Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 11

Course code: ICT-3110

Course title: Operating System Lab

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Date of Submission:

Reference: Tazneen Akter (The mother board of my laptop is suddenly damaged and for that, I wasn't able to do my lab (2,3,5,6). So I took her help).

Submitted by

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Experiment no : 06

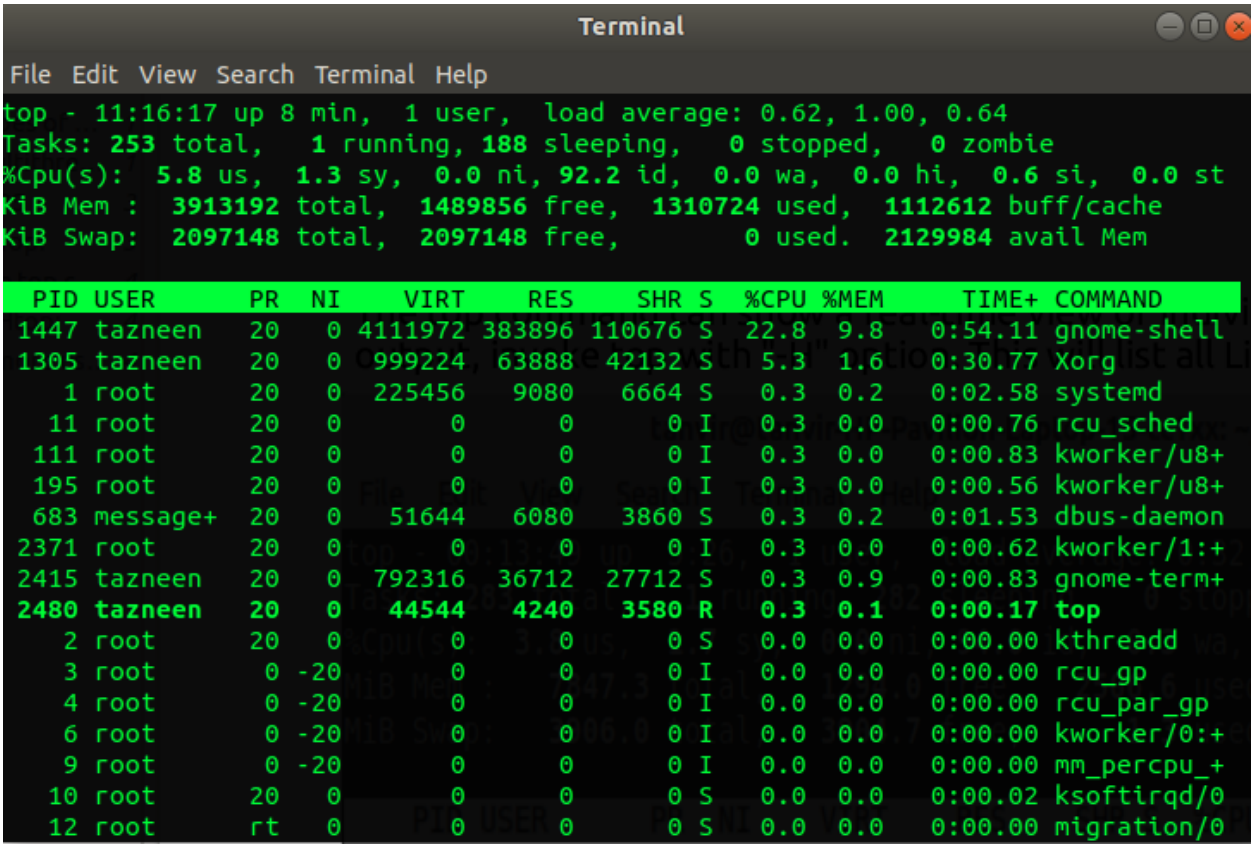
Experiment Name : Linux command for process .

Theory :

