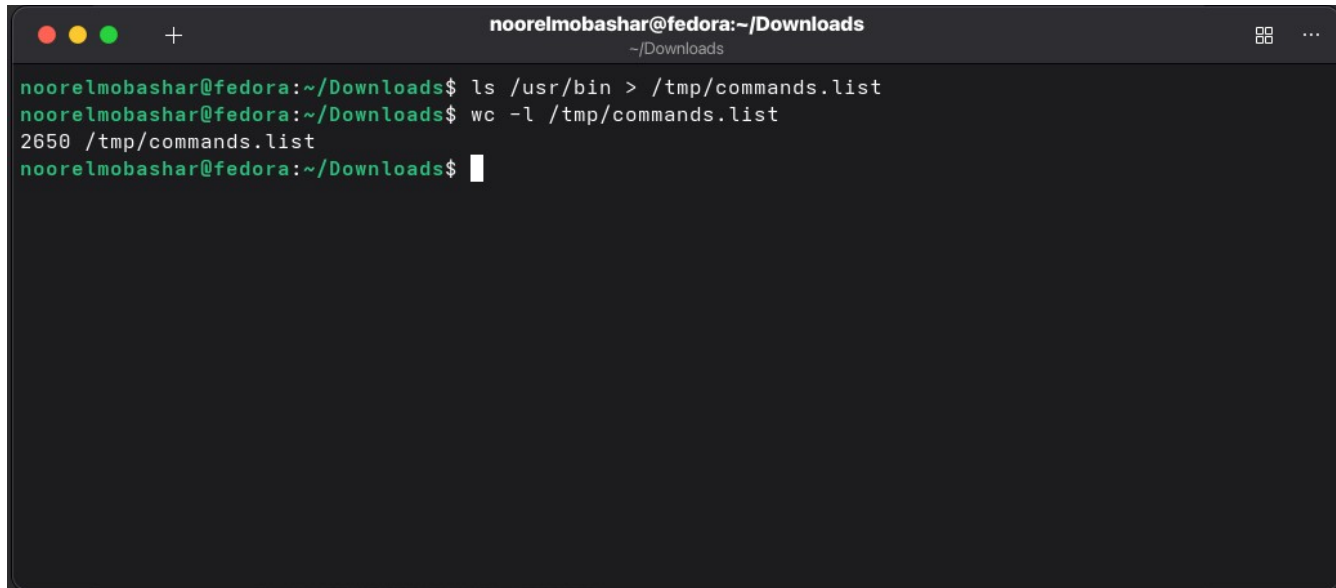


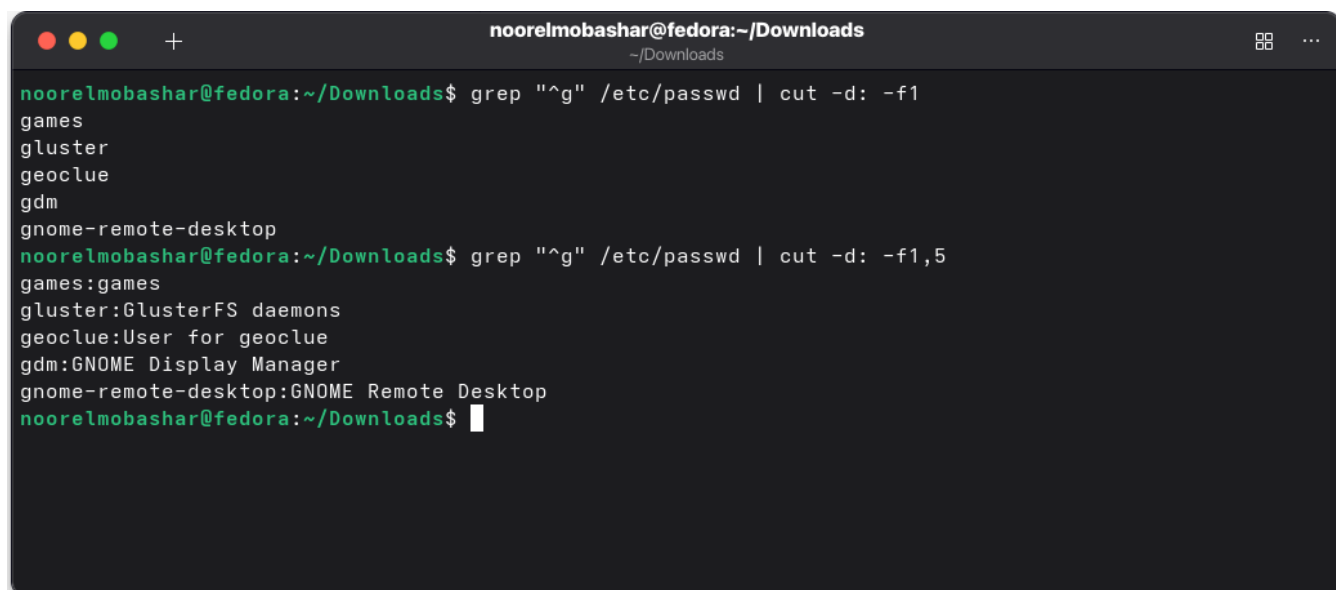
Name: Nooreldeen Ayman Mohammed Elmobashar
Track: Open Source
Branch: ITI Mansoura

