Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: BOSS (2CSE204)

PRACTICAL-6

AIM: - To learn about monitoring and managing Linux processes.

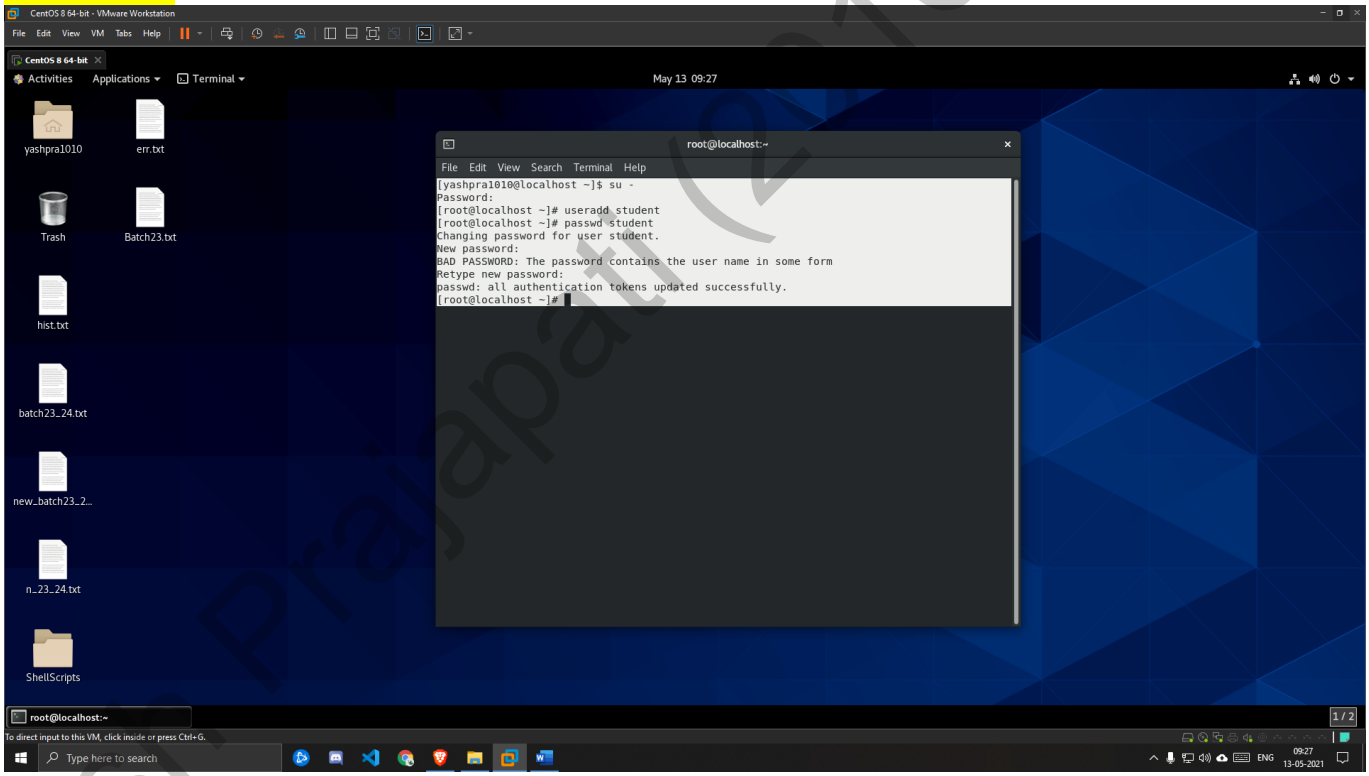
Commands:

1. **top –** It is used to show the processes in linux.
2. **ps –** It is used to show information of running processes in linux.
3. **kill –** It is used to kill/terminate the process in linux.
4. **pkill -** It is used to kill/terminate the process using process name in linux.
5. **jobs –** It is used to list the running jobs in linux.
6. **fg –** It changes the process to foreground environment.
7. **bg –** It is used to place foreground processes to background.

Exercise:

1. Create new user student and set password “student123”.

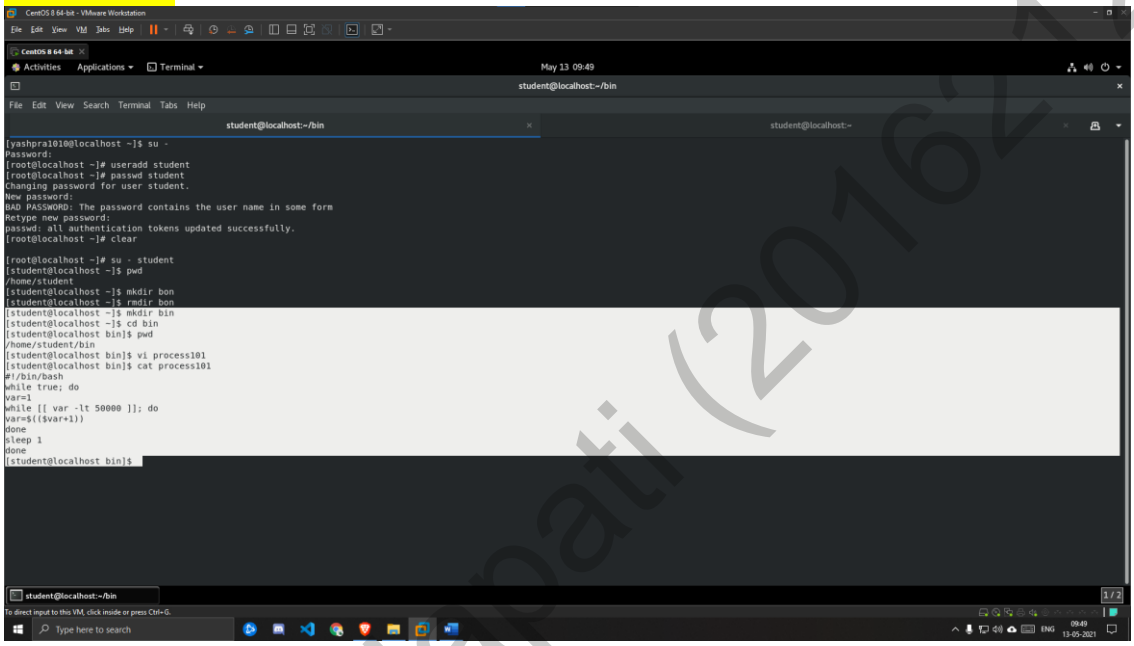
SOLUTION:



2. Switch to student user. Open two terminal windows side by side. In this section, these terminals are referred to as left and right. Create a script called process101, which will generate artificial CPU load. Create the script in the /home/student/bin directory.