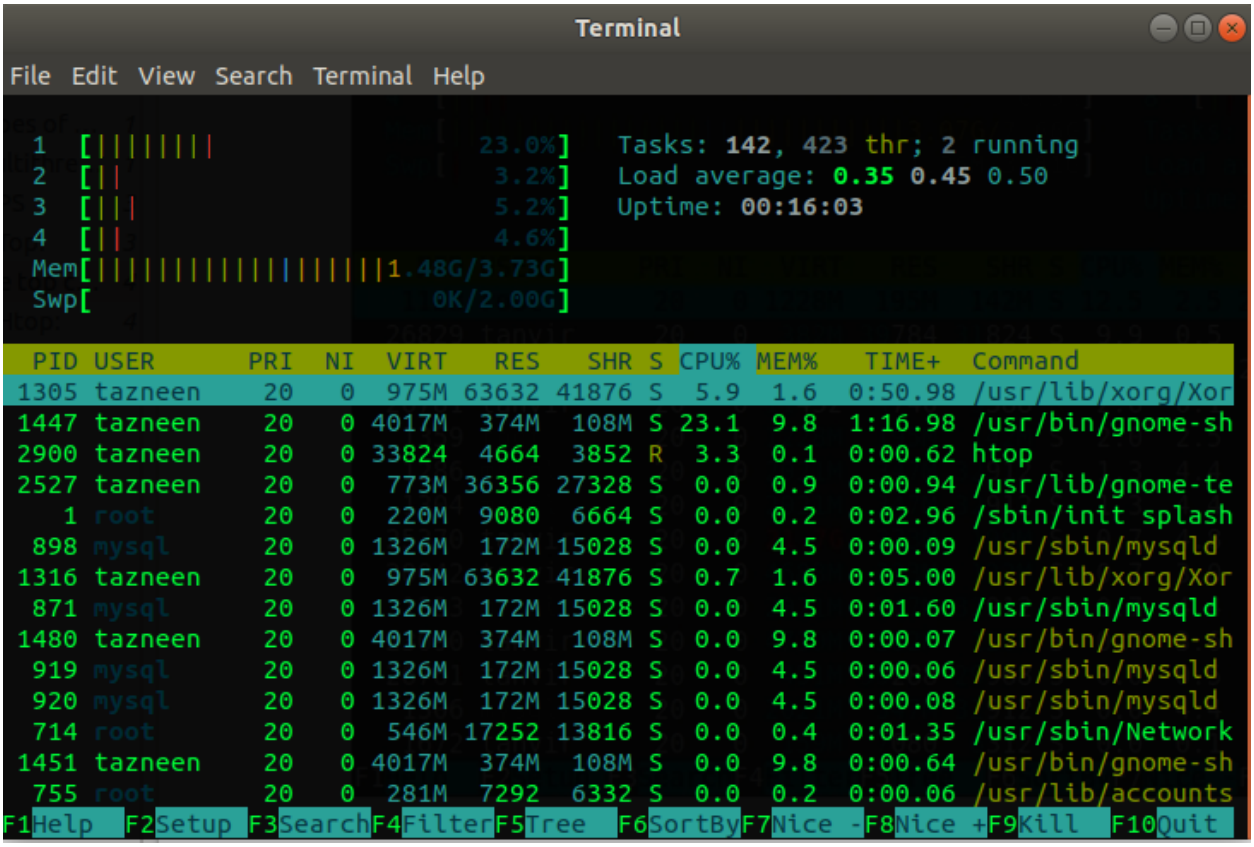
The Linux terminal has a number of useful commands that can display running processes, kill them, and change their priority level. This post lists the classic, traditional commands, as well as some more useful, modern ones. Many of the commands here perform a single function and can be combined that's the Unix philosophy of designing programs. Other programs, like htop, provide a friendly interface on top of the commands. We have to executes this commands Top, htop, ps, pstree, kill, pgrep, pkill ,killall, renice, xkill.

Working Process :

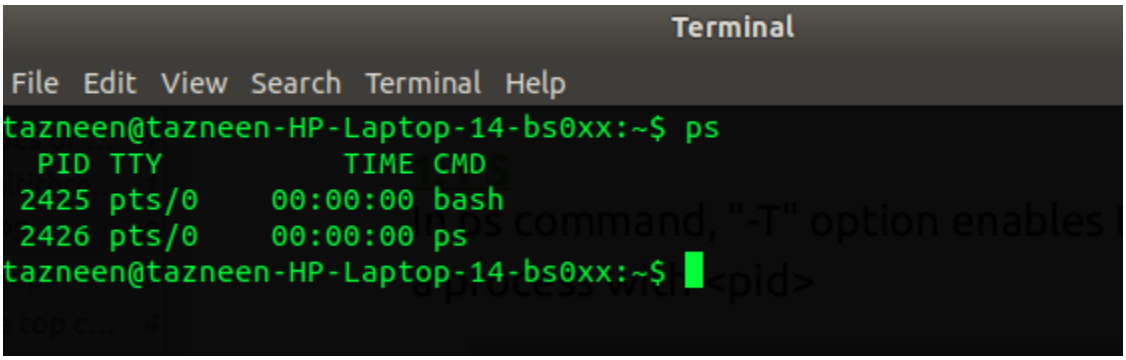
1.Top : This command is the traditional way to view your system's resource usage and see the processes that are taking up the most system resources. Top displays a list of processes, with the ones using the most CPU at the top.