1. List the user commands and redirect the output to /tmp/commands.list
2. Count the number of user commands



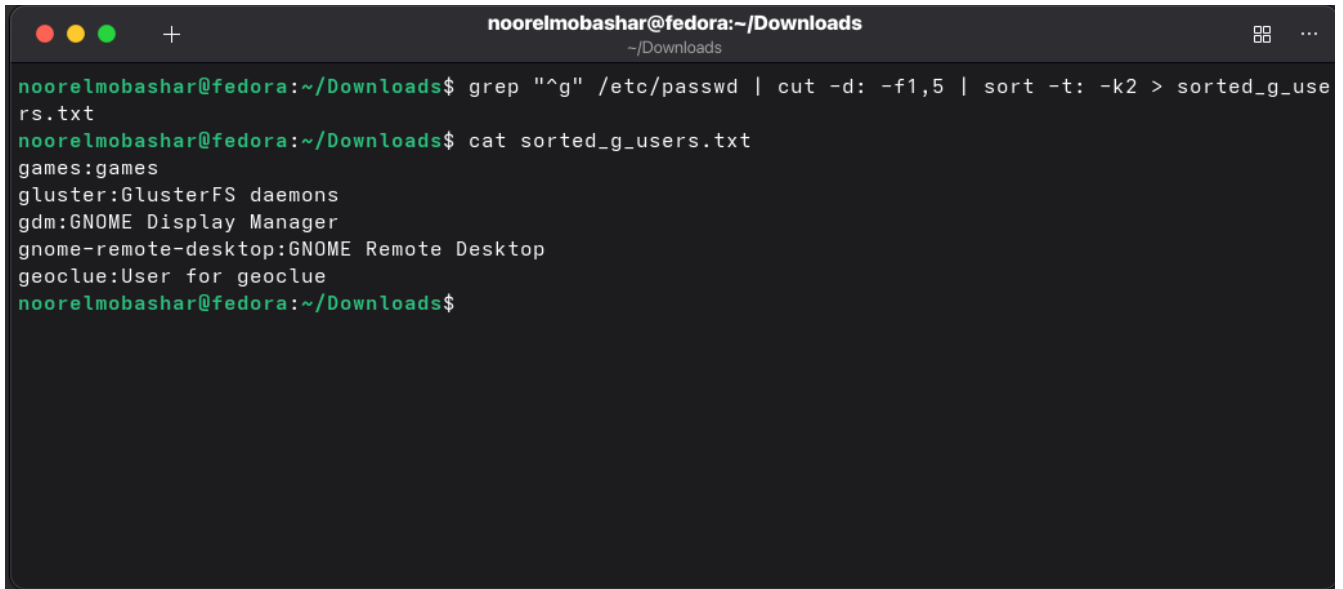
```
noorelmobashar@fedora:~/Downloads$ ls /usr/bin > /tmp/commands.list
noorelmobashar@fedora:~/Downloads$ wc -l /tmp/commands.list
2650 /tmp/commands.list
noorelmobashar@fedora:~/Downloads$
```

3. Get all the users names whose first character in their login is 'g'.
4. Get the logins name and full names (comment) of logins starts with "g".



