

## Lab 04 – Linux

By: Sharaf

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

```
sharaf@sharaf:~$ sudo ls /bin >> /tmp/commands.list
sharaf@sharaf:~$ cat /tmp/commands.list
[
aa-enabled
aa-exec
aa-features-abi
aconect
acpidbg
add-apt-repository
```

2. Count the number of user commands

```
sharaf@sharaf:~$ wc -l /tmp/commands.list
1346 /tmp/commands.list
```

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

```
sharaf@sharaf:~$ 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-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/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
```

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

```
sharaf@sharaf:~$ grep ^g /etc/passwd | cut -f1,5 -d:
games:games
geoclue:
gnome-remote-desktop:GNOME Remote Desktop
gnome-initial-setup:
gdm:Gnome Display Manager
```

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

```
sharaf@sharaf:~/Desktop$ grep ^g /etc/passwd | cut -d: -f1,5 | sort -t: -k2 >> sortedfile
sharaf@sharaf:~/Desktop$ cat sortedfile
geoclue:
gnome-initial-setup:
games:games
gdm:Gnome Display Manager
gnome-remote-desktop:GNOME Remote Desktop
```

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### 6. Write two commands:

- a. first: to search for all files on the system that named .bash\_profile.

```
sharaf@sharaf:~$ find / -name .bash_profile
find: '/home/sharaf/.config/gedit': Permission denied
find: '/home/sharaf/.local/share/gedit': Permission denied
find: '/home/sharaf/testdir': Permission denied
```

- b. Second: sorts the output of ls command on / recursively, Saving their output and error in 2 different files and sending them to the background.

```
sharaf@sharaf:~$ ls -lR / 2> /dev/null | sort >> Desktop/ls_sorted 2>> Desktop/ls_errors &
[2] 9525
```

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

```
sharaf@sharaf:~$ who | wc -l
2
```

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

```
sharaf@sharaf:~$ head -n10 /etc/passwd | tail -n4
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:

- a. cat filename1 | cat filename2

```
sharaf@sharaf:~/Desktop$ cat errors | cat sorted
-rw-r--r-- 1 root root 1290 Jul  5  2023 dot.bash_profile
```

- Display The Content Of Second File

- b. ls | rm

```
sharaf@sharaf:~/Desktop$ ls | rm
rm: missing operand
Try 'rm --help' for more information.
```

- Require Operand For rm

- c. ls /etc/passwd | wc -l

```
sharaf@sharaf:~/Desktop$ ls /etc/passwd | wc -l
1
```

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10. Issue the command sleep 100.

```
sharaf@sharaf:~$ sleep 100
```

11. Stop the last command.

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

12. Resume the last command in the background

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

13. Issue the jobs command and see its output.

```
sharaf@sharaf:~$ jobs
[1]+  Running                  sleep 100 &
```

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

```
sharaf@sharaf:~$ fg %1
sleep 100
^Z
[1]+  Stopped                  sleep 100
sharaf@sharaf:~$ bg %1
[1]+  sleep 100 &
```

15. Kill the sleep command.

```
sharaf@sharaf:~$ kill -SIGKILL %1
sharaf@sharaf:~$ jobs
[1]+  Killed                  sleep 100
```

## Lab 04 – Linux

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### 16.Display your processes only

```
sharaf@sharaf:~$ pgrep -lu sharaf
1684 systemd
1689 (sd-pam)
1698 pipewire
1699 pipewire
1703 wireplumber
```

- Or

○ `ps -u Sharaf`

### 17.Display all processes except yours

```
sharaf@sharaf:~$ pgrep -vlu sharaf
1 systemd
2 kthreadd
3 pool_workqueue_release
4 kworker/R-rcu_gp
5 kworker/R-sync_wq
```

- Or

○ `ps -d`

### 18.Use the pgrep command to list your processes only

```
sharaf@sharaf:~$ pgrep -lu sharaf
1684 systemd
1689 (sd-pam)
1698 pipewire
1699 pipewire
```

### 19.Kill your processes only.

- `Pkill -u Sharaf`

- `Killall -SIGKILL -u Sharaf`