2.htop: The htop command is an improved top. It's not installed by default on most Linux distributions — here's the command you'll need to install it on Ubuntu:



3.ps : The ps command lists running processes.



4.pstree : The pstree command is another way of visualizing processes. It displays them in tree format. So, for example, your X server and graphical environment would appear under the display manager that spawned them.

```
File  Edit  View  Search  Terminal  Help
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ pstree
systemd─┬─ModemManager───2*[{ModemManager}]
        ├─NetworkManager─┬─dhclient
        │                └─3*[{NetworkManager}]
        ├─accounts-daemon───2*[{accounts-daemon}]
        ├─acpid
        ├─avahi-daemon───avahi-daemon
        ├─bluetoothd
        ├─boltd───2*[{boltd}]
        ├─colord───2*[{colord}]
        ├─cron
        ├─cups-browsed───2*[{cups-browsed}]
        ├─cupsd
        ├─dbus-daemon
        ├─fwupd───4*[{fwupd}]
        ├─gdm3─┬─gdm-session-wor─┬─gdm-wayland-ses─┬─gnome-session-b─┬─gnome-sh+
        │      │                 │                 │                 ├─gsd-a11y+
        │      │                 │                 │                 ├─gsd-clip+
        │      │                 │                 │                 ├─gsd-colo+
        │      │                 │                 │                 ├─gsd-date+
        │      │                 │                 │                 ├─gsd-hous+
        │      │                 │                 │                 ├─gsd-keyb+
        │      │                 │                 │                 ├─gsd-medi+
        │      │                 │                 │                 ├─gsd-mous+
        │      │                 │                 │                 ├─gsd-powe+
        │      │                 │                 │                 ├─gsd-prin+
        │      │                 │                 │                 ├─gsd-rfki+
        │      │                 │                 │                 ├─gsd-scre+
        │      │                 │                 │                 ├─gsd-shar+
        │      │                 │                 │                 ├─gsd-smar+
        │      │                 │                 │                 ├─gsd-soun+
        │      │                 │                 │                 ├─gsd-waco+
        │      │                 │                 │                 ├─gsd-xset+
        │      │                 │                 │                 └─3*[{gnom+
        │      │                 │                 └─2*[{gdm-wayland-ses}]
```

5. kill : The kill command can kill a process, given its process ID. You can get this information from the ps -A, top or pgrep commands.

kill PID

```
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ kill evince
bash: kill: evince: arguments must be process or job IDs
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ ps -A | grep evince
 3371 ?        00:00:18 evince
 3439 ?        00:00:27 evince
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ sudo kill 3371
[sudo] password for tazneen:
tazneen@tazneen-HP-Laptop-14-bs0xx:~$
```

6. pkill & killall : The pkill and killall commands can kill a process.

```
File  Edit  View  Search  Terminal  Help
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ sudo killall evince
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ pkill evince
tazneen@tazneen-HP-Laptop-14-bs0xx:~$
```

7. pgrep : Given a search term,pgrep returns the process IDs that match it.

```
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ pgrep netns
34
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ renice 19 34
renice: failed to set priority for 34 (process ID): Operation not permitted
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ sudo renice 19 34
34 (process ID) old priority -20, new priority 19
tazneen@tazneen-HP-Laptop-14-bs0xx:~$
```

8. renice : The renice command changes the nice value of an already running process. The nice value determines what priority the process runs with. A value of -15 is very high priority, while a value of 15 is very low priority. A value of 0 is the default priority.


```
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ pgrep netns
34
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ renice 19 34
renice: failed to set priority for 34 (process ID): Operation not permitted
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ sudo renice 19 34
34 (process ID) old priority -20, new priority 19
tazneen@tazneen-HP-Laptop-14-bs0xx:~$
```


9. .xkill : The xkill command is a way of easily killing graphical programs. Run it and your cursor will turn into an x sign. Click a program's window to kill that program. If you don't want to kill a program, you can back out of xkill by rightclicking instead.

```
File  Edit  View  Search  Terminal  Help
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ xkill
Select the window whose client you wish to kill with button 1....
xkill:  killing creator of resource 0x3a00007
tazneen@tazneen-HP-Laptop-14-bs0xx:~$
```

Discussion: We have implemented some Linux command for process in this lab. We can easily executes our work and do our work firster by using this terminal and very easy commands.