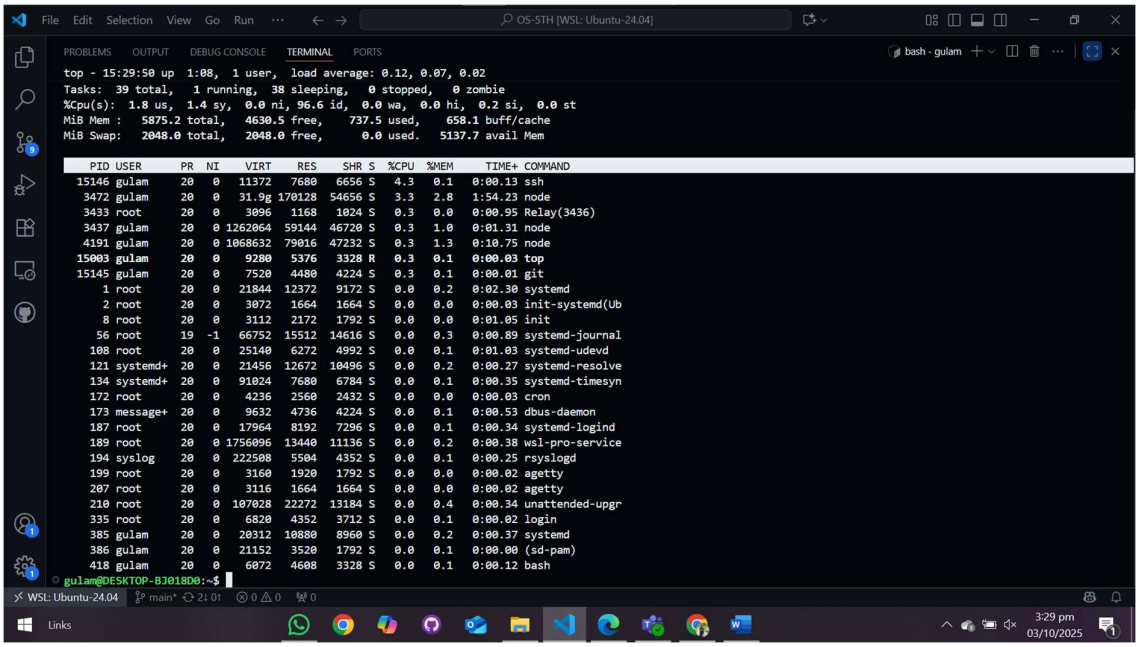


ps-ef | grep bash



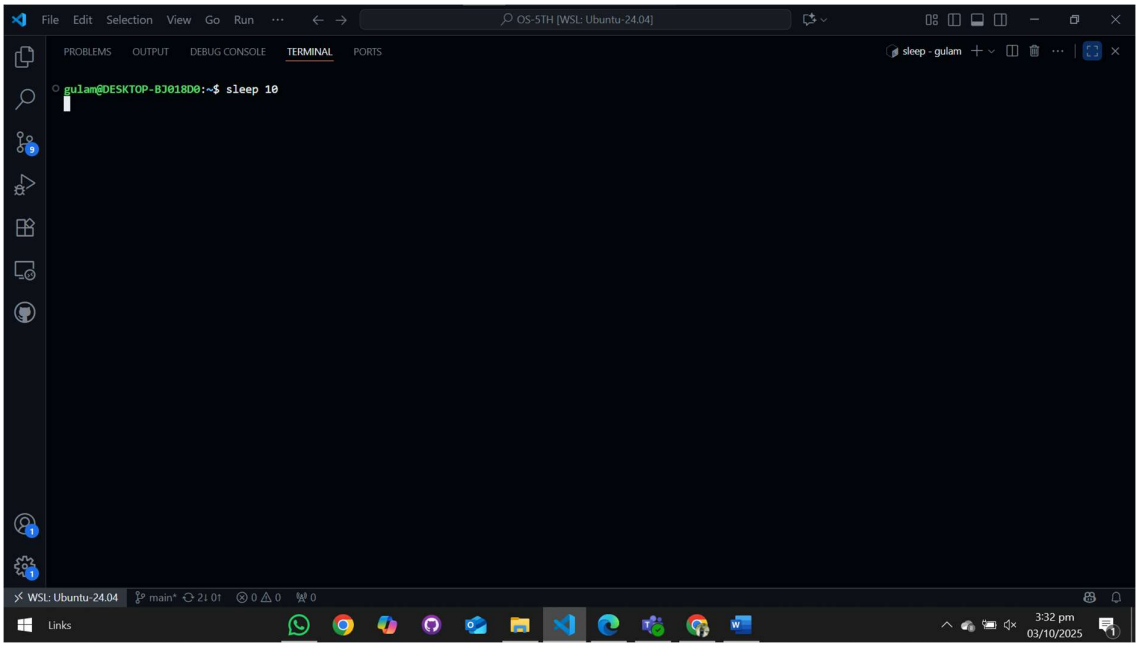
2.2 Monitoring Processes Interactively

