National Textile University

Department of Computer Science

Subject:

Operating System

Submitted To:

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Registration No:

23-NTU-CS-1163

Lab No:

3

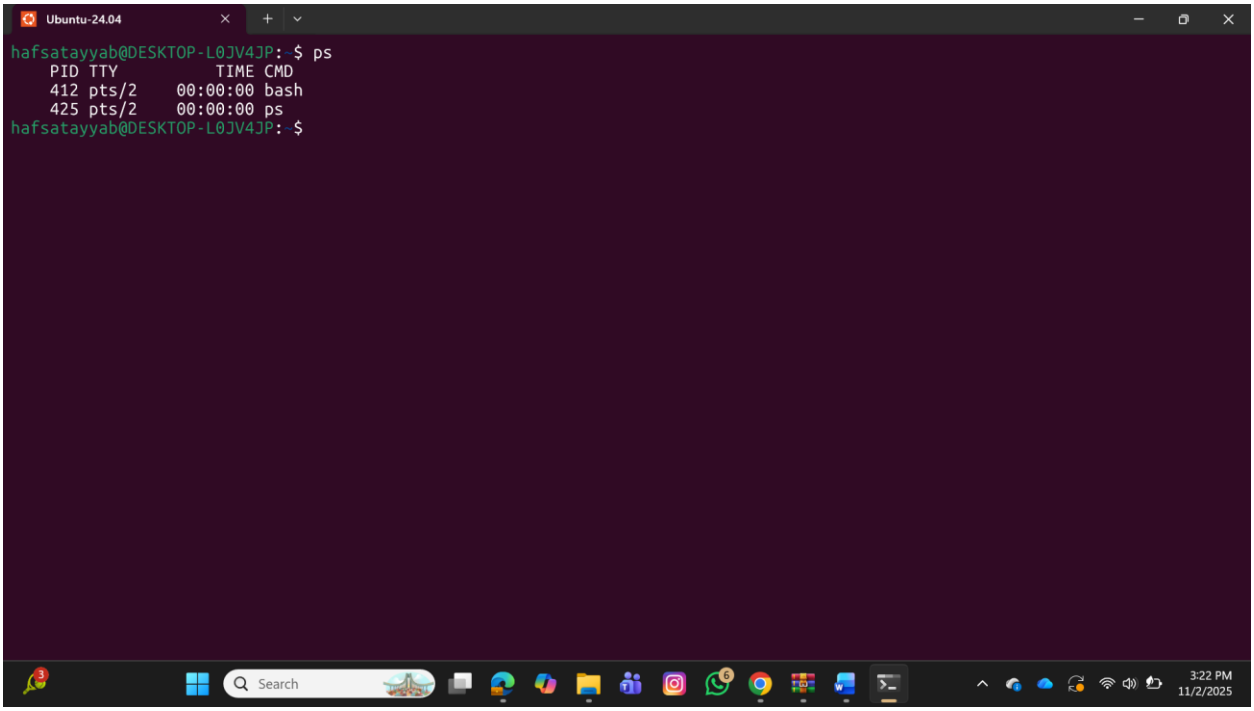
Semester:

5th

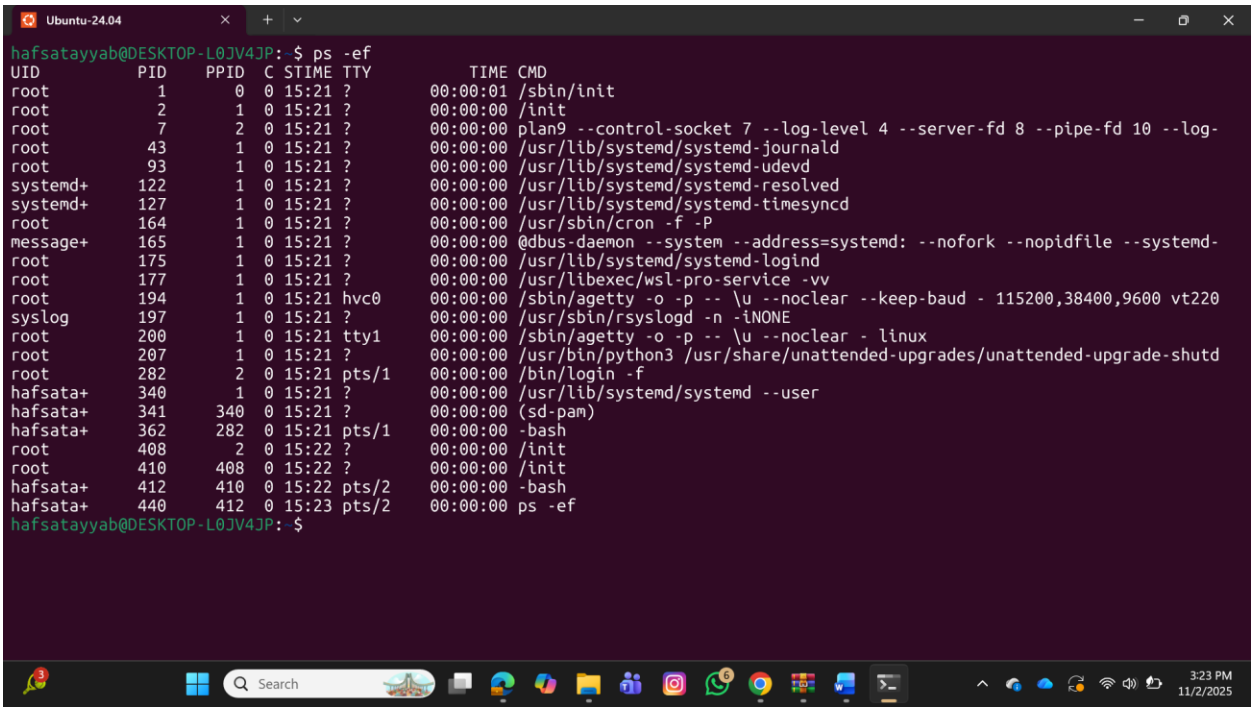
2. Linux Process Commands

2.1 Viewing Processes

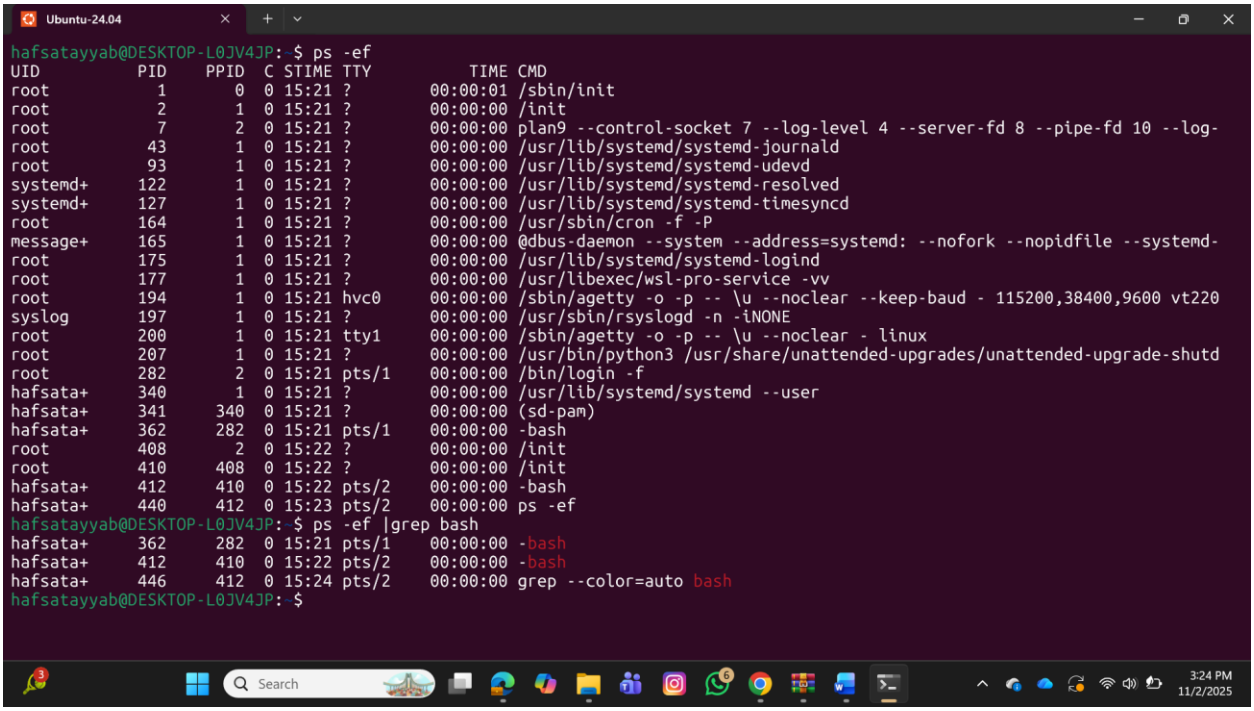
ps → Process Status



ps -ef → Full list of all processes

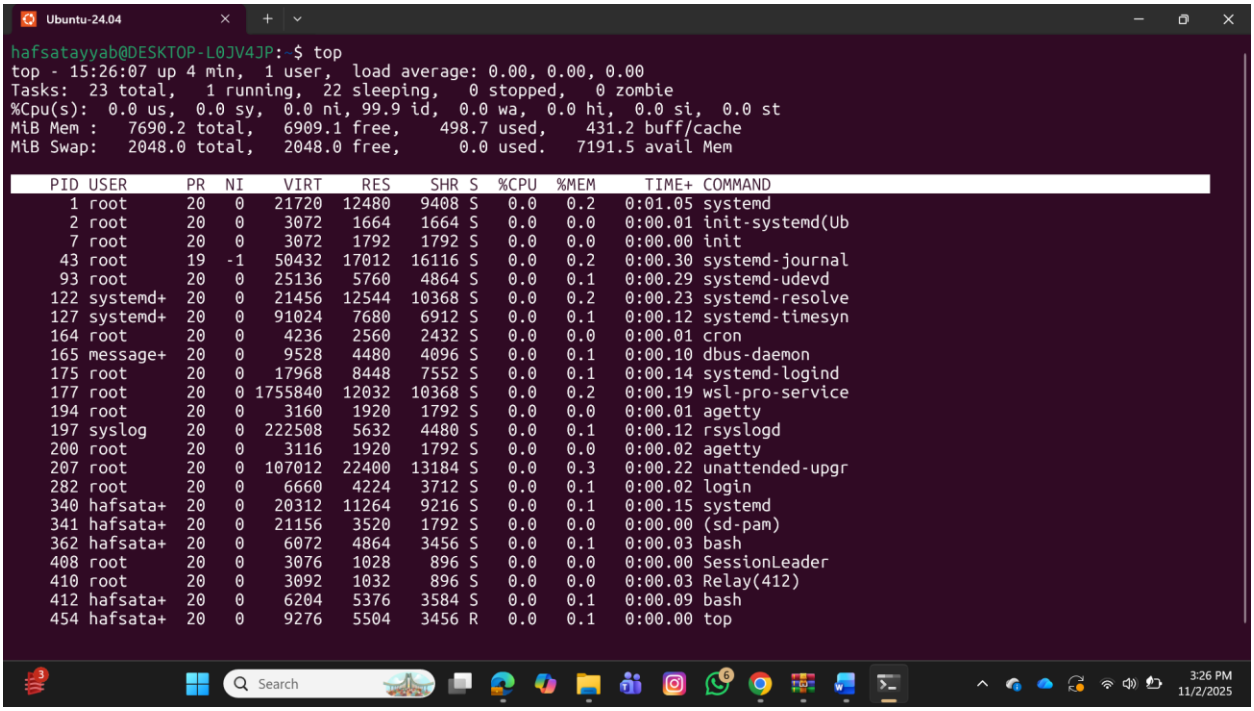


ps-ef | grep bash This finds all processes related to the bash shell