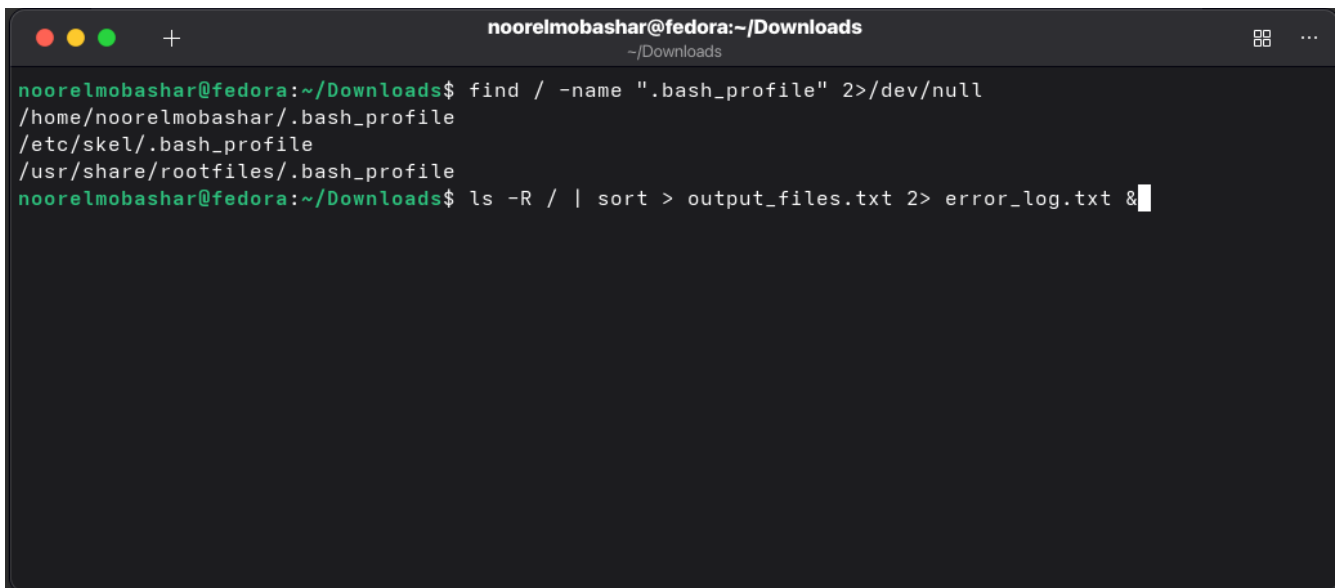
```
noorelmobashar@fedora:~/Downloads$ grep "^g" /etc/passwd | cut -d: -f1
games
gluster
geoclue
gdm
gnome-remote-desktop
noorelmobashar@fedora:~/Downloads$ grep "^g" /etc/passwd | cut -d: -f1,5
games:games
gluster:GlusterFS daemons
geoclue:User for geoclue
gdm:GNOME Display Manager
gnome-remote-desktop:GNOME Remote Desktop
noorelmobashar@fedora:~/Downloads$
```

5. Save the output of the last command sorted by their full names in a file.



```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ grep "^g" /etc/passwd | cut -d: -f1,5 | sort -t: -k2 > sorted_g_users.txt
noorelmobashar@fedora:~/Downloads$ cat sorted_g_users.txt
games:games
gluster:GlusterFS daemons
gdm:GNOME Display Manager
gnome-remote-desktop:GNOME Remote Desktop
geoclue:User for geoclue
noorelmobashar@fedora:~/Downloads$
```