top → Dynamic process viewer

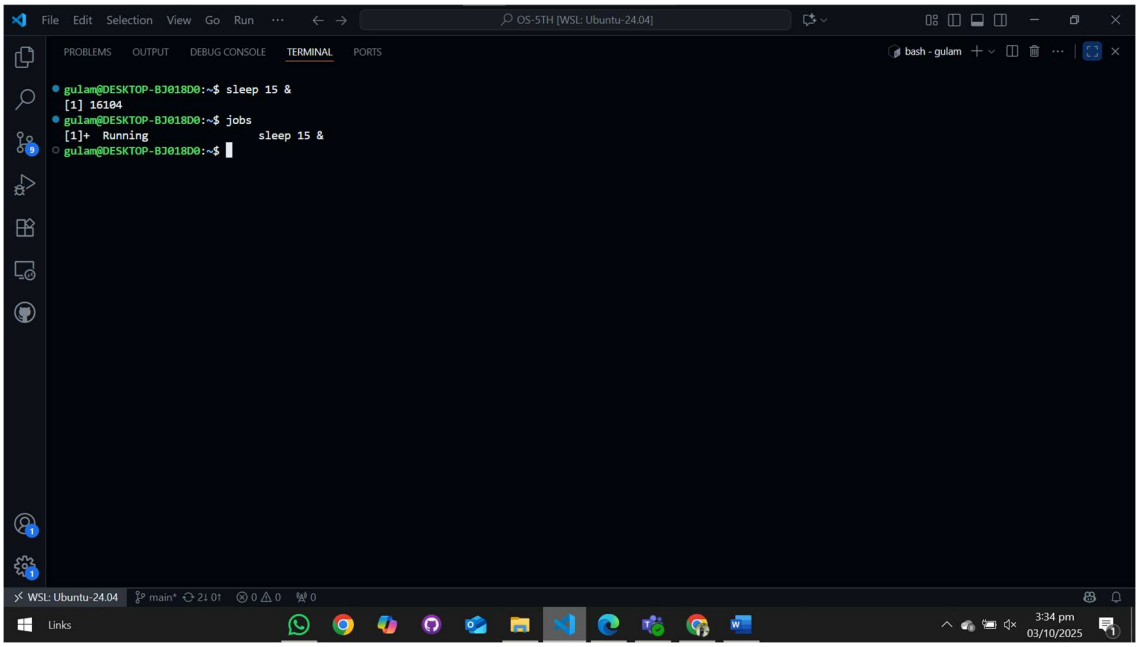


2.3 Foreground and Background Jobs