2.2 Monitoring Processes Interactively

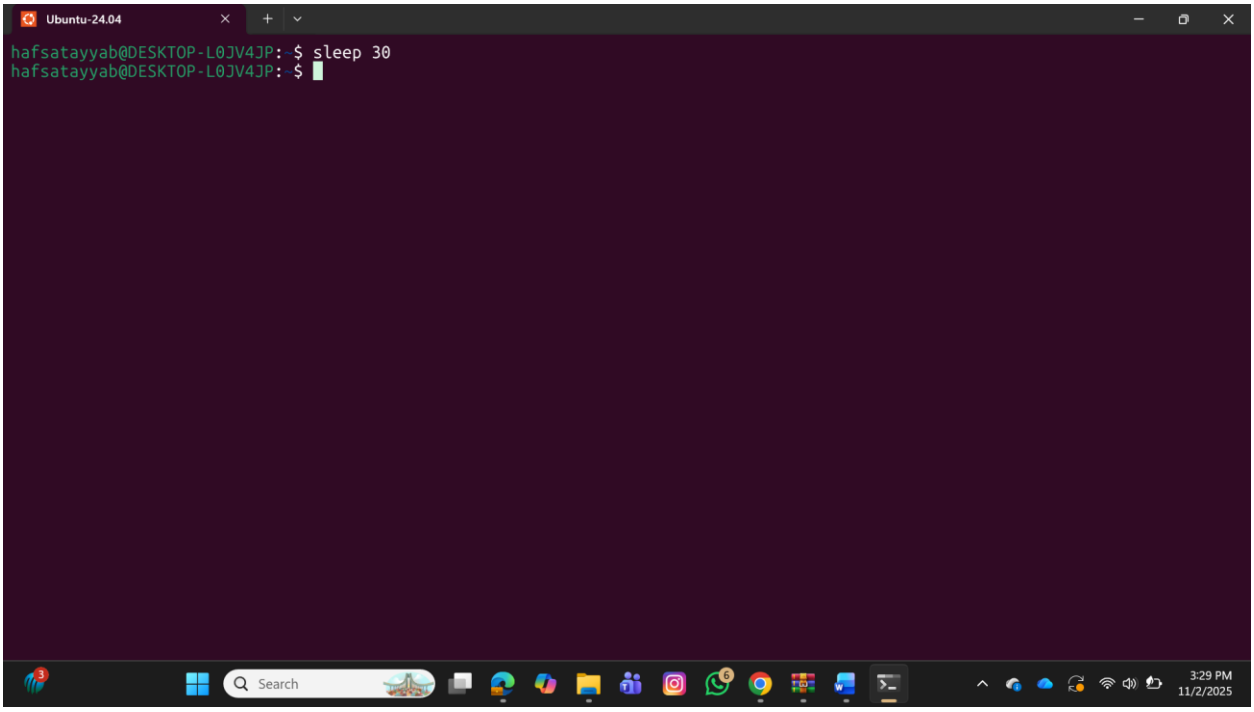
top → Dynamic process viewer



2.3 Foreground and Background Jobs

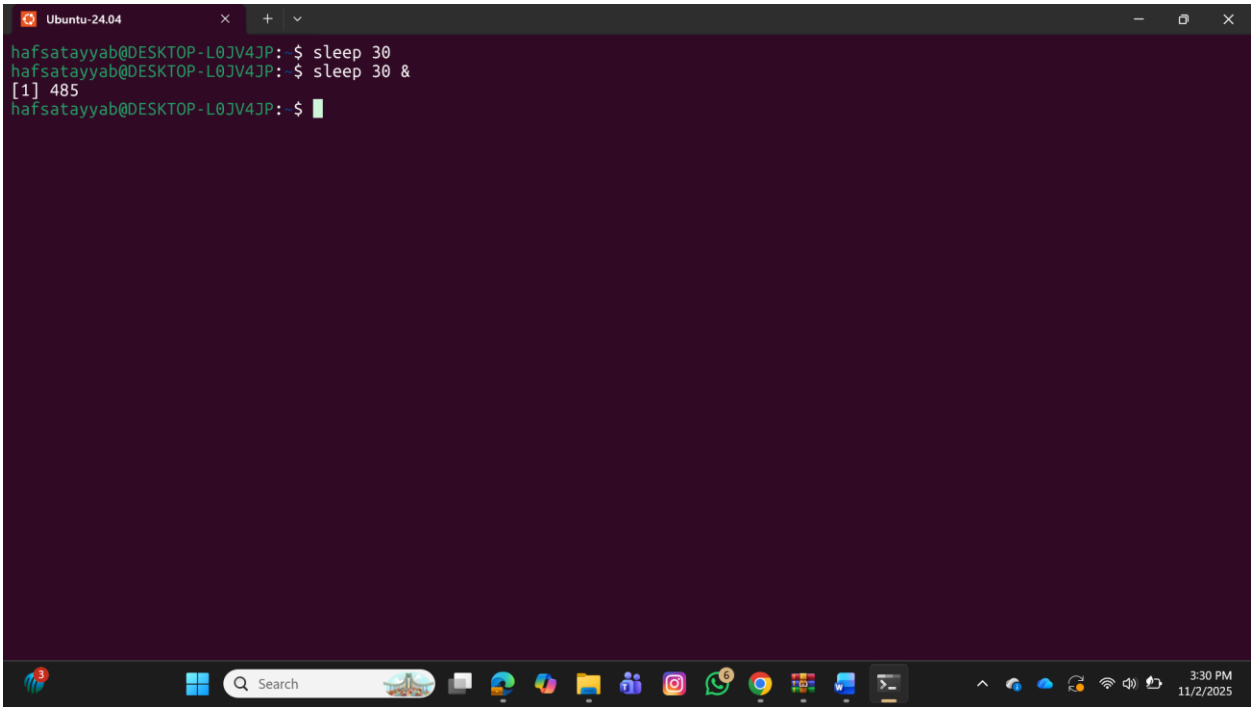
Foreground: A process that takes control of the terminal until it finishes.