6. Write two commands: first: to search for all files on the system that named .bash_profile. Second: sorts the output of ls command on / recursively, Saving their output and error in 2 different files and sending them to the background.



```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ find / -name ".bash_profile" 2>/dev/null
/home/noorelmobashar/.bash_profile
/etc/skel/.bash_profile
/usr/share/rootfiles/.bash_profile
noorelmobashar@fedora:~/Downloads$ ls -R / | sort > output_files.txt 2> error_log.txt &
```

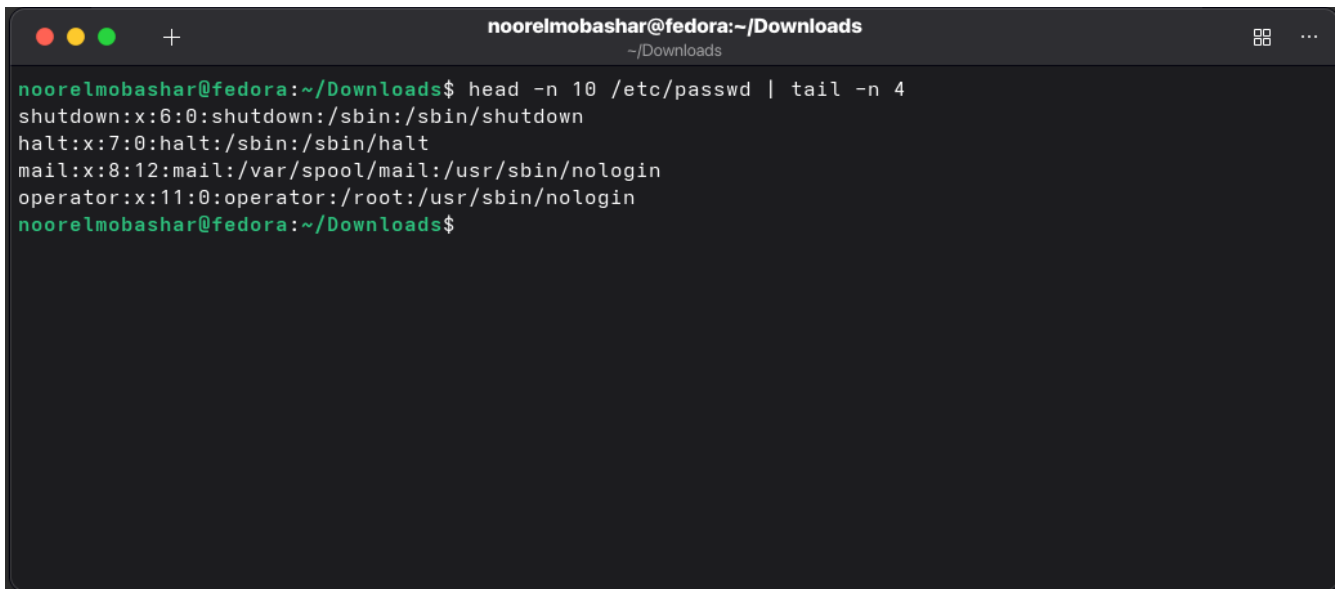
```
noorelmobashar@fedora:~/Downloads
ice-KwrQs0': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-pcsd.service-U2Wxiw': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-polkit.service-YrFsK5': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-rtkit-daemon.service-y6Jy3g': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-switcheroo-control.service-YghvvZ': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-systemd-logind.service-HQZDNR': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-systemd-resolved.service-LxNHqZ': Permission denied
ls: cannot open directory '/var/tmp/systemd-private-8b8347e939d64cb4a8723b394ca5176c-upower.service-gVlyvK': Permission denied

[1]+  Done                  ls --color=auto -R / | sort > output_files.txt 2> error_log.txt
noorelmobashar@fedora:~/Downloads$
```

7. Display the number of users who is logged now to the system.

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ who | wc -l
2
noorelmobashar@fedora:~/Downloads$
```

8. Display lines 7 to line 10 of /etc/passwd file

A terminal window titled "noorelmobashar@fedora:~/Downloads" with a dark background. The prompt is "noorelmobashar@fedora:~/Downloads\$". The command "head -n 10 /etc/passwd | tail -n 4" has been executed, resulting in four lines of output: "shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown", "halt:x:7:0:halt:/sbin:/sbin/halt", "mail:x:8:12:mail:/var/spool/mail:/usr/sbin/nologin", and "operator:x:11:0:operator:/root:/usr/sbin/nologin". The prompt is now "noorelmobashar@fedora:~/Downloads\$".

```
noorelmobashar@fedora:~/Downloads$ head -n 10 /etc/passwd | tail -n 4
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/usr/sbin/nologin
operator:x:11:0:operator:/root:/usr/sbin/nologin
noorelmobashar@fedora:~/Downloads$
```

9. What happens if you execute:

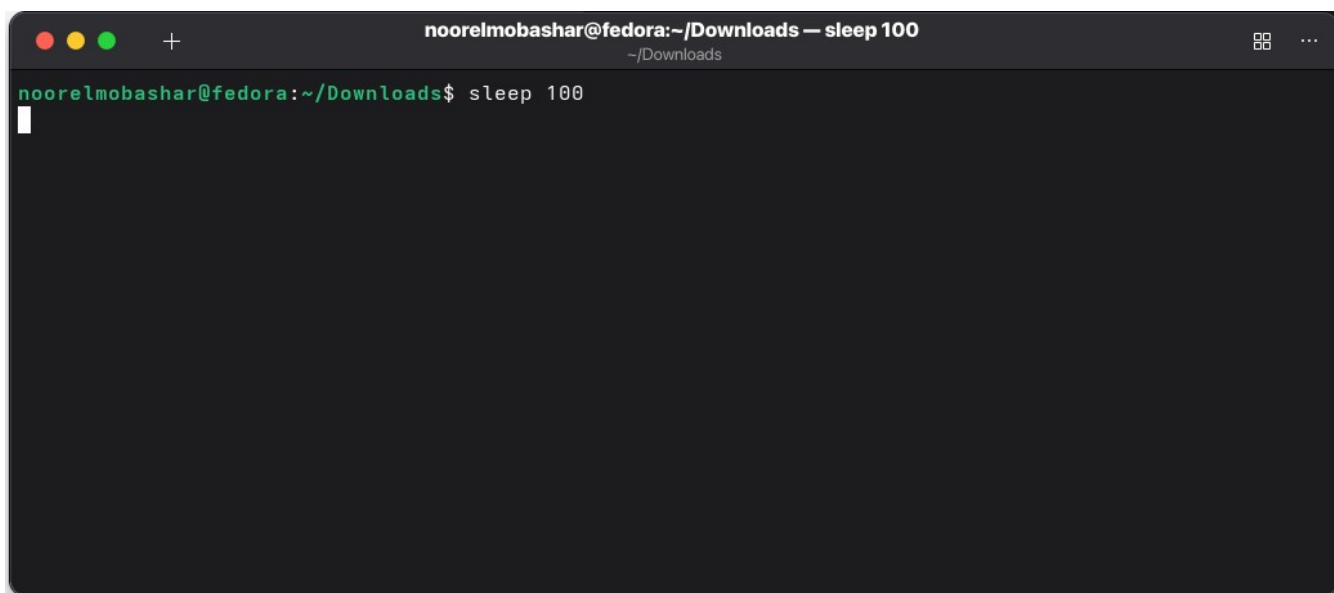
```
cat filename1 | cat filename2
ls | rm
ls /etc/passwd | wc -l
```

For the first command it will show only filename2 information, because it will ignore the first command output.

For the second command it will result in an error, as the files will be listed, but the rm needs more argument which is the file to be deleted.

For the third command it will list the file /etc/passwd then wc -l will count it.

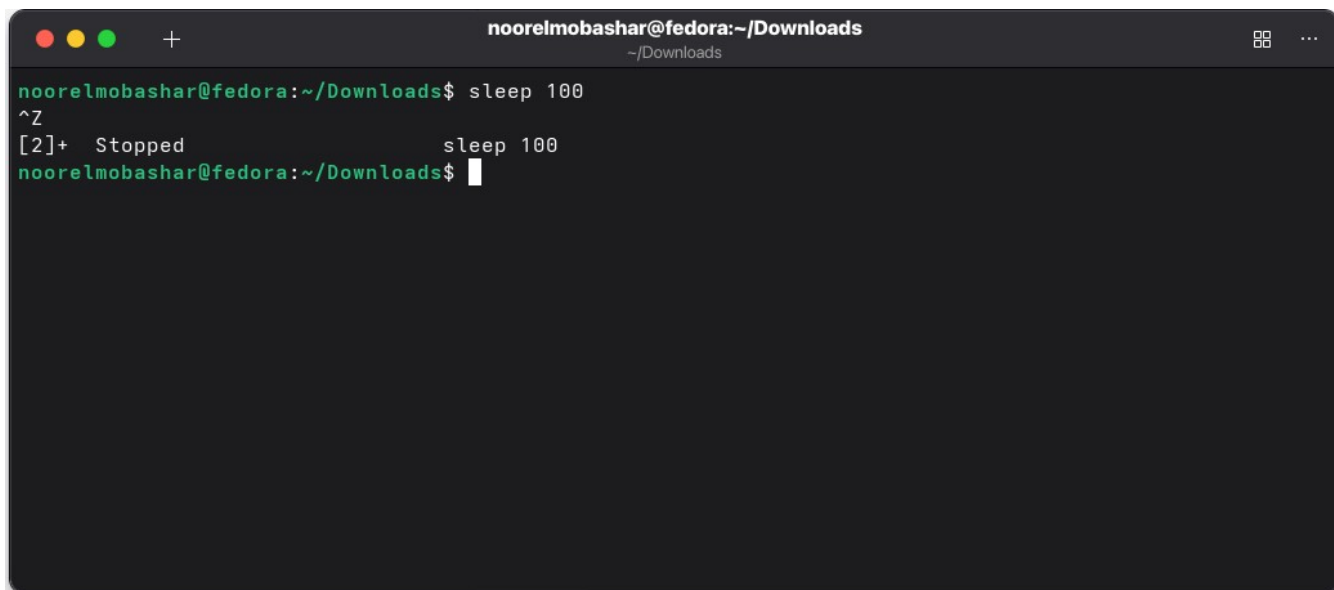
10. Issue the command sleep 100.



A terminal window titled "noorelmobashar@fedora:~/Downloads — sleep 100". The prompt is "noorelmobashar@fedora:~/Downloads\$". The command "sleep 100" has been entered, and a white cursor is visible on the line below it.

```
noorelmobashar@fedora:~/Downloads$ sleep 100
```

11. Stop the last command.



A terminal window titled "noorelmobashar@fedora:~/Downloads". The prompt is "noorelmobashar@fedora:~/Downloads\$". The command "sleep 100" has been entered. The user presses Ctrl-Z, which is shown as "^Z". The terminal then displays "[2]+ Stopped sleep 100". The prompt "noorelmobashar@fedora:~/Downloads\$" is shown again with a white cursor.

```
noorelmobashar@fedora:~/Downloads$ sleep 100
^Z
[2]+  Stopped                  sleep 100
noorelmobashar@fedora:~/Downloads$
```

12. Resume the last command in the background

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ sleep 100
^Z
[2]+  Stopped                  sleep 100
noorelmobashar@fedora:~/Downloads$ bg
[2]+ sleep 100 &
noorelmobashar@fedora:~/Downloads$
```

13. Issue the jobs command and see its output.

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ sleep 100
^Z
[2]+  Stopped                  sleep 100
noorelmobashar@fedora:~/Downloads$ bg
[2]+ sleep 100 &
noorelmobashar@fedora:~/Downloads$ jobs
[1]+  Stopped                  sleep 100
[2]-  Running                  sleep 100 &
noorelmobashar@fedora:~/Downloads$
```

14. Send the sleep command to the foreground and send it again to the background.

```
noorelmobashar@fedora:~/Downloads
~/Downloads

noorelmobashar@fedora:~/Downloads$ sleep 100
^Z
[2]+  Stopped                  sleep 100
noorelmobashar@fedora:~/Downloads$ bg
[2]+ sleep 100 &
noorelmobashar@fedora:~/Downloads$ jobs
[1]+  Stopped                  sleep 100
[2]-  Running                  sleep 100 &
noorelmobashar@fedora:~/Downloads$ fg
sleep 100
[2]  Done                      sleep 100
noorelmobashar@fedora:~/Downloads$ // The command has finished i will not send it back to bg :)
```

15.Kill the sleep command.

```
noorelmobashar@fedora:~/Downloads
~/Downloads

noorelmobashar@fedora:~/Downloads$ pkill sleep
noorelmobashar@fedora:~/Downloads$
```

16.Display your processes only

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ ps -u $(whoami)
  PID TTY          TIME CMD
 3007 ?            00:00:01 systemd
 3009 ?            00:00:00 (sd-pam)
 3027 ?            00:00:00 gnome-keyring-d
 3144 tty2          00:00:00 gdm-wayland-ses
 3151 ?            00:00:00 dbus-broker-lau
 3177 ?            00:00:01 dbus-broker
 3181 tty2          00:00:00 gnome-session-i
 3273 ?            00:00:00 gnome-session-c
 3274 ?            00:00:00 uresourced
 3282 ?            00:00:00 gnome-session-s
 3283 ?            00:00:00 gvfsd
 3292 ?            00:00:00 gvfsd-fuse
 3303 ?            00:00:23 pipewire
 3304 ?            00:00:01 wireplumber
 3307 ?            00:02:37 gnome-shell
 3362 ?            00:00:00 at-spi-bus-laun
 3368 ?            00:00:00 dbus-broker-lau
```

17.Display all processes except yours

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ ps -ef | grep -v $(whoami)
UID          PID    PPID  C STIME TTY          TIME CMD
root           1        0  0 12:50 ?            00:00:02 /usr/lib/systemd/systemd --switched-root --system
--deserialize=59 rhgb
root           2        0  0 12:50 ?            00:00:00 [kthreadd]
root           3        2  0 12:50 ?            00:00:00 [pool_workqueue_release]
root           4        2  0 12:50 ?            00:00:00 [kworker/R-rcu_gp]
root           5        2  0 12:50 ?            00:00:00 [kworker/R-sync_wq]
root           6        2  0 12:50 ?            00:00:00 [kworker/R-kvfree_rcu_reclaim]
root           7        2  0 12:50 ?            00:00:00 [kworker/R-slub_flushwq]
root           8        2  0 12:50 ?            00:00:00 [kworker/R-netns]
root          10        2  0 12:50 ?            00:00:00 [kworker/0:0H-events_highpri]
root          11        2  0 12:50 ?            00:00:00 [kworker/0:1-events]
root          13        2  0 12:50 ?            00:00:00 [kworker/R-mm_percpu_wq]
root          14        2  0 12:50 ?            00:00:01 [kworker/u64:1-btrfs-compressed-write]
root          15        2  0 12:50 ?            00:00:00 [ksoftirqd/0]
root          16        2  0 12:50 ?            00:00:00 [rcu_preempt]
root          17        2  0 12:50 ?            00:00:00 [rcu_exp_par_gp_kthread_worker/0]
root          18        2  0 12:50 ?            00:00:00 [rcu_exp_gp_kthread_worker]
```

18.Use the pgrep command to list your processes only


```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ pgrep -l -u $(whoami)
3007 systemd
3009 (sd-pam)
3027 gnome-keyring-d
3144 gdm-wayland-ses
3151 dbus-broker-lau
3177 dbus-broker
3181 gnome-session-i
3273 gnome-session-c
3274 uresourced
3282 gnome-session-s
3283 gvfsd
3292 gvfsd-fuse
3303 pipewire
3304 wireplumber
3307 gnome-shell
3362 at-spi-bus-laun
3368 dbus-broker-lau
3369 dbus-broker
```

19. Kill your processes only.

```
noorelmobashar@fedora:~/Downloads
noorelmobashar@fedora:~/Downloads$ pkill -u $(whoami) // I will not execute it :)
```

I guess that the next Lab we will execute `sudo rm -rf / :)))`