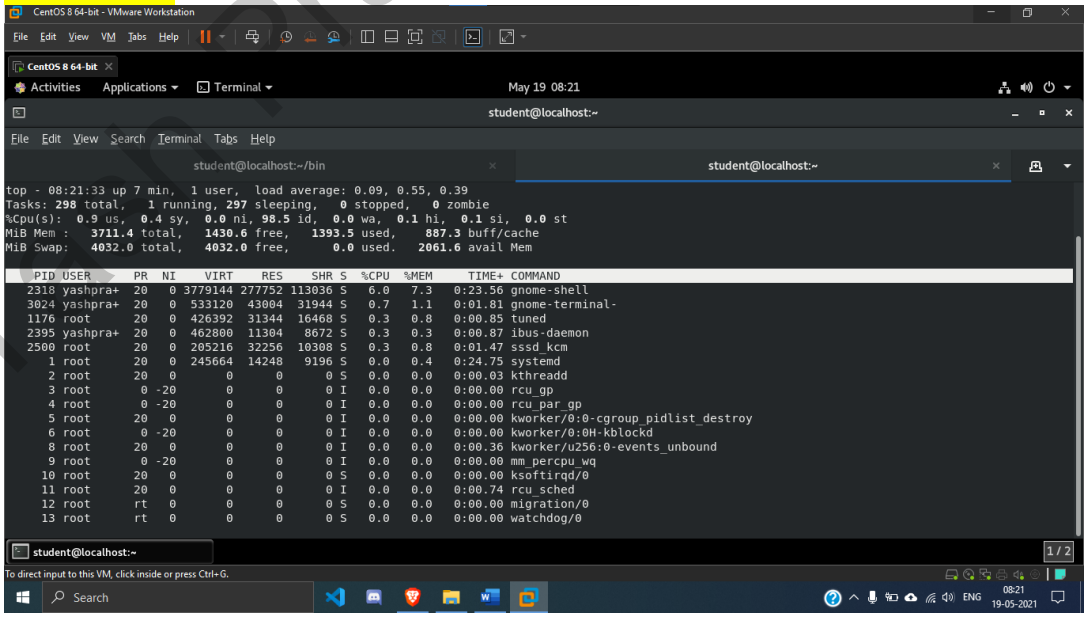
```
#!/bin/bash
while true; do
  var=1
  while [[ var -lt 50000 ]]; do
    var=$(($var+1))
  done
  sleep 1
done
```

SOLUTION:



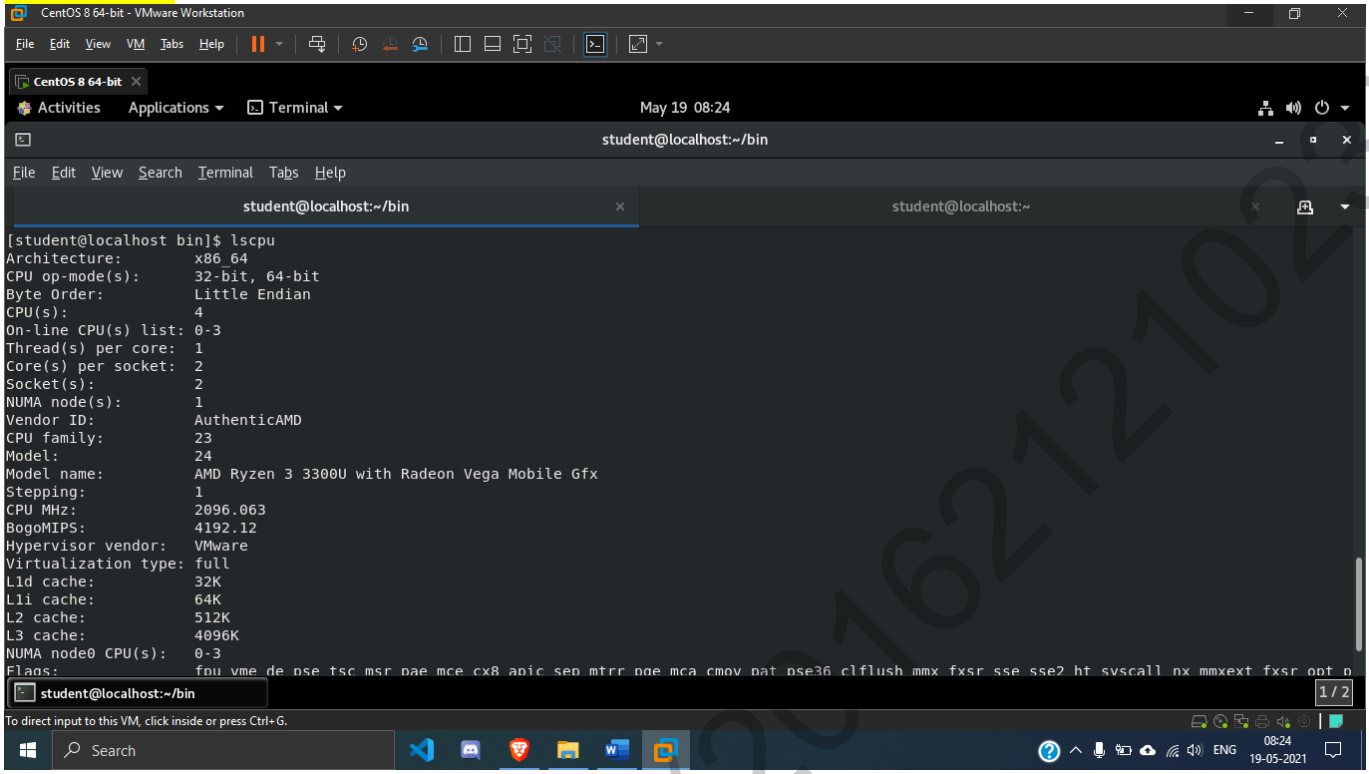
3. In the right window, run the top utility.

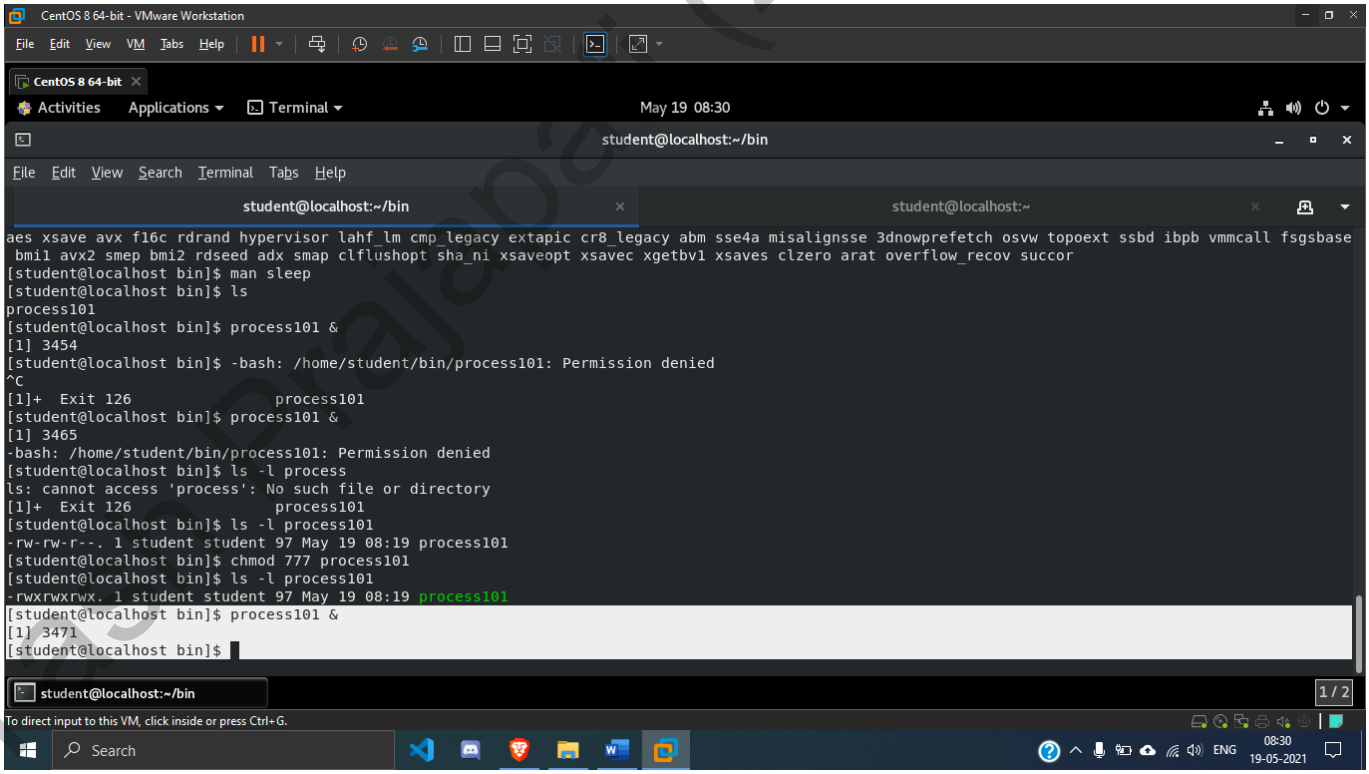
SOLUTION:



4. In the left terminal shell, determine the number of logical CPUs on the virtual machine. Run the process101 script in the background.

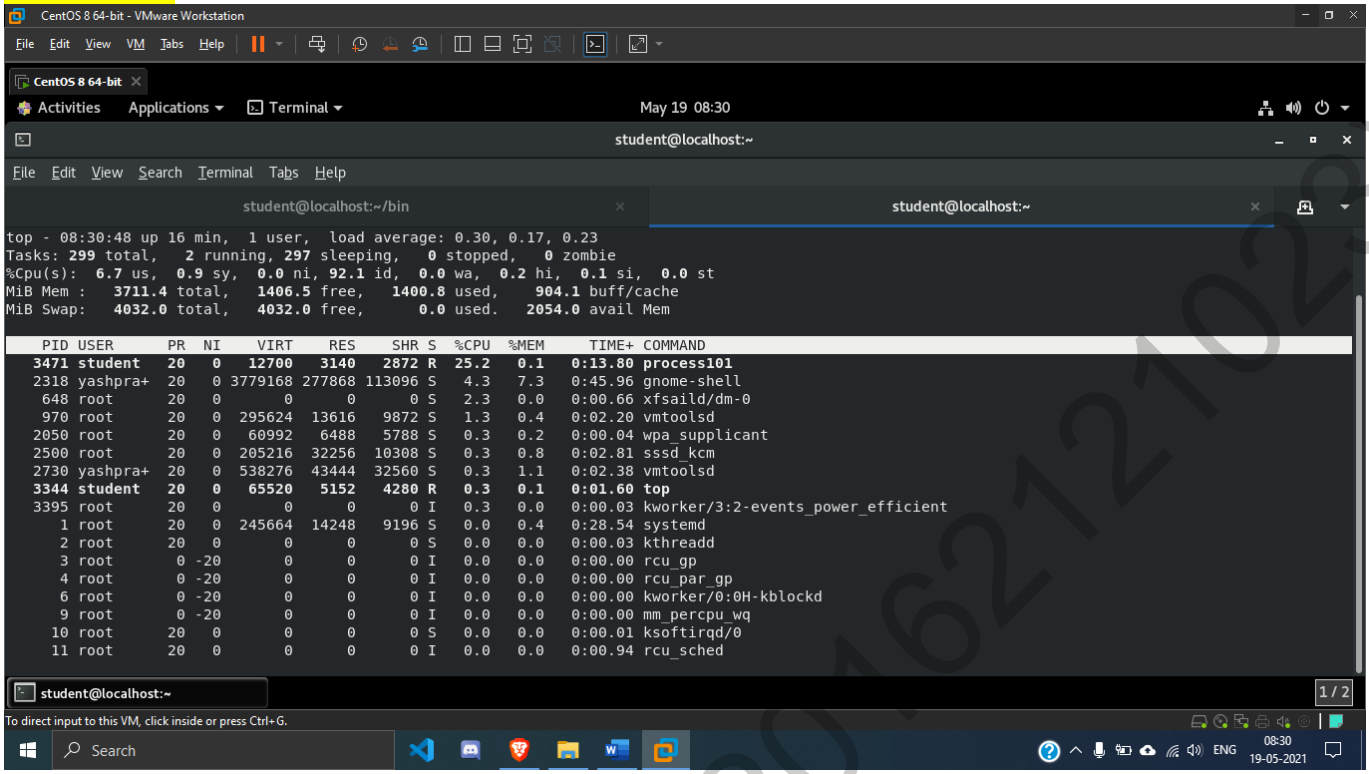
SOLUTION:





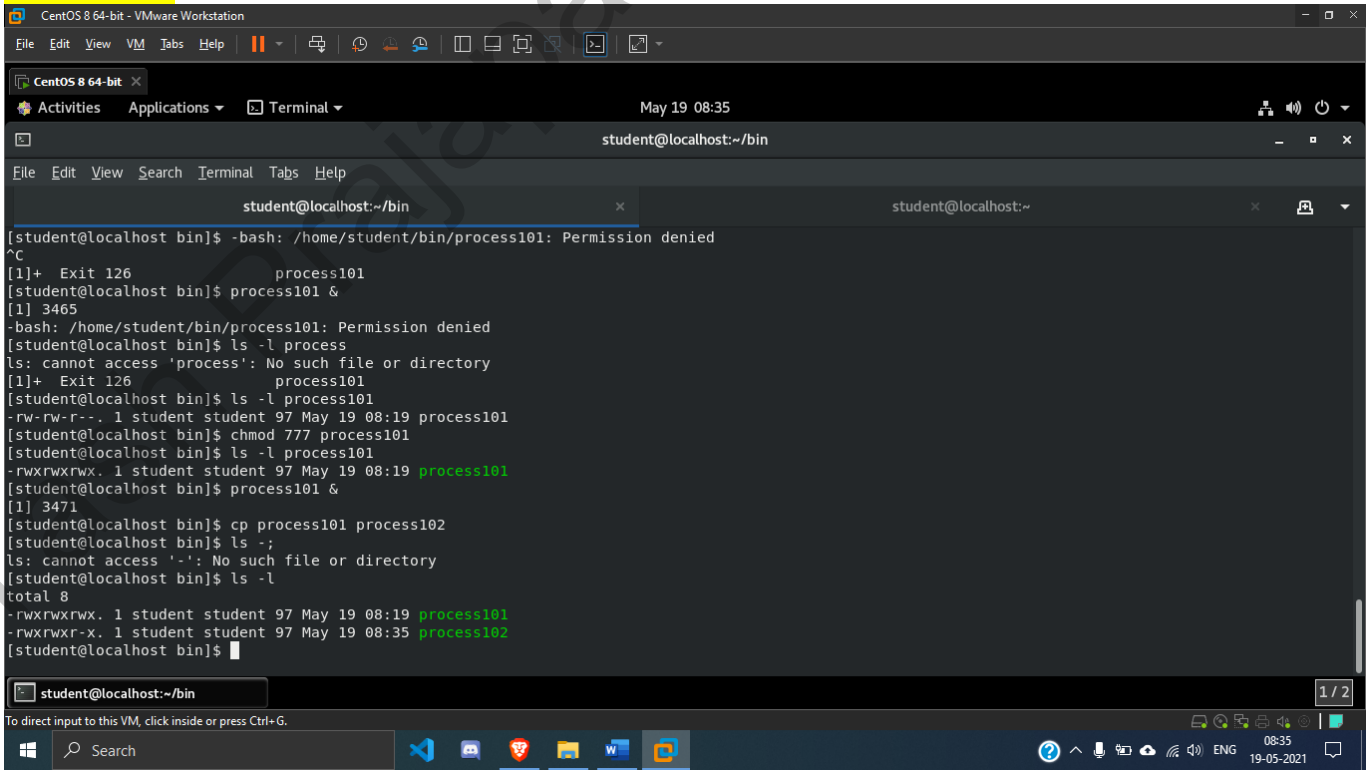
5. In the right terminal shell, observe the top display, running tasks & CPU load.