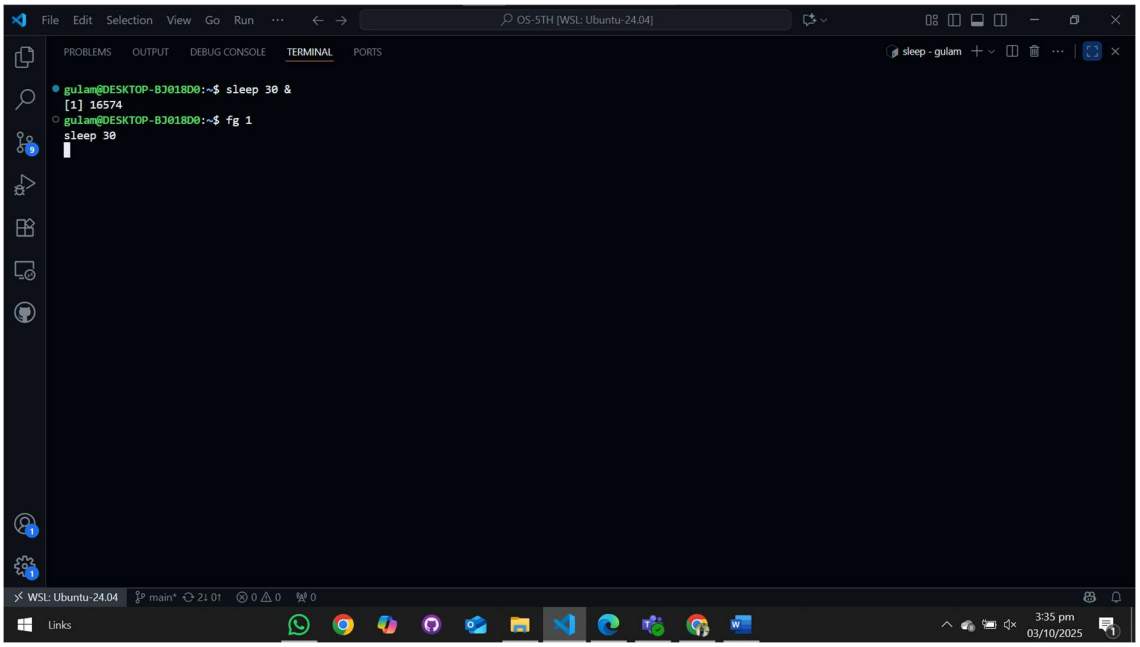
Foreground:



Check background jobs:

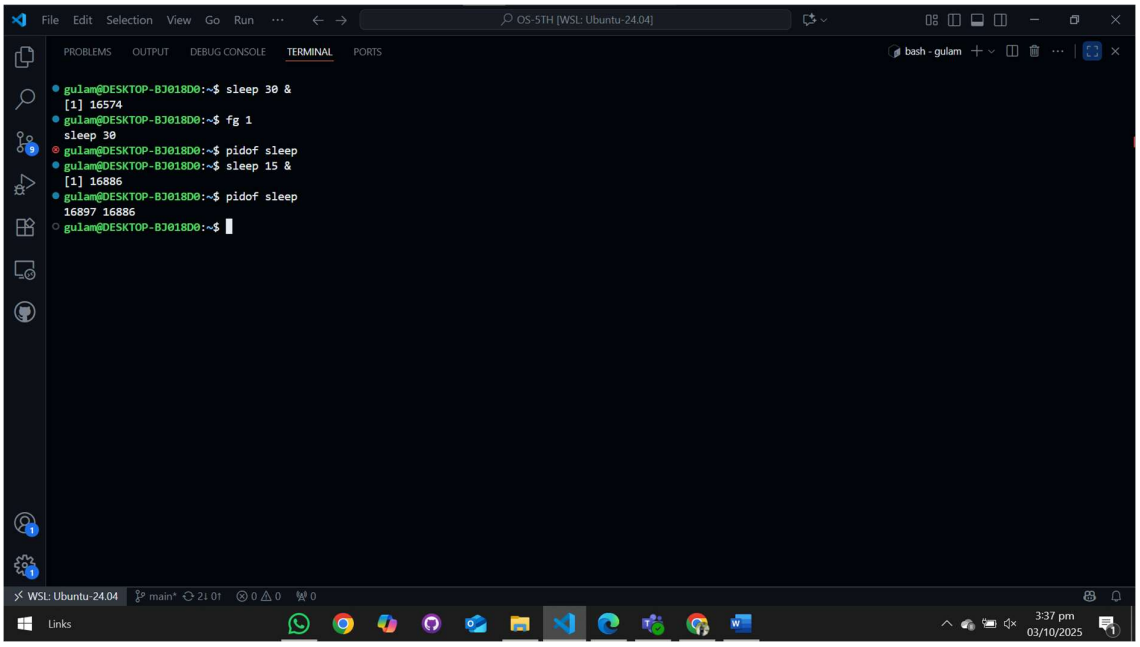


Bring a job to foreground:



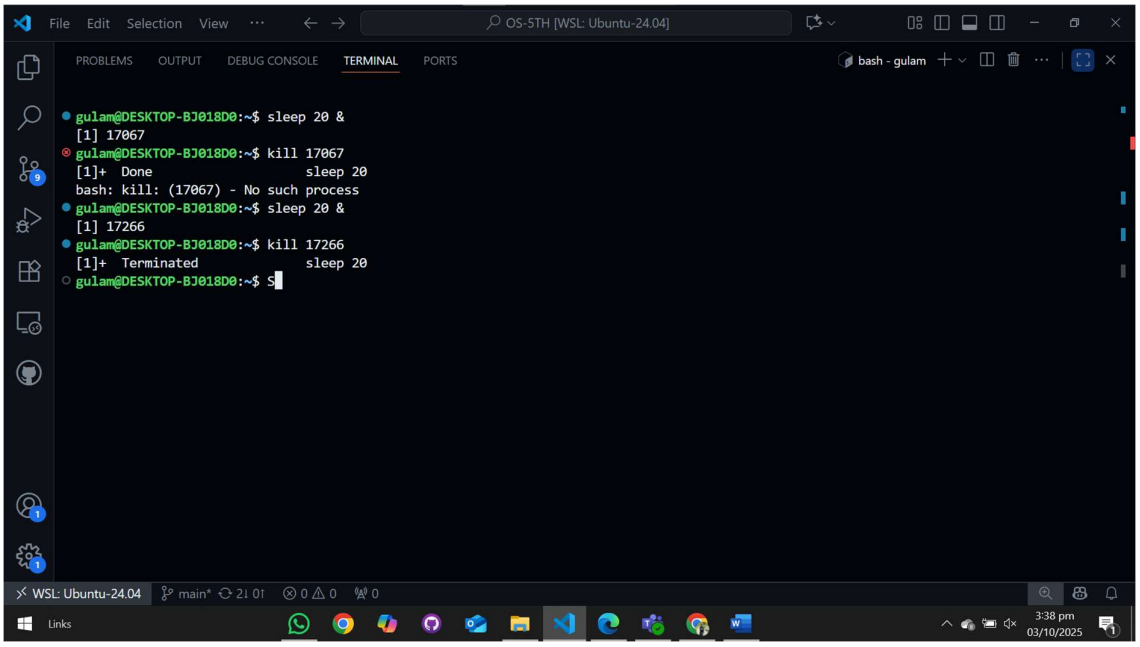
2.4 Process Identification

Get PID of a process by name:



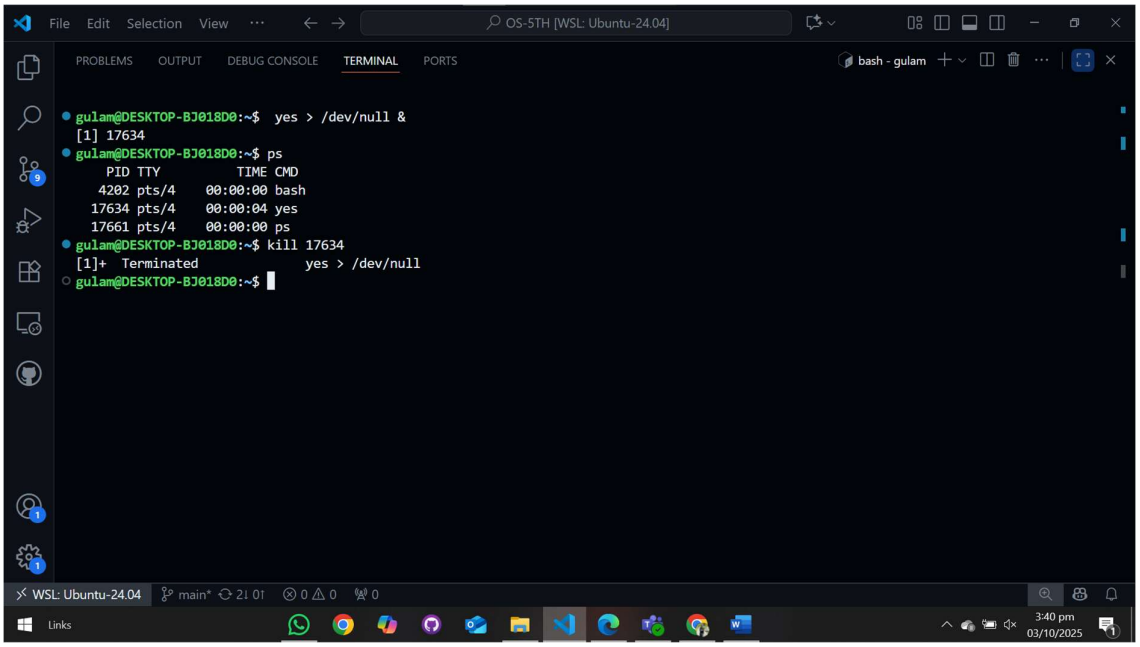
2.5 Killing Processes

Kill by PID:



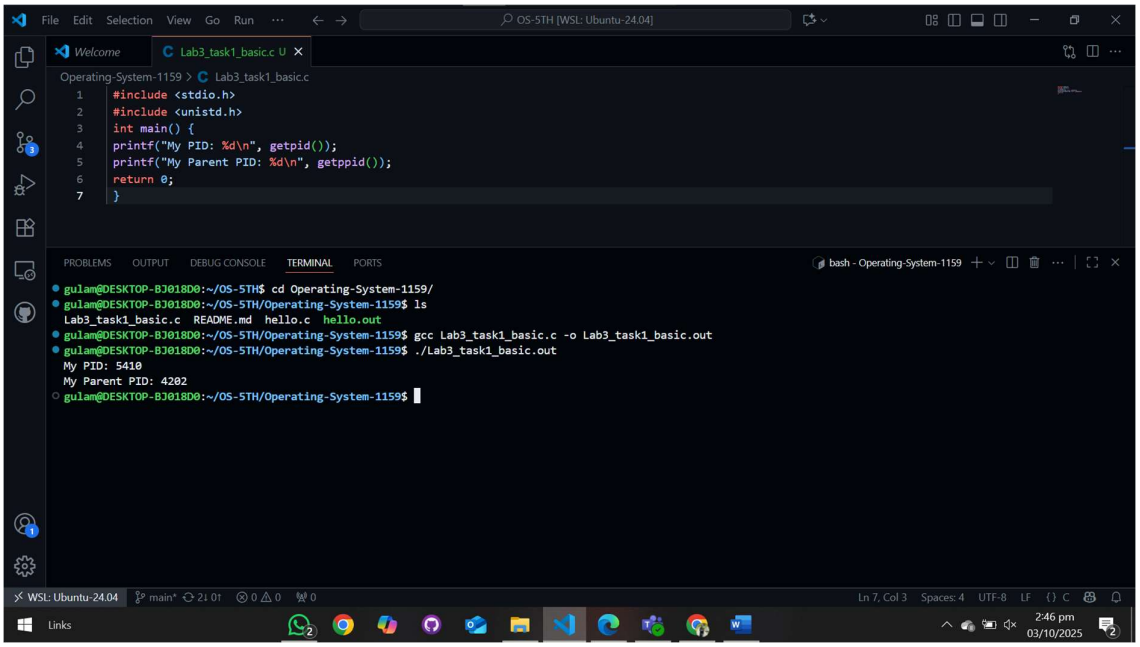
. Run an infinite process:

yes > /dev/null &

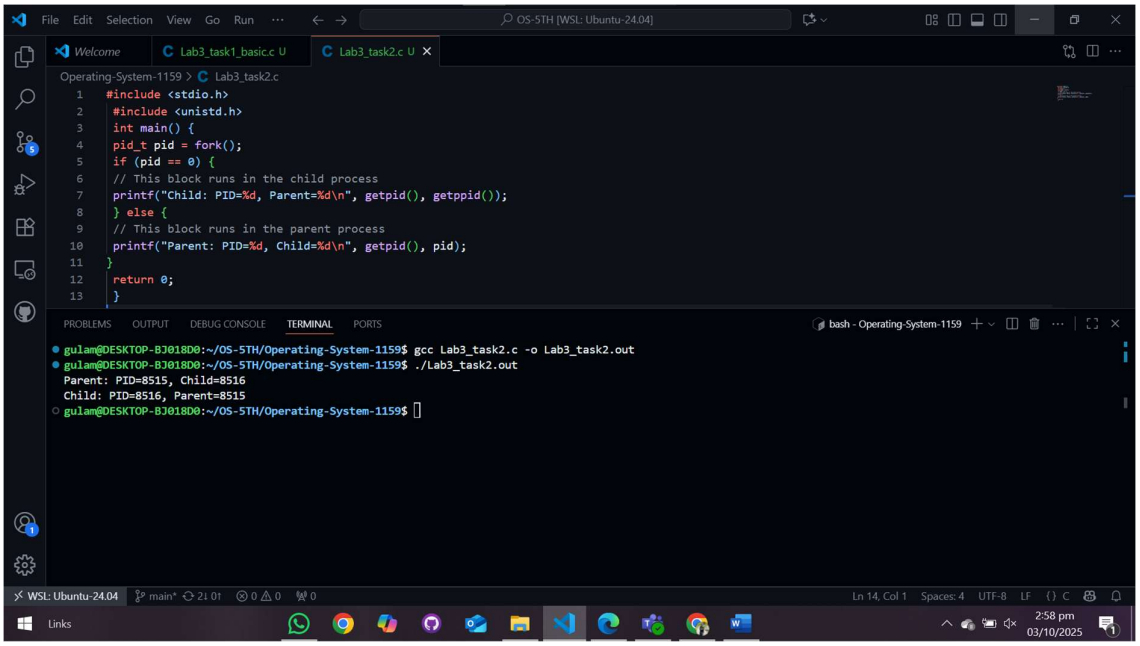


3.C Programs on Processes

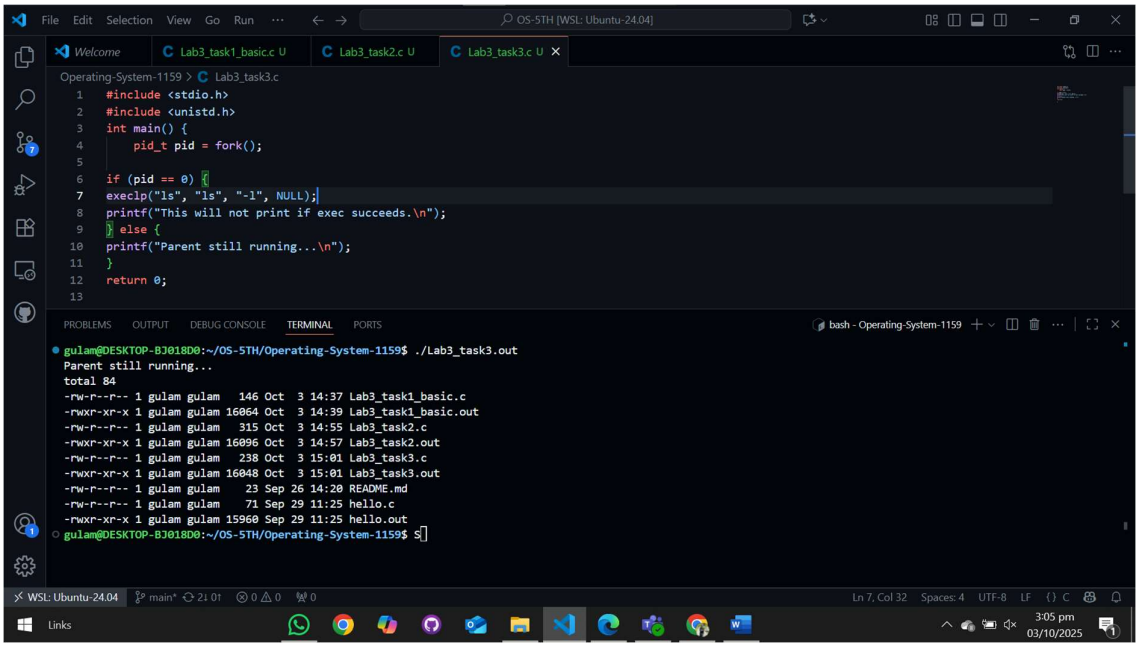
Program 1: Print PID and PPID.



Program 2: Fork Creating Child Processes.



Program 3: Execl – Replacing a New Process



Program 4: Wait – Synchronization