sleep 30

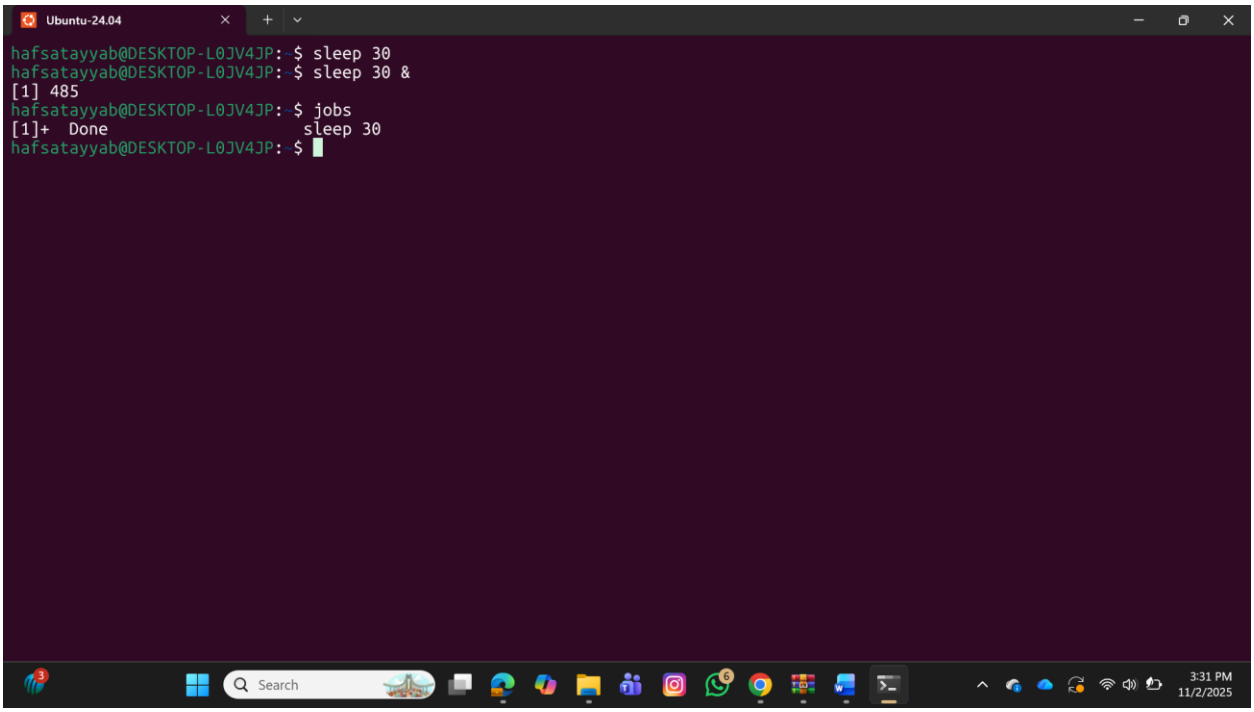


Background: Add & to run without blocking.

