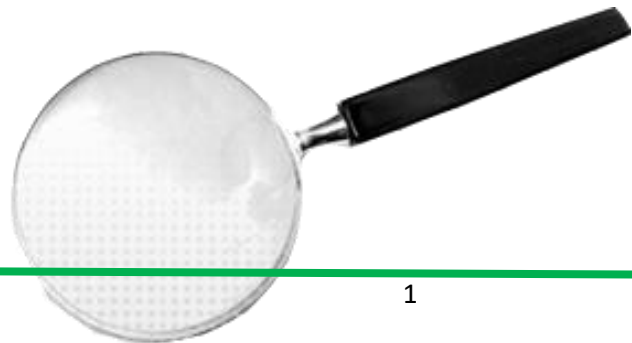


Lab

1. List the user commands/files in /usr/bin and redirect the output to /tmp/commands.list

```
eslam@ITI:~$ compgen -c >> /tmp/commands.list
eslam@ITI:~$ ls /tmp
commands.list
gdm3-config-err-EiJHrk
hsperfdata_eslam
hsperfdata_root
lu16387j47k5.tmp
OSL_PIPE_1000_SingleOfficeIPC_c18a83656478beb70eb457341dce7d
snap-private-tmp
systemd-private-e866d9513865415abc7725fb2f468045-bluetooth.service-DDZvMV
systemd-private-e866d9513865415abc7725fb2f468045-colord.service-jdRgtg
systemd-private-e866d9513865415abc7725fb2f468045-fwupd.service-edhxJf
systemd-private-e866d9513865415abc7725fb2f468045-ModemManager.service-S01hTd
systemd-private-e866d9513865415abc7725fb2f468045-polkit.service-XKKf6C
systemd-private-e866d9513865415abc7725fb2f468045-power-profiles-daemon.service-uQnc38
systemd-private-e866d9513865415abc7725fb2f468045-switcheroo-control.service-p4lW6u
systemd-private-e866d9513865415abc7725fb2f468045-systemd-logind.service-fYgz8t
systemd-private-e866d9513865415abc7725fb2f468045-systemd-oemd.service-3ZaxcB
systemd-private-e866d9513865415abc7725fb2f468045-systemd-resolved.service-qoPgk
systemd-private-e866d9513865415abc7725fb2f468045-systemd-timesyncd.service-8srNud
systemd-private-e866d9513865415abc7725fb2f468045-upower.service-9yQyWs
eslam@ITI:~$ cat /tmp/commands.list
alert
egrep
fgrep
ssss
```



- Count the number of user commands from above question

```
eslam@ITI:~$ wc -l /tmp/commands.list
4232 /tmp/commands.list
```

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

```
eslam@ITI:~$ grep ^g /etc/passwd
games:x:5:60:games:/usr/games:/usr/sbin/nologin
geoclue:x:114:117::/var/lib/geoclue:/usr/sbin/nologin
gnome-initial-setup:x:119:65534::/run/gnome-initial-setup:/bin/false
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-remote-desktop:x:985:985:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/sbin/nologin
```

- Get the logins name and full names (comment) of logins starts with "gu".

```
eslam@ITI:~$ cut -d : -f 1,5 /etc/passwd | grep ^gu
```

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

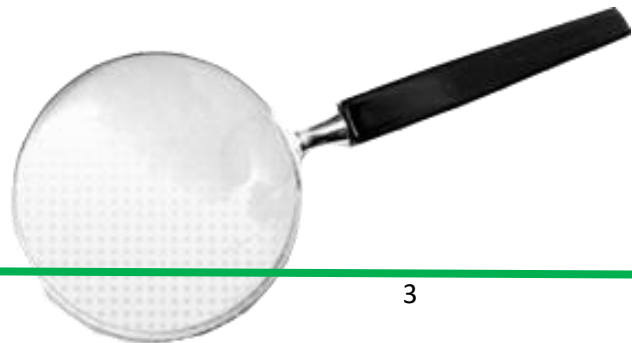
```
eslam@ITI:~$ cut -d : -f 1,5 /etc/passwd | grep ^g | sort -k 2 -t : -o Names
eslam@ITI:~$ cat Names
geoclue:
gnome-initial-setup:
games:games
gdm:Gnome Display Manager
gnome-remote-desktop:GNOME Remote Desktop
eslam@ITI:~$
```

- 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 outputs in 2 different files and sending them(search command) to the background.

```
eslam@ITI:~$ find / -name .profile 2> /dev/null
/etc/skel/.profile
/snap/core/16928/etc/skel/.profile
/snap/core18/2823/etc/skel/.profile
/snap/core22/1380/etc/skel/.profile
/home/eslam/.profile
```

```
youtube-ut
eslam@ITI:~$ sudo ls -R | sort > output 2> error
```

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



```
eslam@ITI:~$ who | wc -l
```

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

```
eslam@ITI:~$ sed -n "7,10p" /etc/passwd
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
```

9. What happens if you execute:

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

-- display content of filename2

--error

--print 1(num of lines)

10. Issue the command sleep 100.

```
1
eslam@ITI:~$ sleep 100
```

11. Stop the last command.

```
eslam@ITI:~$ sleep 100
^Z
[1]+  Stopped                  sleep 100
eslam@ITI:~$
```

12. Resume the last command in the background

```
eslam@ITI:~$ jobs
[1]+  Stopped                  sleep 100
eslam@ITI:~$ bg %1
[1]+  sleep 100 &
eslam@ITI:~$
```

13. Issue the jobs command and see its output.

```
eslam@ITI:~$ jobs
[1]+  Done                    sleep 100
```

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

```
eslam@ITI:~$ sleep 100

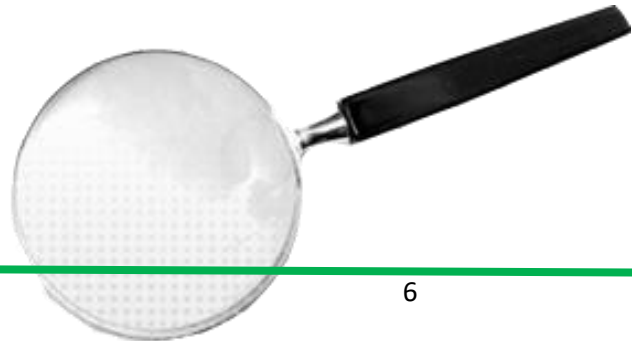
^Z
[1]+  Stopped                  sleep 100
eslam@ITI:~$ bg %1
[1]+  sleep 100 &
eslam@ITI:~$ jobs
[1]+  Running                  sleep 100 &
```

15. Kill the sleep command.

```
eslam@ITI:~$ sleep 100

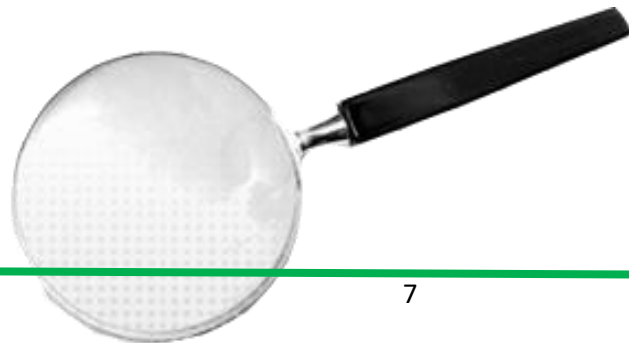
^Z
[1]+  Stopped                  sleep 100
eslam@ITI:~$ ps
  PID TTY          TIME CMD
 21760 pts/1    00:00:00 bash
 23405 pts/1    00:00:00 sleep
 23406 pts/1    00:00:00 ps
eslam@ITI:~$ kill %1

[1]+  Stopped                  sleep 100
```



16. Display your processes only (process started by your username)

```
eslam@ITI:~$ ps -o user,pid,cmd -u eslam
USER      PID  CMD
eslam      2000 /usr/lib/systemd/systemd --user
eslam      2004 (sd-pam)
eslam      2013 /usr/bin/pipewire
eslam      2014 /usr/bin/pipewire -c filter-chain.conf
eslam      2018 /usr/bin/wireplumber
eslam      2019 /usr/bin/pipewire-pulse
eslam      2028 /usr/bin/gnome-keyring-daemon --foreground --components=pkcs11,secre
eslam      2031 /usr/bin/dbus-daemon --session --address=systemd: --nofork --nopidfi
eslam      2064 /usr/libexec/xdg-document-portal
eslam      2071 /usr/libexec/xdg-permission-store
eslam      2108 /usr/libexec/gdm-x-session --run-script env GNOME_SHELL_SESSION_MODE
eslam      2112 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthor
eslam      2199 /usr/libexec/gnome-session-binary --session=ubuntu
eslam      2266 /usr/libexec/at-spi-bus-launcher
eslam      2273 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/acces
eslam      2282 /usr/libexec/gcr-ssh-agent --base-dir /run/user/1000/gcr
eslam      2283 /usr/libexec/gnome-session-ctl --monitor
eslam      2297 /usr/libexec/gvfsd
eslam      2305 /usr/libexec/gvfsd-fuse /run/user/1000/gvfs -f
eslam      2308 /usr/libexec/gnome-session-binary --systemd-service --session=ubuntu
```



17. Display all processes of all users in system except process started by you

```
eslam@ITI:~$ ps -eo user,pid,cmd | grep -v eslam
USER      PID  CMD
root        1  /sbin/init splash
root        2  [kthreadd]
root        3  [pool_workqueue_release]
root        4  [kworker/R-rcu_g]
root        5  [kworker/R-rcu_p]
root        6  [kworker/R-slub_]
root        7  [kworker/R-netns]
root        9  [kworker/0:0H-events_highpri]
root       12  [kworker/R-mm_pe]
root       13  [rcu_tasks_kthread]
root       14  [rcu_tasks_rude_kthread]
root       15  [rcu_tasks_trace_kthread]
root       16  [ksoftirqd/0]
root       17  [rcu_preempt]
root       18  [migration/0]
root       19  [idle_inject/0]
root       20  [cpuhp/0]
root       21  [cpuhp/1]
root       22  [idle_inject/1]
root       23  [migration/1]
```

18. Use the pgrep command to list your processes only


```
eslam@ITI:~$ pgrep -u eslam
2000
2004
2013
```

19. Kill your processes only.

```
eslam@ITI:~$ pkill -u eslam
```