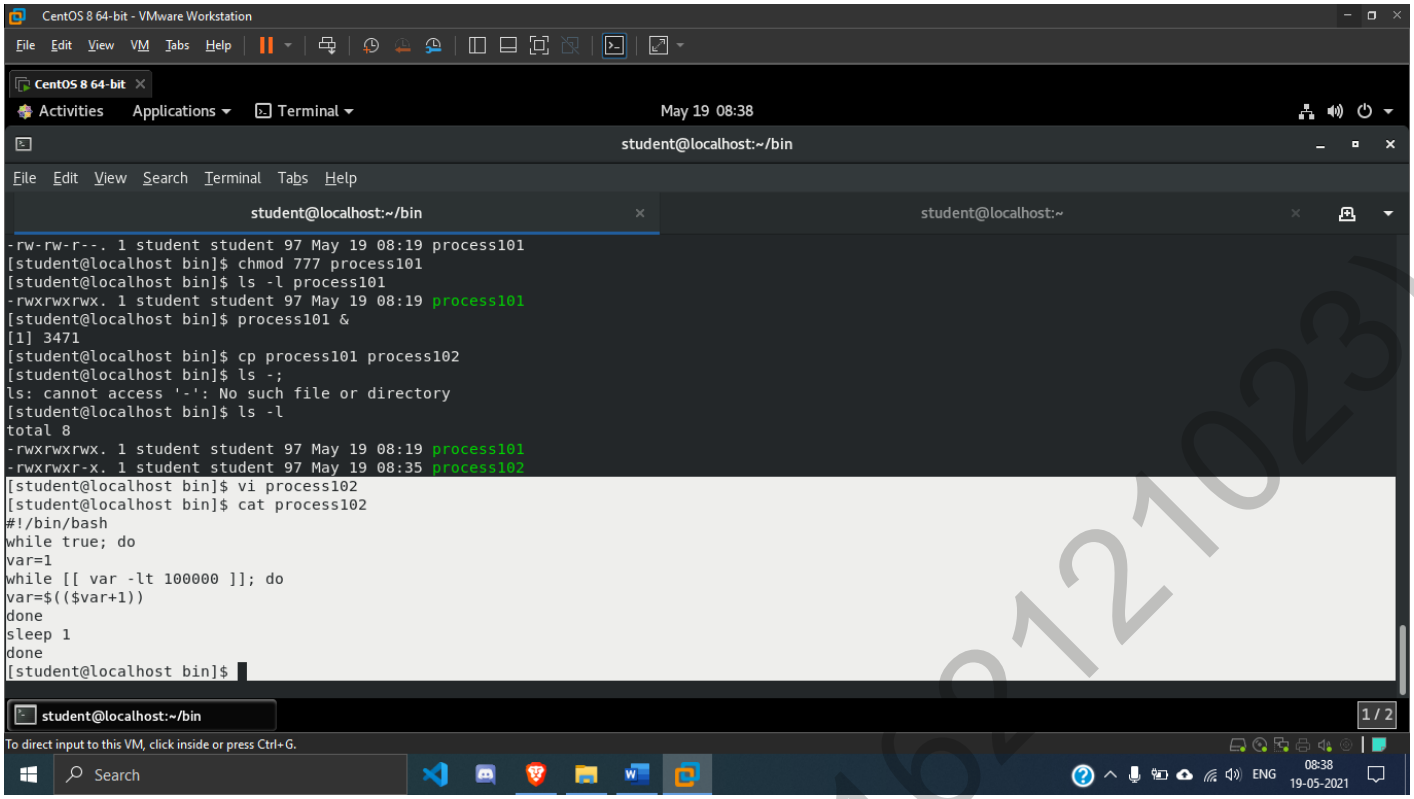
SOLUTION:

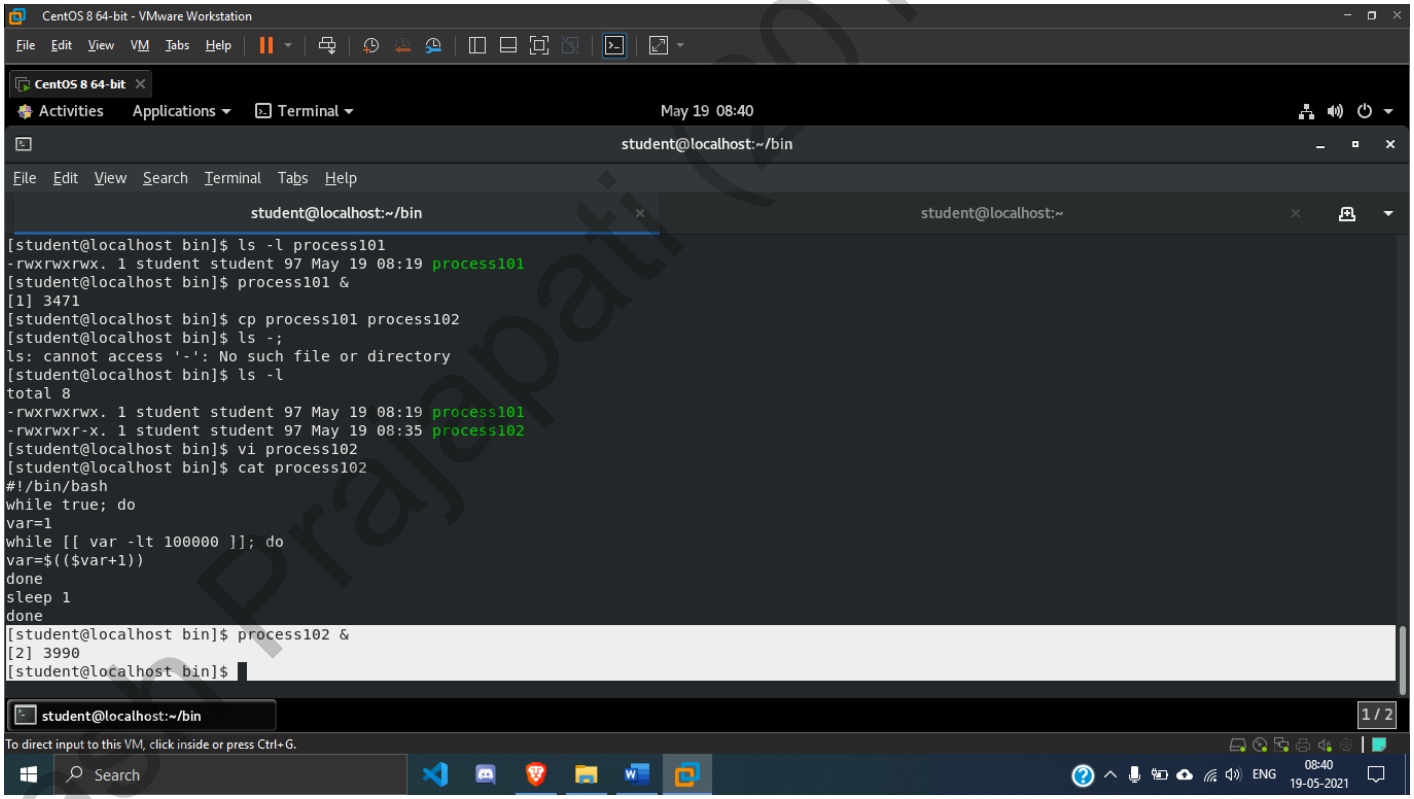


6. Copy the process101 script to a new file called process102. Edit the script to create more artificial CPU load. Increase the load from fifty thousand to one hundred thousand. Start the process102 process in the background.

SOLUTION:

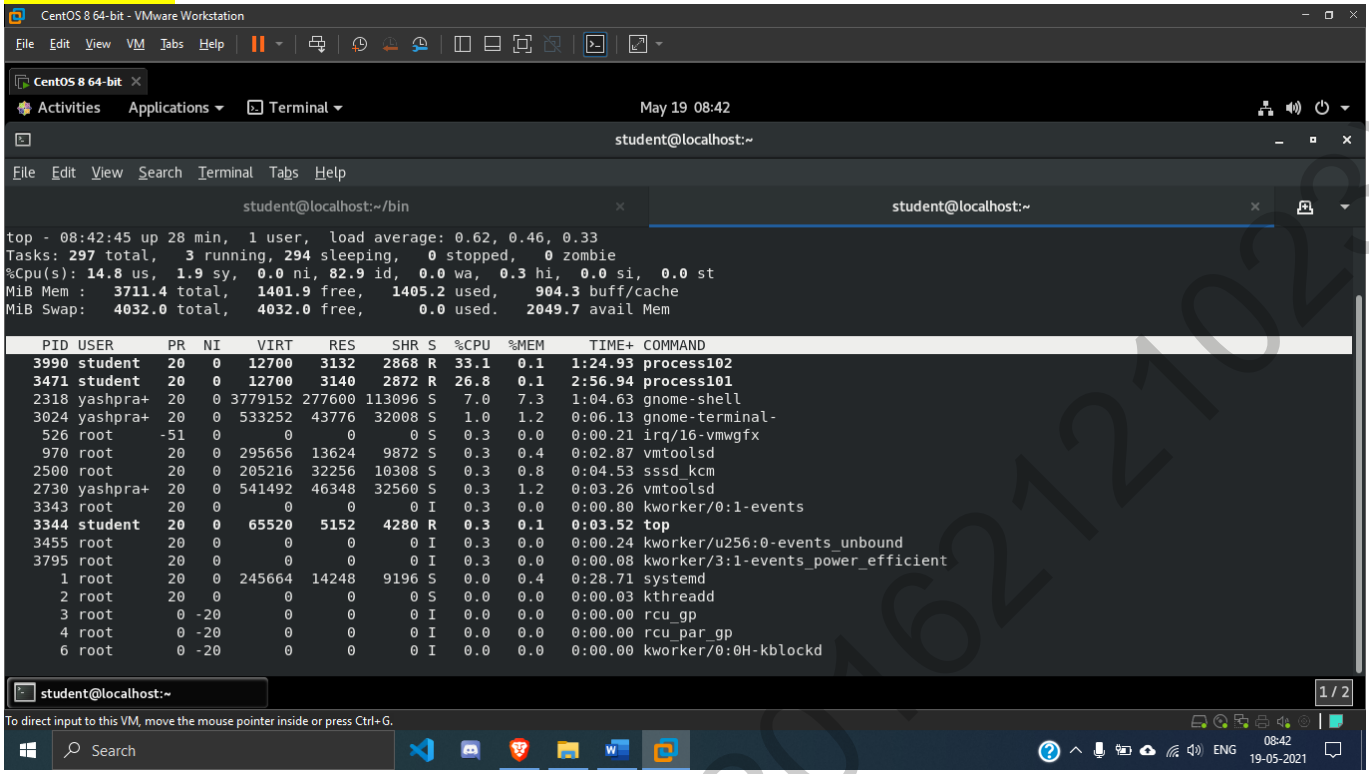






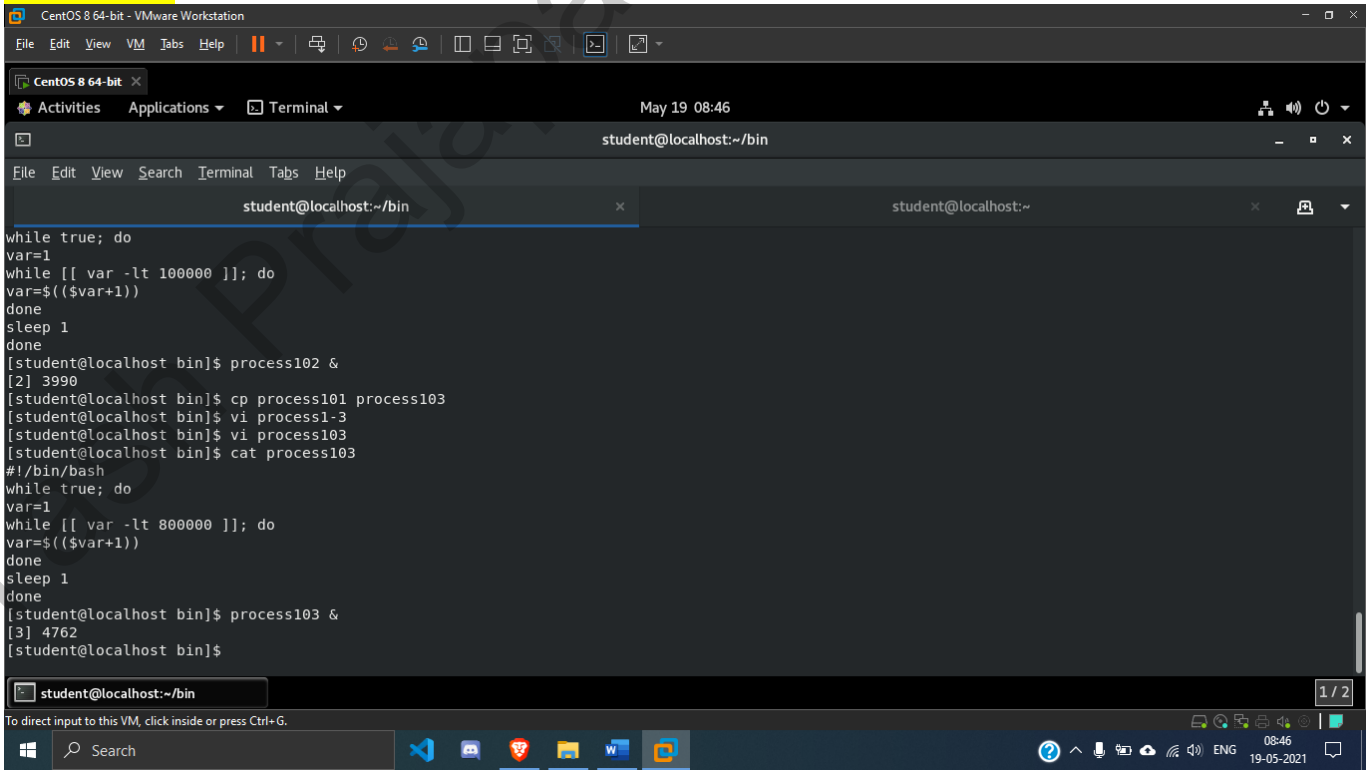
7. In the right terminal shell, confirm that the process is running and using the most CPU resources.

