RedHat Lab4

1. List the user commands and redirect the output to /tmp/commands.list

```
gamal@gamal-virtual-machine: ~/Desktop
gamal@gamal-virtual-machine:~/Desktop$ compgen -c > /tmp/commands.list
```

2. Count the number of user commands

```
gamal@gamal-virtual-machine:~/Desktop$ compgen -c | wc -l
3543
gamal@gamal-virtual-machine:~/Desktop$
```

3. Get all the users names whose first character in their login is 'g'.

```
gamal@gamal-virtual-machine:~/Desktop$ compgen -c | wc -l
3543
gamal@gamal-virtual-machine:~/Desktop$ compgen -u | grep ^g
games
gnats
geoclue
gnome-initial-setup
gdm
gamal
gamal@gamal-virtual-machine:~/Desktop$
```

4. Get the logins name and full names (comment) of logins starts with "g".

```
gamal@gamal-virtual-machine:~/Desktop$ getent passwd | grep ^g
games:x:5:60:games:/usr/games:/usr/sbin/nologin
Terminal 1:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologi
n
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
gamal:x:1000:1000:Gamal,,,:/home/gamal:/bin/bash
gamal@gamal-virtual-machine:~/Desktop$
```

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

```
gamal@gamal-virtual-machine:~/Desktop$ getent passwd | grep ^g | sort -t: -k5 >/
tmp/users.list
gamal@gamal-virtual-machine:~/Desktop$ cat /tmp/users.list
gamal:x:1000:1000:Gamal,,,:/home/gamal:/bin/bash
games:x:5:60:games:/usr/games:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologi
n
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
gamal@gamal-virtual-machine:~/Desktop$
```
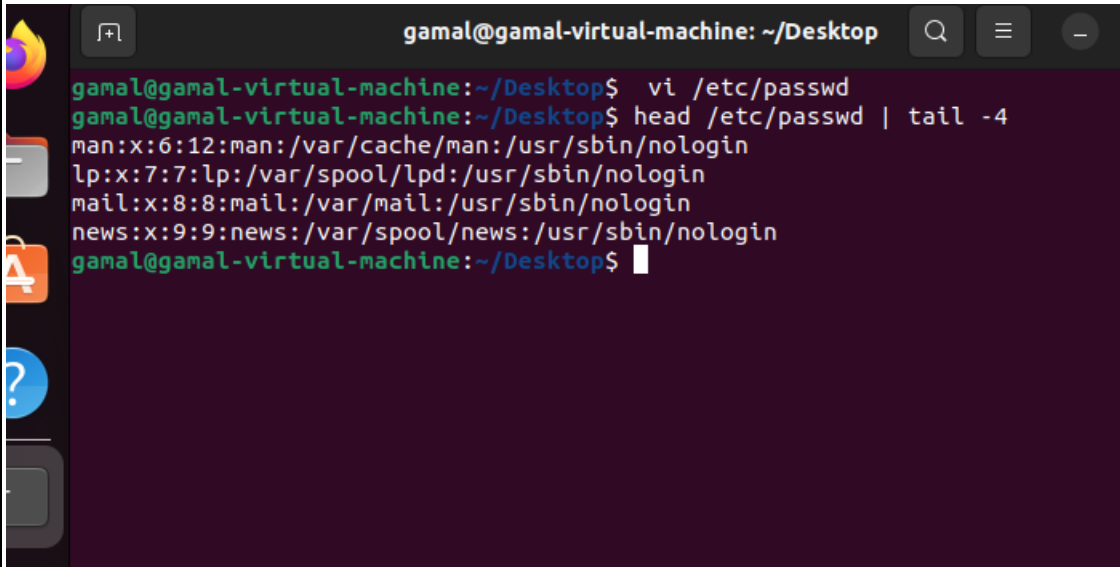
6. Write two commands: first: to search for all files on the system that named .bash_profile. Second: sorts the output of ls command on / recursively, Saving their output and error in 2 different files and sending them to the background.

