

## Lab 4 Full Complete

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

```
[alaa@Alaa-khaled ~]$ ls /usr/bin/ > /tmp/commands.list  
[alaa@Alaa-khaled ~]$
```

2. Count the number of user commands

```
[alaa@Alaa-khaled ~]$ wc -l /etc/passwd  
53 /etc/passwd  
[alaa@Alaa-khaled ~]$
```

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

```
[alaa@Alaa-khaled ~]$ grep ^g /etc/passwd  
games:x:12:100:games:/usr/games:/sbin/nologin  
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin  
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin  
gdm:x:42:42::/var/lib/gdm:/sbin/nologin  
gnome-initial-setup:x:976:975:./run/gnome-initial-setup:/sbin/nologin  
[alaa@Alaa-khaled ~]$
```

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

```
[alaa@Alaa-khaled ~]$ cut -f1,5 -d: /etc/passwd > file_research  
[alaa@Alaa-khaled ~]$  
[alaa@Alaa-khaled ~]$ more file_research  
root:root  
bin:bin  
daemon:daemon  
adm:adm  
lp:lp  
sync:sync  
shutdown:shutdown  
halt:halt  
mail:mail  
operator:operator  
games:games  
ftp:FTP User  
nobody:Kernel Overflow User  
dbus:System message bus  
systemd-coredump:systemd Core Dumper  
systemd-resolve:systemd Resolver  
tss:Account used by the trousers package to sandbox the tcsd daemon  
polkitd:User for polkitd  
geoclue:User for geoclue  
gdm:RealtimeKit
```

```
[alaa@Alaa-khaled ~]$ grep ^g file_research  
games:games  
geoclue:User for geoclue  
gluster:GlusterFS daemons  
gdm:  
gnome-initial-setup:  
[alaa@Alaa-khaled ~]$
```

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

```
[alaa@Alaa-khaled ~]$ sort -k5 -t: file_research | more
adm:adm
alaa:alaa khaled
Alaa Khaled:
avahi:Avahi mDNS/DNS-SD Stack
bin:bin
bob:
chrony:
clevis:Clevis Decryption Framework unprivileged user
cockpit-wsinstance:User for cockpit-ws instances
cockpit-ws:User for cockpit web service
colord:User for colord
```

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.

```
[alaa@Alaa-khaled ~]$ grep bash$ /etc/passwd | cut -f1 -d: 2>error >result |& more
[alaa@Alaa-khaled ~]$
```

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

```
[alaa@Alaa-khaled ~]$ w
15:52:06 up 2:11, 1 user, load average: 0.08, 0.04, 0.05
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
alaa tty2 tty2 13:49 2:10m 2:38 0.63s /usr/libexec/t
```

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

```
[alaa@Alaa-khaled ~]$ sed -n '7,10p' /etc/passwd
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
[alaa@Alaa-khaled ~]$
```

9. What happens if you execute:

❏ `cat filename1 | cat filename2`

you execute `filename2` only

```
[alaa@Alaa-khaled ~]$ cat mycv | cat j
hi alaa
```

❏ `ls | rm`

```
[alaa@Alaa-khaled ~]$ ls | rm
rm: missing operand
Try 'rm --help' for more information.
```

❏ `ls /etc/passwd | wc -l`

```
Try 'man --help' for more information.  
[alaa@Alaa-khaled ~]$ ls /etc/passwd | wc -l  
1
```

10. Issue the command `sleep 100`.

```
File Edit View Search Terminal Help  
[alaa@Alaa-khaled ~]$ sleep 100
```

11. Stop the last command.

```
[alaa@Alaa-khaled ~]$ sleep 100  
^Z  
[1]+  Stopped                  sleep 100  
[alaa@Alaa-khaled ~]$
```

12. Resume the last command in the background

```
[alaa@Alaa-khaled ~]$ bg %1  
[1]+ sleep 100 &  
[1]+  Done                    sleep 100  
[alaa@Alaa-khaled ~]$
```

13. Issue the `jobs` command and see its output.

Jobs

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

```
[alaa@Alaa-khaled ~]$ bg %1  
[1]+ sleep 100 &  
[alaa@Alaa-khaled ~]$ fg %1  
sleep 100
```

15. Kill the `sleep` command.

Ctrl+c

or

```
[alaa@Alaa-khaled ~]$ bg %1  
[1]+ sleep 100 &  
[alaa@Alaa-khaled ~]$ pkill -9 sleep  
pkill: killing pid 6631 failed: Operation not permitted  
[1]+  Killed                  sleep 100  
[alaa@Alaa-khaled ~]$ sudo pkill -9 sleep  
[sudo] password for alaa:  
[alaa@Alaa-khaled ~]$
```

16.Display your processes only

```
[1]+  Stopped                  sleep 100
[alaa@Alaa-khaled ~]$ ps
  PID TTY          TIME CMD
  3111 pts/0    00:00:00 bash
  6807 pts/0    00:00:00 sleep
  6814 pts/0    00:00:00 ps
[alaa@Alaa-khaled ~]$
```

```
[alaa@Alaa-khaled ~]$ ps -u alaa
  PID TTY          TIME CMD
  2327 ?            00:00:00 systemd
  2332 ?            00:00:00 (sd-pam)
  2346 ?            00:00:00 pulseaudio
  2351 ?            00:00:00 gnome-keyring-d
  2357 tty2        00:00:00 gdm-wayland-ses
  2361 ?            00:00:00 dbus-daemon
  2364 tty2        00:00:00 gnome-session-b
  2391 ?            00:00:00 gvfsd
  2400 ?            00:00:00 gvfsd-fuse
  2442 tty2        00:00:26 gnome-shell
  2463 tty2        00:00:00 Xwayland
  2468 ?            00:00:00 at-spi-bus-laun
```

17.Display all processes except yours

```
[alaa@Alaa-khaled ~]$ ps -U root -u root -N
  PID TTY          TIME CMD
  763 ?            00:00:00 rpcbind
  794 ?            00:00:00 avahi-daemon
  795 ?            00:00:32 polkitd
  802 ?            00:00:00 rtkit-daemon
  804 ?            00:00:00 lsmd
  818 ?            00:00:06 dbus-daemon
  825 ?            00:00:08 rngd
  832 ?            00:00:00 chronyd
  890 ?            00:00:00 avahi-daemon
```

18.Use the pgrep command to list your processes only

```
[alaa@Alaa-khaled ~]$ pgrep -lu alaa
2327 systemd
2332 (sd-pam)
2346 pulseaudio
2351 gnome-keyring-d
2357 gdm-wayland-ses
2361 dbus-daemon
2364 gnome-session-b
2391 gvfsd
2400 gvfsd-fuse
2442 gnome-shell
2463 Xwayland
2468 at-spi-bus-laun
2473 dbus-daemon
2478 at-spi2-registr
2481 ibus-daemon
```

19.Kill your processes only.

```
[alaa@Alaa-khaled ~]$ ps
  PID TTY          TIME CMD
  3111 pts/0    00:00:00 bash
  6807 pts/0    00:00:00 sleep
  7513 pts/0    00:00:00 ps
[alaa@Alaa-khaled ~]$ pkill -9 sleep
pkill: killing pid 7527 failed: operation not permitted
[1]+  Killed                  sleep 100
[alaa@Alaa-khaled ~]$ ps
  PID TTY          TIME CMD
  3111 pts/0    00:00:00 bash
  7535 pts/0    00:00:00 ps
[alaa@Alaa-khaled ~]$
```