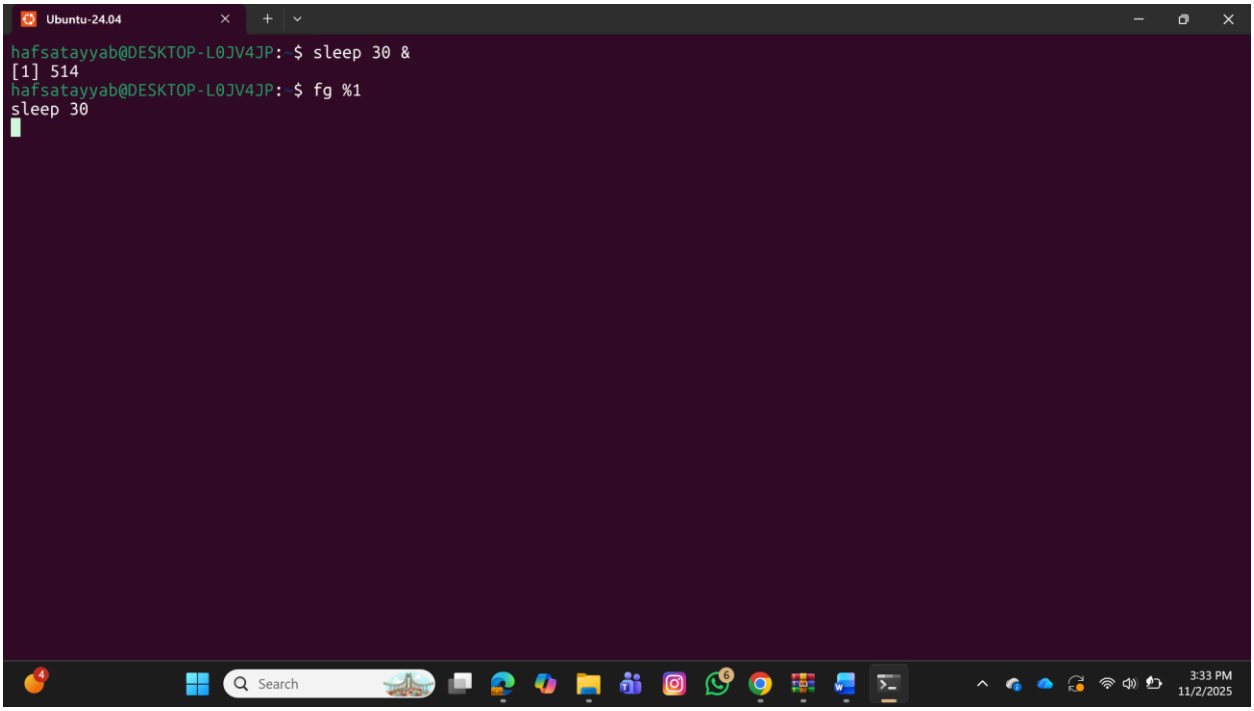
sleep 30 &



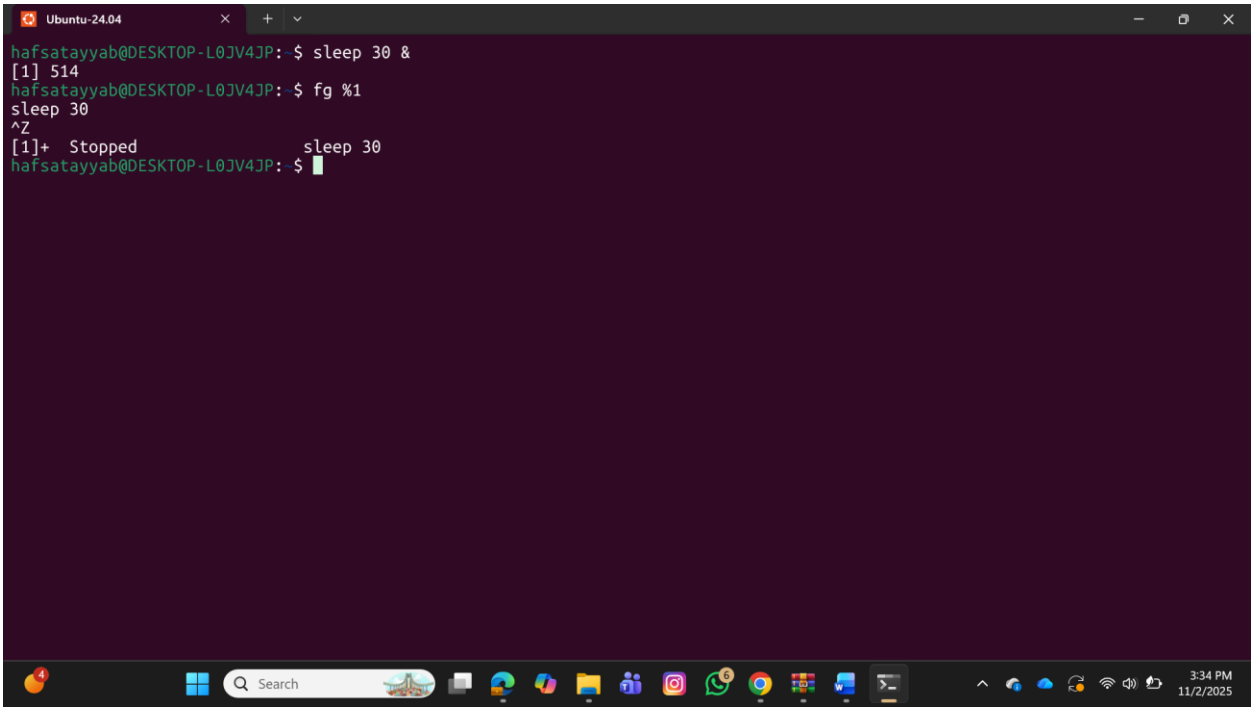
Check background jobs: jobs



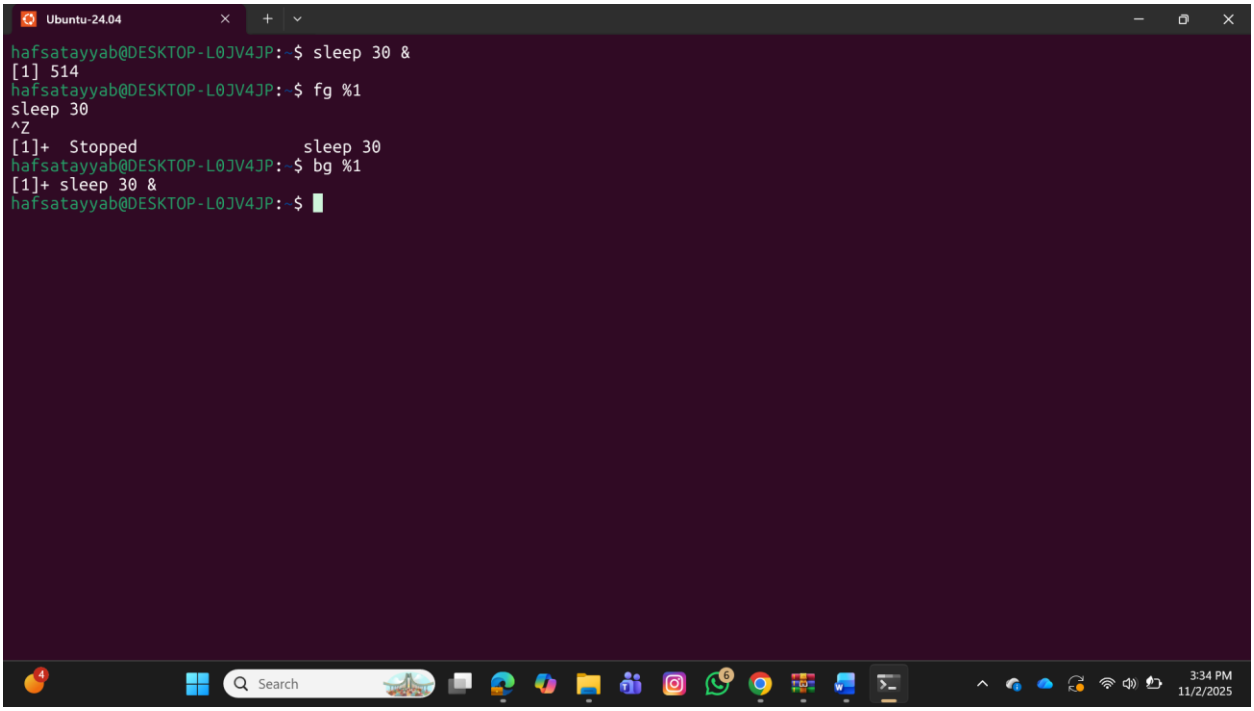
Bring a job to foreground: fg %1



Suspend a job: Press Ctrl + Z while it runs.



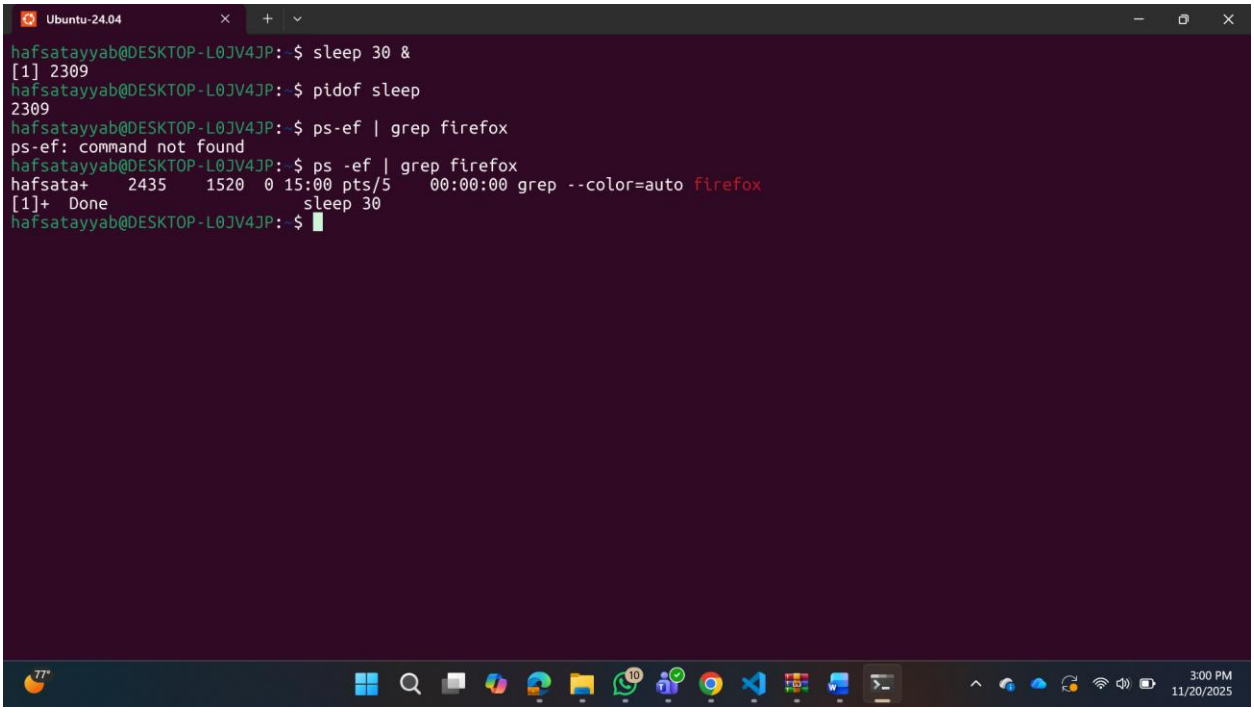
Resume suspended job in background: bg %1



2.4 Process Identification

Get PID of a process by name: pidof sleep

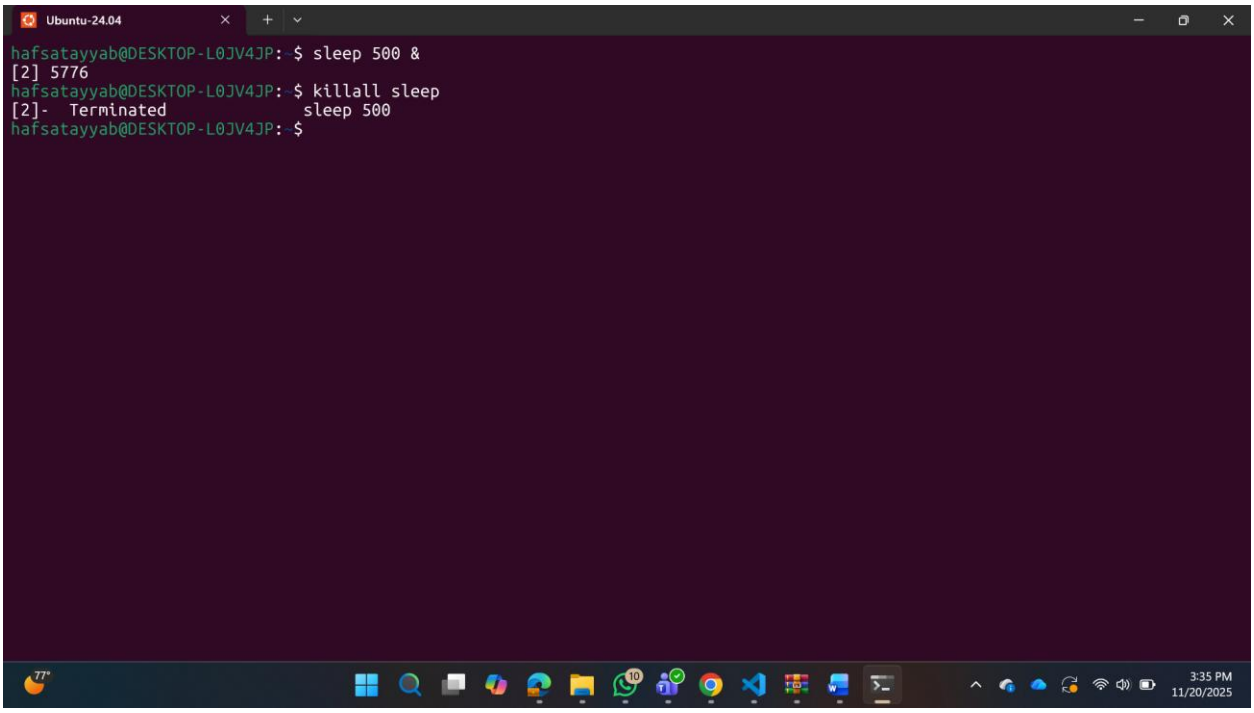
Search using ps and grep : ps-ef | grep firefox



2.5 Killing Processes

Kill by PID: kill-9 3421-9 → force kill (SIGKILL).

Kill all processes by name: killall sleep

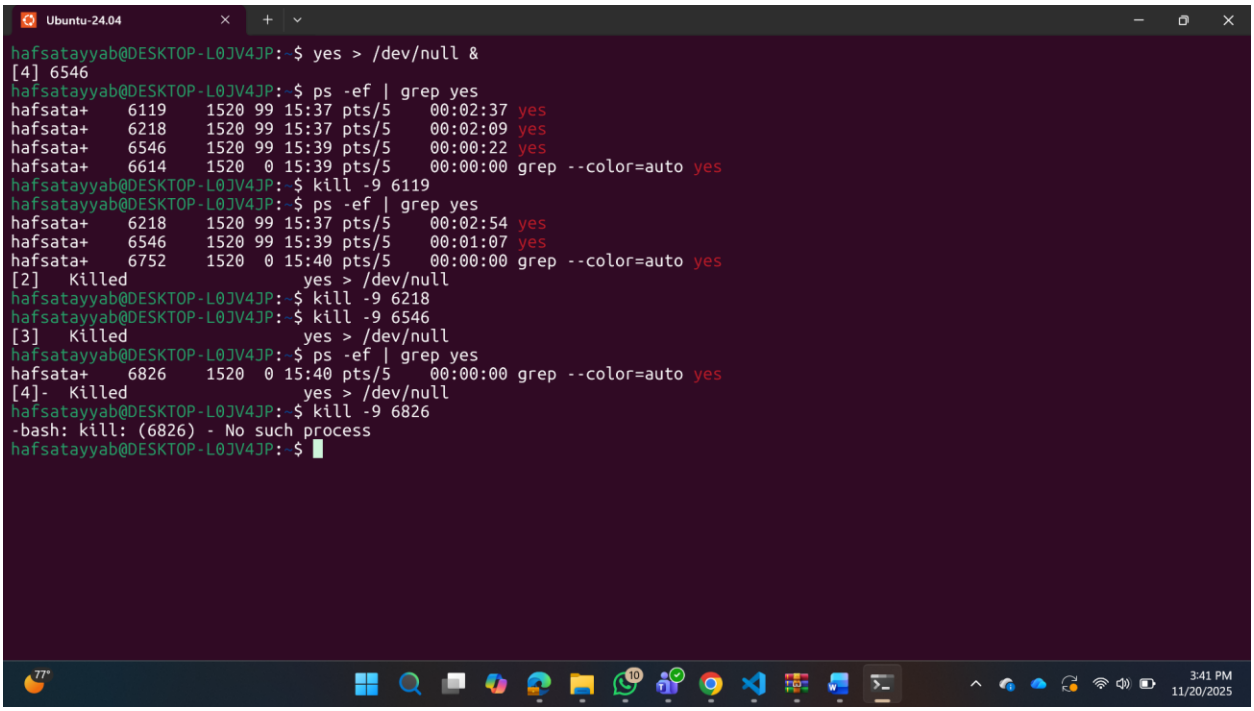


Practice Task:

Run an infinite process: yes > /dev/null & (yes prints “y” forever; redirected to /dev/null to hide output).

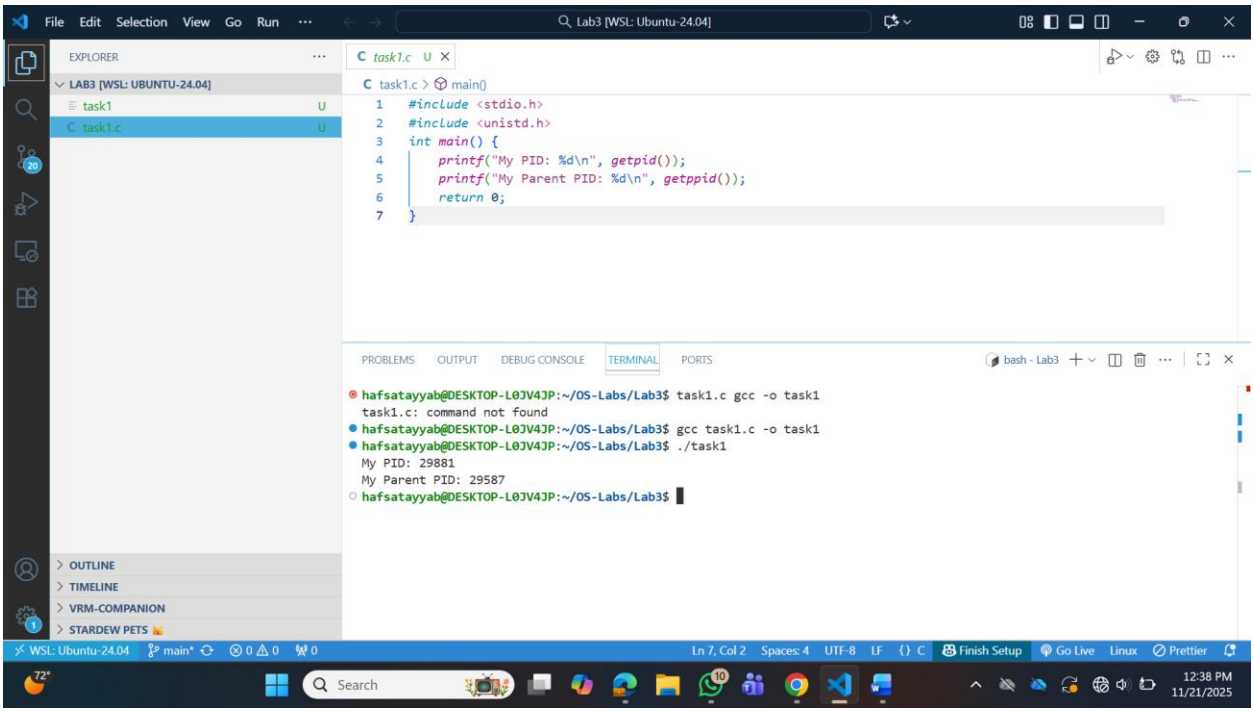
2. Find it with: ps-ef | grep yes

3. Kill it with: kill-9

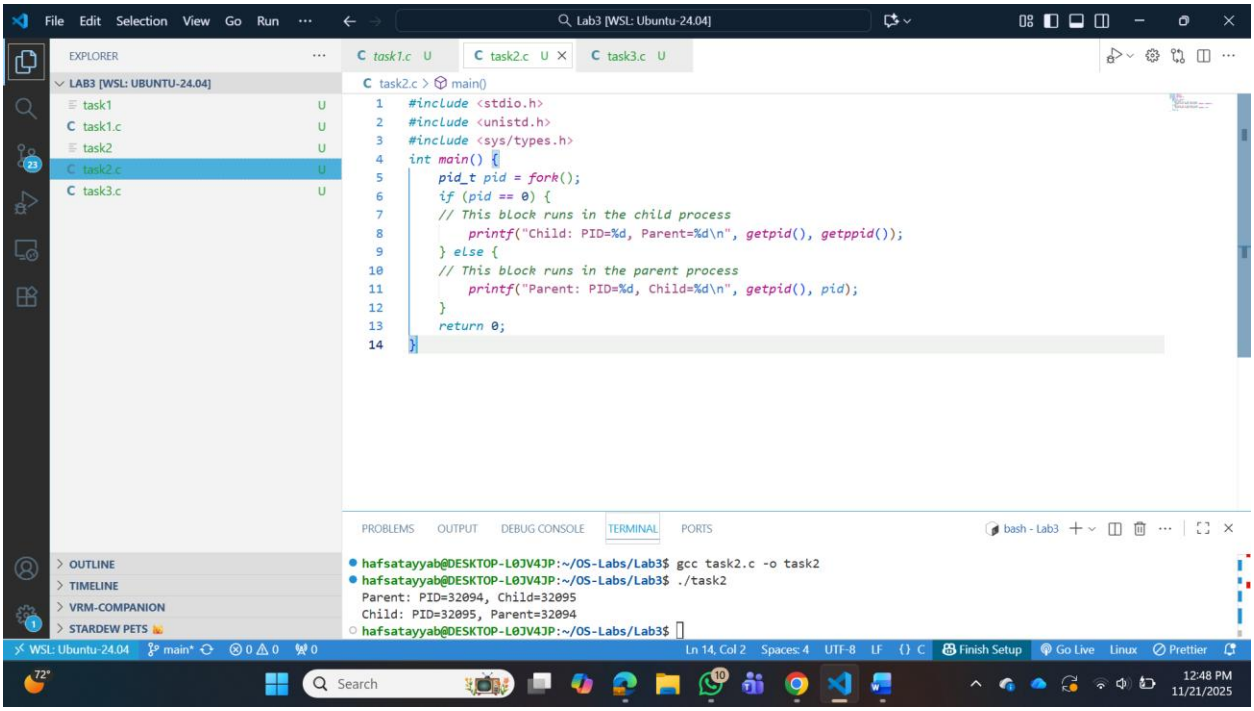


3. C Programs on Processes

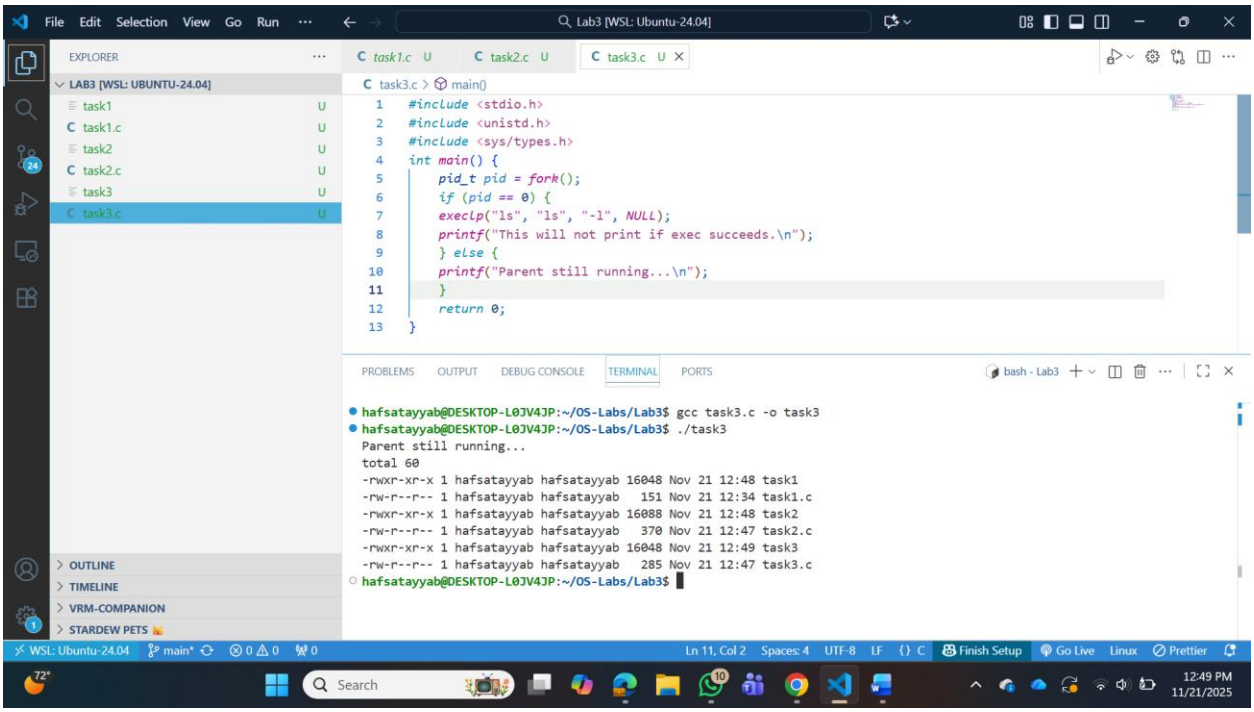
Program 1: Print PID and PPID



Program 2: Fork – Creating Child Process



Program 3: Execl – Replacing a Process



Program 4: Wait – Synchronization