1- find / -name .bash_profile

2- ls -rR / | sort -t/ -k2 > /tmp/output.txt 2> /tmp/error.txt &

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

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

```
gamal@gamal-virtual-machine:~/Desktop$   vi /etc/passwd
gamal@gamal-virtual-machine:~/Desktop$ head /etc/passwd | tail -4
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
gamal@gamal-virtual-machine:~/Desktop$
```

9. What happens if you execute: • cat filename1 | cat filename2

before the command
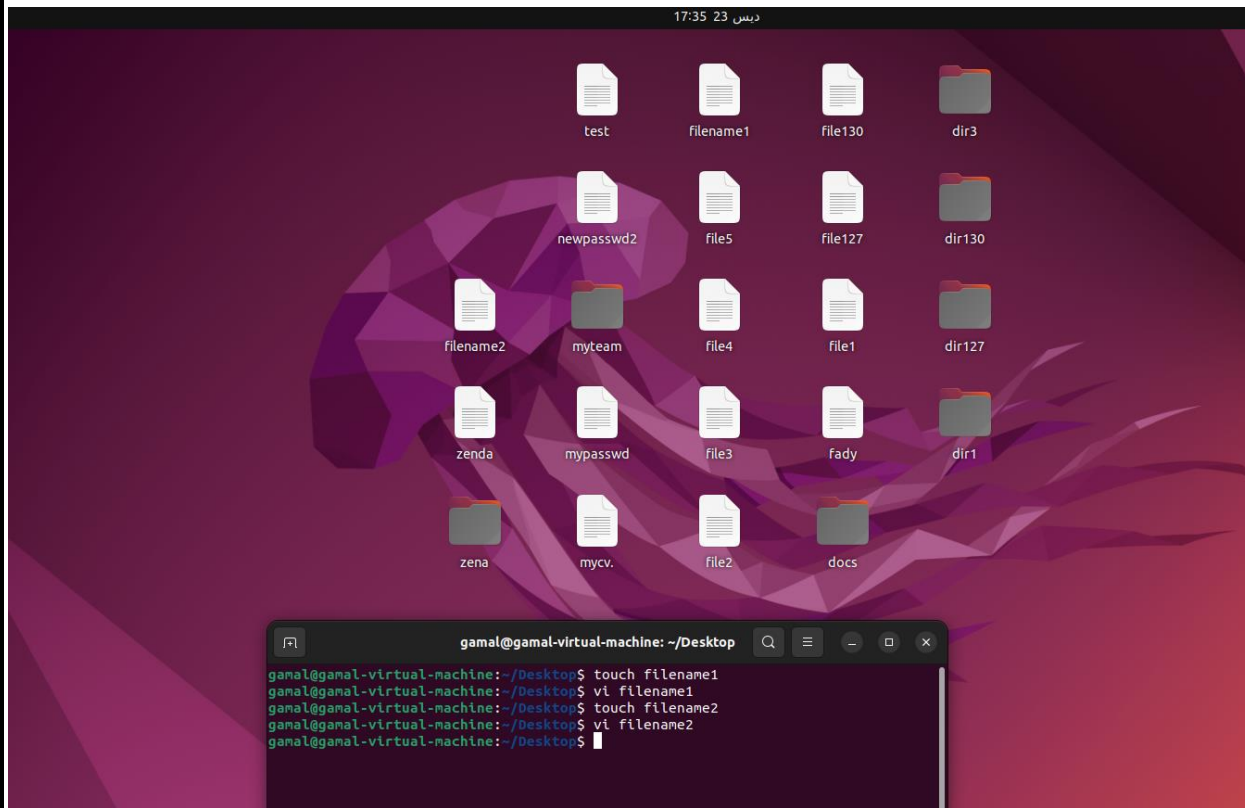
after the command :
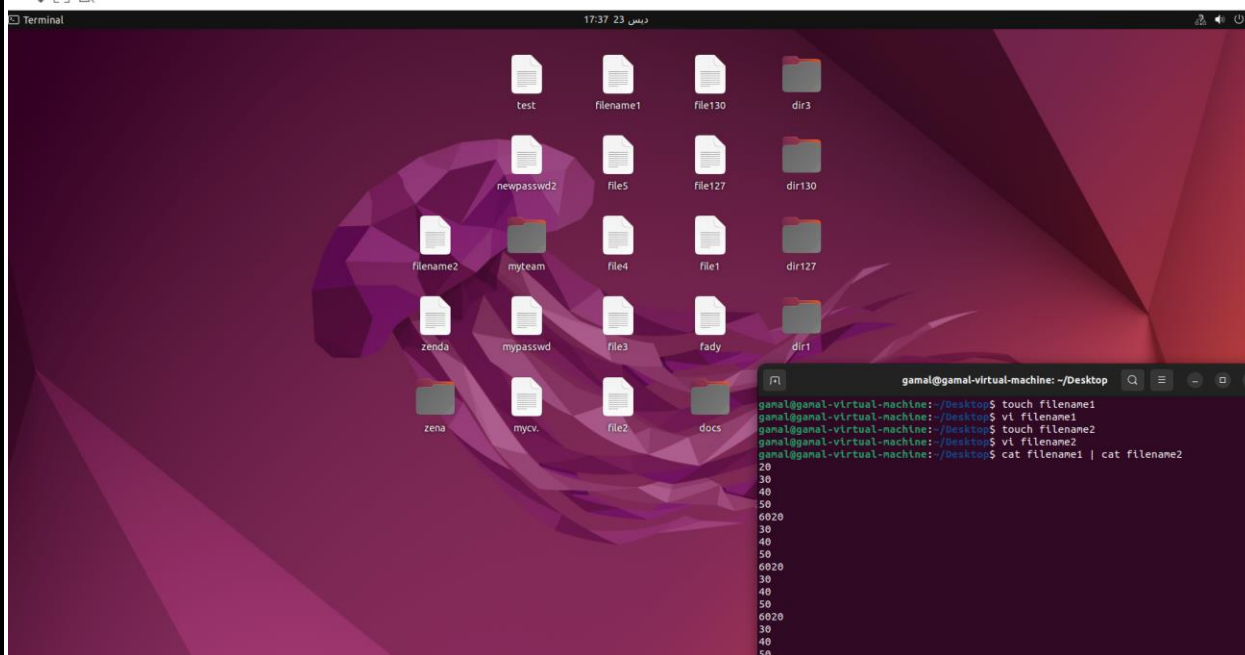
comment : he enters the output of filename 1 to act as the input of filename2

- ls | rm

```
qgamal@gamal-virtual-machine:~/Desktop$ ls | rm -r dir3
```

comment : he 'll list directories and file then remove the required(directory or file)

- if you didn't enter specific file or directory ut 'll show a message with "missing operand"
-

- ls /etc/passwd | wc –l

```
gamal@gamal-virtual-machine:~/Desktop$ ls /etc/passwd
/etc/passwd
gamal@gamal-virtual-machine:~/Desktop$ ls /etc/passwd | wc -l
1
gamal@gamal-virtual-machine:~/Desktop$
```

after listing the directory it counts the no of lines outputted by the command (ls /etc/passwd)

10. Issue the command sleep 100.

```
gamal@gamal-virtual-machine:~/Desktop$ sleep 100
```

comment : by executing that command the CPU won't receive any commands except after 100 second (process for stopping the cpu from executing any other commands)

11. Stop the last command.

```
gamal@gamal-virtual-machine:~/Desktop$ sleep 200
^Z
[2]+  Stopped                 sleep 200
gamal@gamal-virtual-machine:~/Desktop$ █
```

comment : by usinf ctrl + z as it works in the foreground

12.Resume the last command in the background

kill –STOP %(process)

```
gamal@gamal-virtual-machine:~/Desktop$ sleep 100 &
[4] 2433
gamal@gamal-virtual-machine:~/Desktop$ kill -STOP %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]    Stopped                 sleep 200
[3]-   Stopped                 sleep 100
[4]+   Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ kill -CONT %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]    Stopped                 sleep 200
[3]-   Stopped                 sleep 100
[4]+   Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ fg %4
sleep 100
^Z
[4]+   Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ bg %4
[4]+ sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]-   Stopped                 sleep 200
[3]+   Stopped                 sleep 100
[4]    Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ kill -KILL %4
[4]    Killed                  sleep 100
gamal@gamal-virtual-machine:~/Desktop$
```

13.Issue the jobs command and see its output.

it shows you which processes are currently stopped or running


```
gamal@gamal-virtual-machine:~/Desktop$ sleep 100 &
[4] 2433
gamal@gamal-virtual-machine:~/Desktop$ kill -STOP %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]    Stopped                 sleep 200
[3]-   Stopped                 sleep 100
[4]+   Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ kill -CONT %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]    Stopped                 sleep 200
[3]-   Stopped                 sleep 100
[4]+   Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ fg %4
sleep 100
^Z
[4]+   Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ bg %4
[4]+ sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]-   Stopped                 sleep 200
[3]+   Stopped                 sleep 100
[4]    Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ kill -KILL %4
[4]    Killed                  sleep 100
gamal@gamal-virtual-machine:~/Desktop$
```

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

- kill –CONT %(process)
- fg %(process)
- ctrl + z
- bg %(process)

```
gamal@gamal-virtual-machine:~/Desktop$ sleep 100 &
[4] 2433
gamal@gamal-virtual-machine:~/Desktop$ kill -STOP %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]   Stopped                 sleep 200
[3]-  Stopped                 sleep 100
[4]+  Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ kill -CONT %4
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]   Stopped                 sleep 200
[3]-  Stopped                 sleep 100
[4]+  Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ fg %4
sleep 100
^Z
[4]+  Stopped                 sleep 100
gamal@gamal-virtual-machine:~/Desktop$ bg %4
[4]+ sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ jobs
[2]-  Stopped                 sleep 200
[3]+  Stopped                 sleep 100
[4]   Running                 sleep 100 &
gamal@gamal-virtual-machine:~/Desktop$ kill -KILL %4
[4]   Killed                  sleep 100
gamal@gamal-virtual-machine:~/Desktop$
```

15.Kill the sleep command.

kill –KILL %(process)

16.Display your processes only

```
gamal@gamal-virtual-machine:~/Desktop$ ps -u 1000
    PID TTY          TIME CMD
    945 ?        00:00:00 systemd
    971 ?        00:00:00 (sd-pam)
   1005 ?        00:00:00 pipewire
   1006 ?        00:00:00 pipewire-media-
   1007 ?        00:00:04 pulseaudio
   1009 ?        00:00:01 snapd-desktop-i
   1011 ?        00:00:00 ubuntu-report
   1014 ?        00:00:00 gnome-keyring-d
   1020 ?        00:00:00 dbus-daemon
   1024 tty2     00:00:00 gdm-wayland-ses
   1031 tty2     00:00:00 gnome-session-b
   1055 ?        00:00:00 gvfsd
   1072 ?        00:00:00 gvfsd-fuse
   1097 ?        00:00:00 gnome-session-c
   1112 ?        00:00:00 gnome-session-b
   1157 ?        00:00:00 at-spi-bus-laun
   1159 ?        00:00:23 gnome-shell
   1167 ?        00:00:00 dbus-daemon
   1203 ?        00:00:00 xdg-document-po
   1212 ?        00:00:00 xdg-permission-
   1314 ?        00:00:00 snapd-desktop-i
   1316 ?        00:00:00 gnome-shell-cal
   1320 ?        00:00:00 xdg-desktop-por
   1329 ?        00:00:00 evolution-sourc
   1330 ?        00:00:00 xdg-desktop-por
   1344 ?        00:00:00 goa-daemon
   1351 ?        00:00:00 evolution-calen
   1354 ?        00:00:00 gvfs-udisks2-vo
   1367 ?        00:00:00 gvfs-gphoto2-vo
   1378 ?        00:00:00 dconf-service
   1379 ?        00:00:00 goa-identity-se
   1380 ?        00:00:00 evolution-addre
   1386 ?        00:00:00 gvfs-mtp-volume
```

17.Display all processes except yours

18.Use the pgrep command to list your processes only

```
gamal@gamal-virtual-machine:~/Desktop$ pgrep -u 1000 -l
945 systemd
971 (sd-pam)
1005 pipewire
1006 pipewire-media-
1007 pulseaudio
1009 snapd-desktop-i
1011 ubuntu-report
1014 gnome-keyring-d
1020 dbus-daemon
1024 gdm-wayland-ses
1031 gnome-session-b
1055 gvfsd
1072 gvfsd-fuse
1097 gnome-session-c
1112 gnome-session-b
1157 at-spi-bus-laun
1159 gnome-shell
1167 dbus-daemon
1203 xdg-document-po
1212 xdg-permission-
1314 snapd-desktop-i
1316 gnome-shell-cal
1320 xdg-desktop-por
1329 evolution-sourc
1330 xdg-desktop-por
```

19.Kill your processes only

pkill –u (root or the id of root user= 1000)

```
gamal@gamal-virtual-machine:~/Desktop$ pkill -u 1000
```