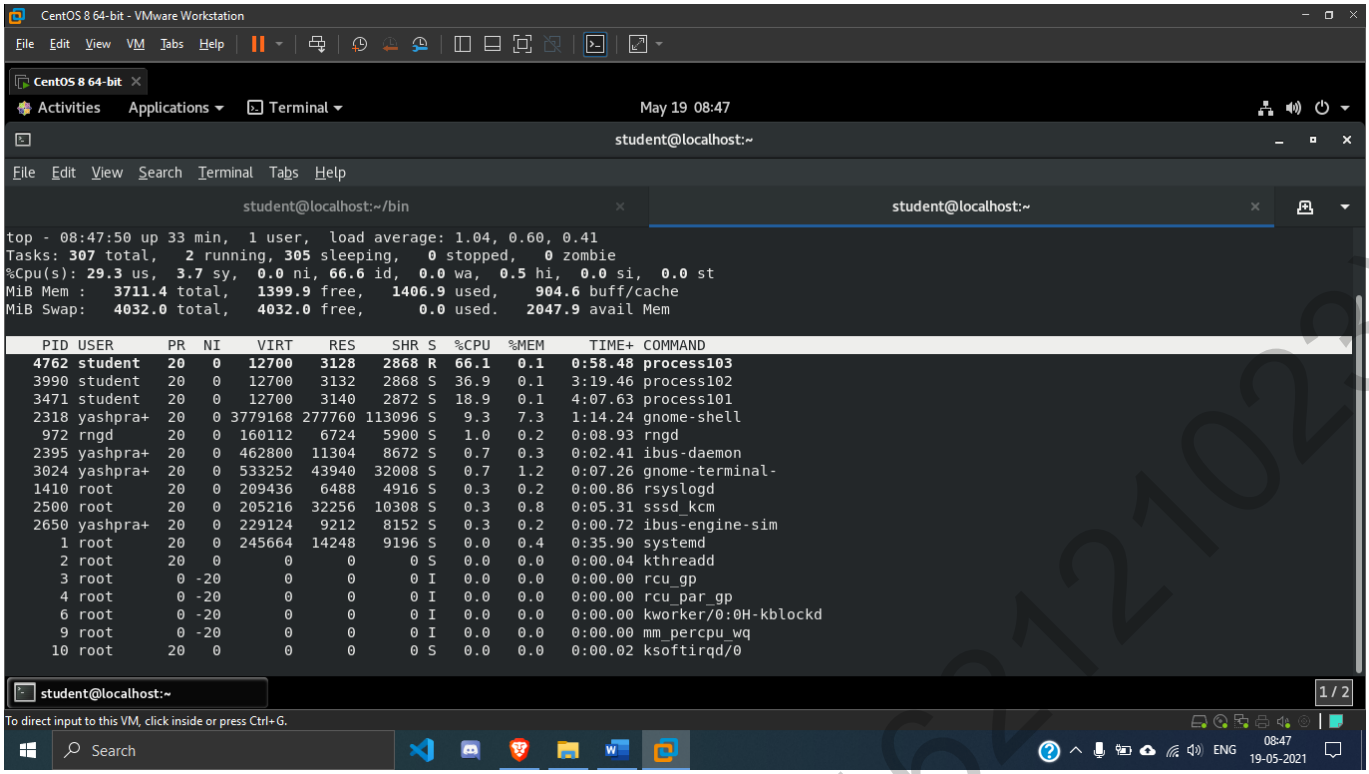
SOLUTION:



8. Copy process101 to a new script called process103. Increase the addition count to eight hundred thousand. Start process103 in the background. Confirm that the load average is above 1. It may take a few minutes for the load average to change.

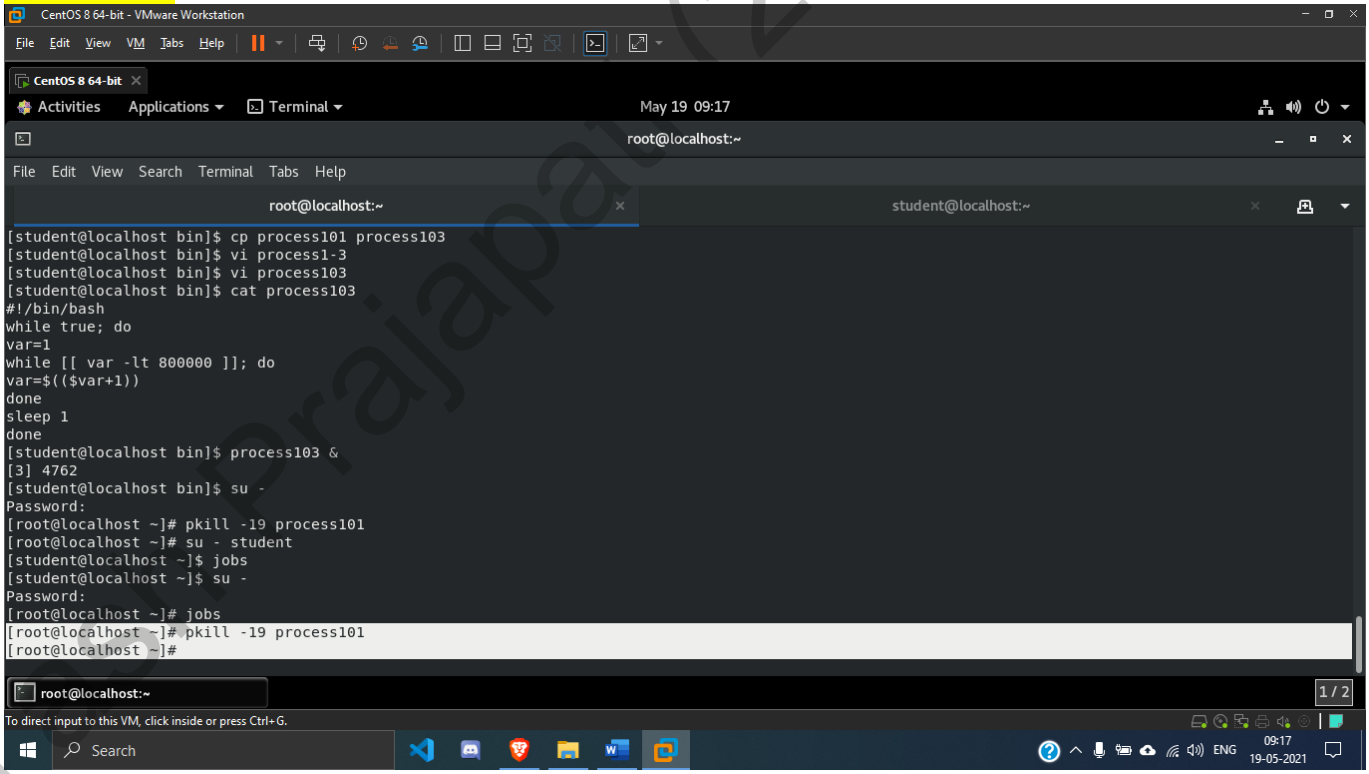
SOLUTION:

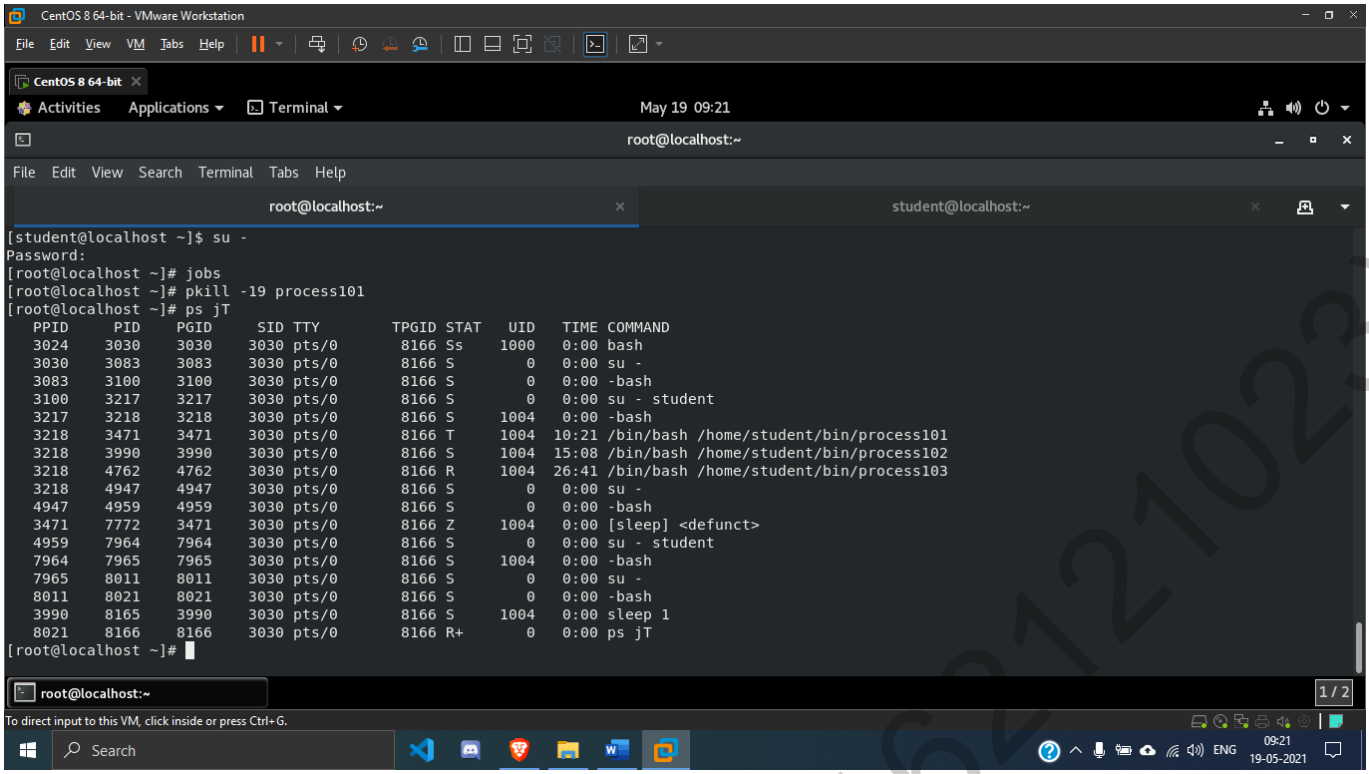




9. In the left terminal shell, become root. Suspend the process101 process. List the remaining jobs. Observe that the process state for process101 is now T.

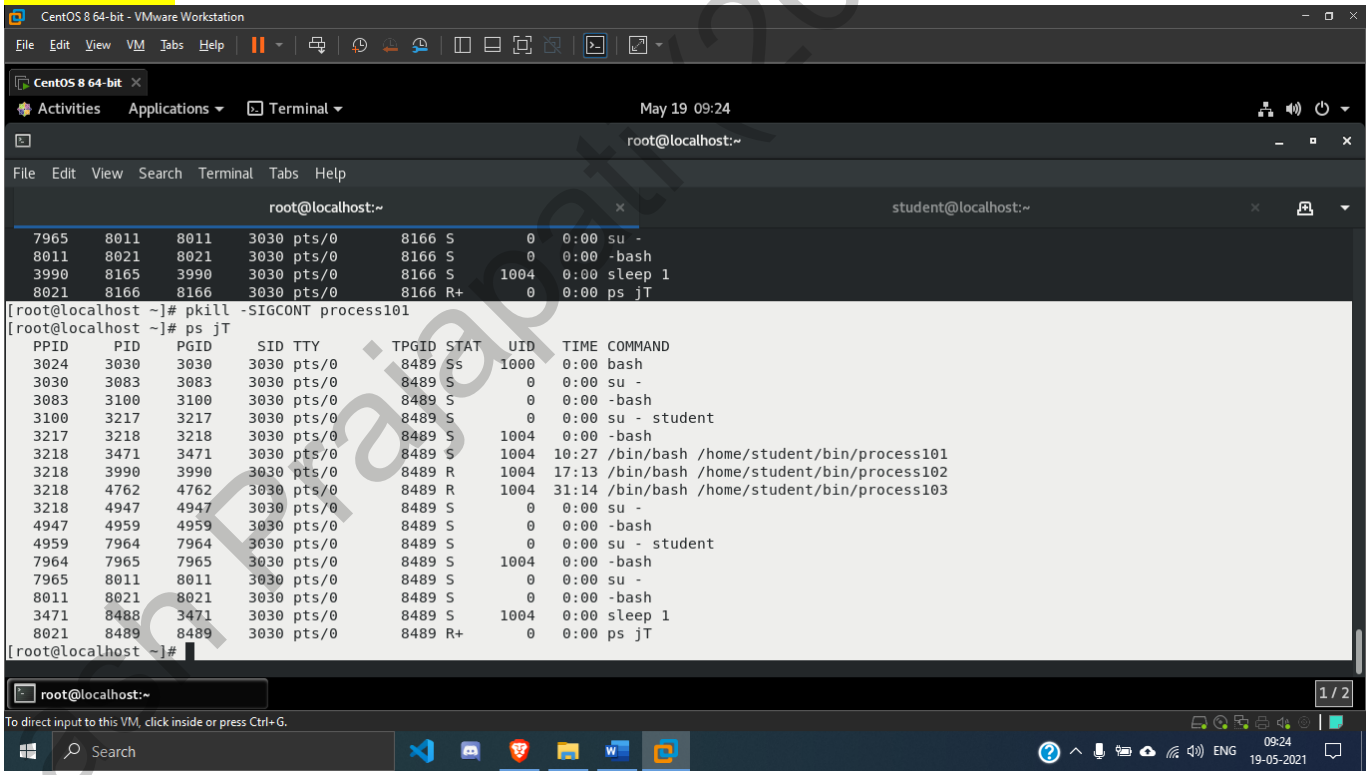
SOLUTION:





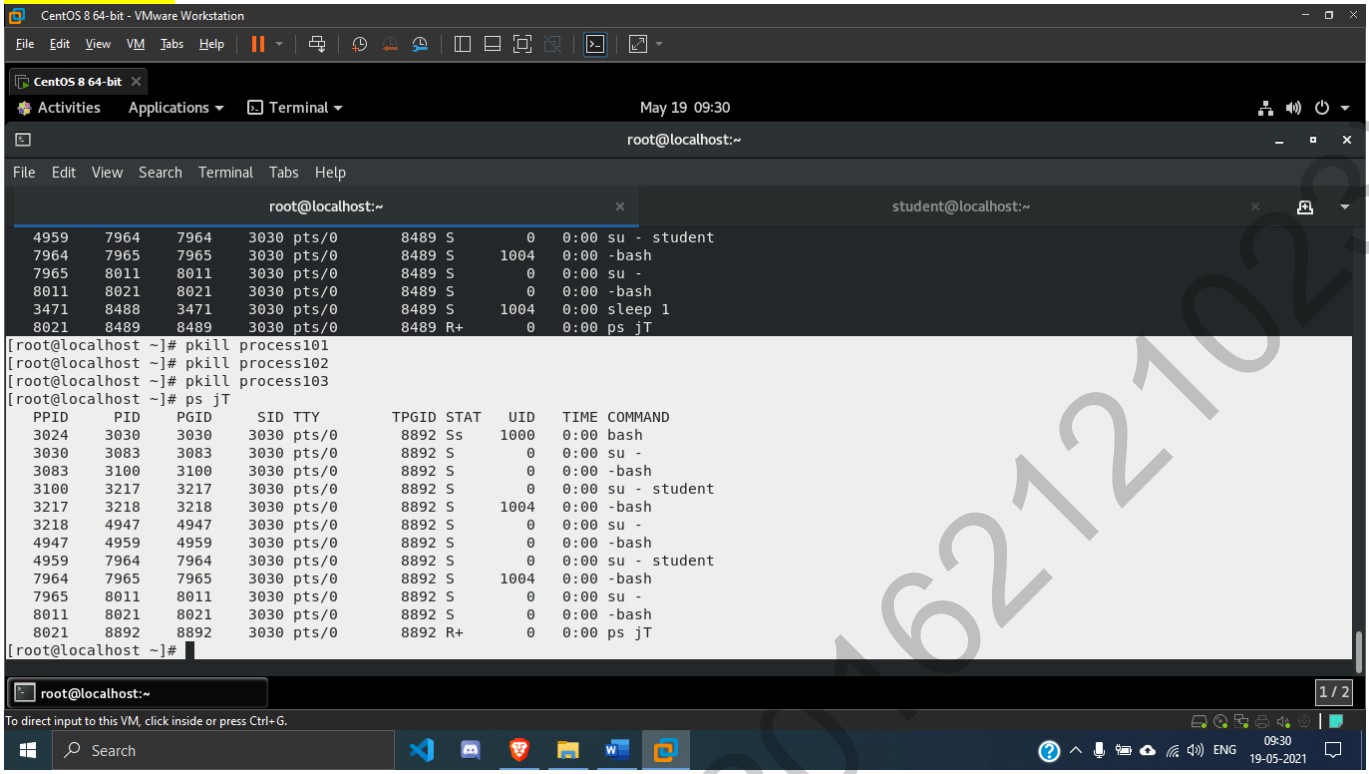
10. Resume the process101 process.

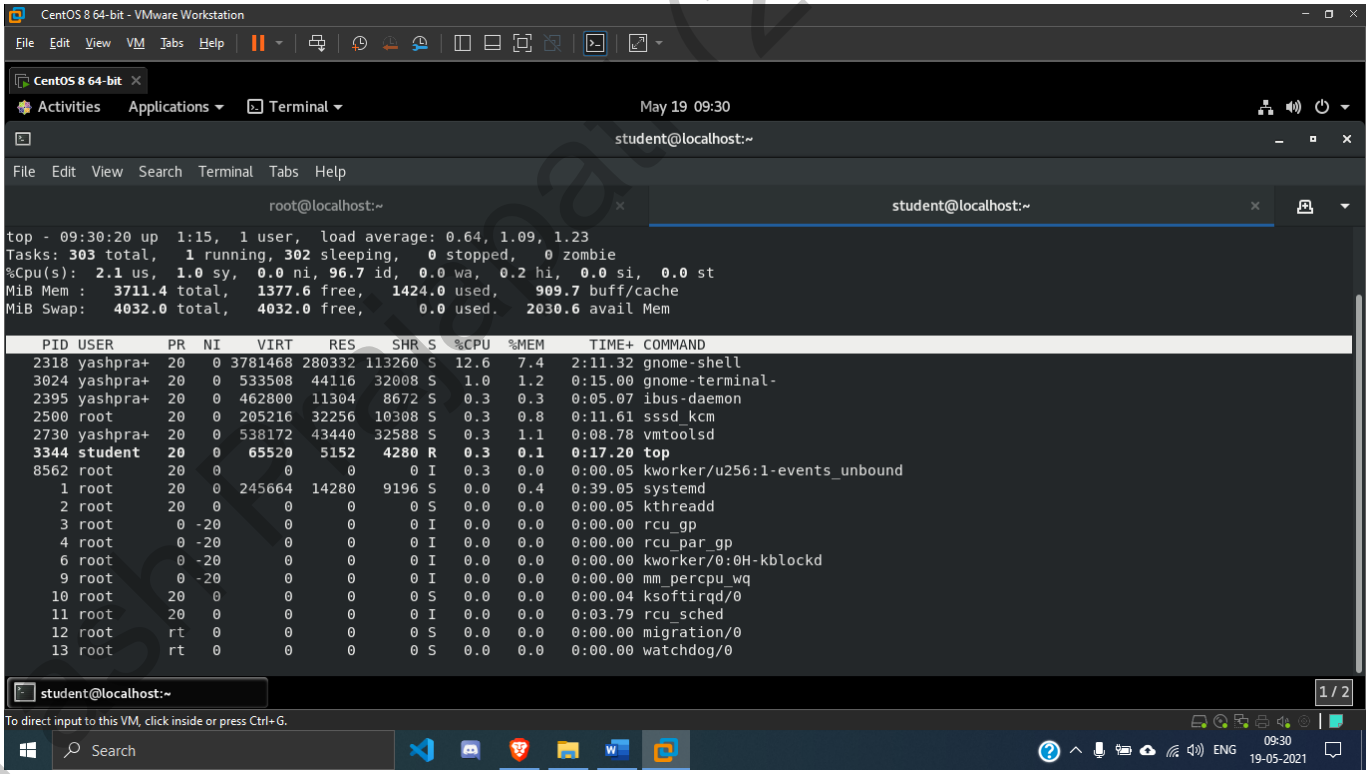
SOLUTION:



11. Terminate process101, process102, and process103 using the command line. Confirm that the processes no longer display in top.

SOLUTION:





12. In the left terminal shell, exit from the root user. In the right terminal shell stop the top command.

SOLUTION: