

Exercise 1:

1. Display a list of all the users on your system who log in with the Bash shell as a default.

```
salmane@salmane-VirtualBox:~$ grep ':/bin/bash$' /etc/passwd
root:x:0:0:root:/root:/bin/bash
salmane:x:1000:1000:Salmane,,,:/home/salmane:/bin/bash
```

2. From the /etc/group directory, display all lines starting with the string "daemon".

```
salmane@salmane-VirtualBox:~$ grep '^daemon' /etc/group
daemon:x:1:
```

3. Print all the lines from the same file that don't contain the string

```
salmane@salmane-VirtualBox:~$ grep -v 'daemon' /etc/group
root:x:0:
bin:x:2:
sys:x:3:
adm:x:4:syslog
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:
floppy:x:25:
tape:x:26:
sudo:x:27:salmane
audio:x:29:pulse
dip:x:30:
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
```

4. Display localhost information from the /etc/hosts file, display the line number(s) matching the search string and count the number of occurrences of the string.

```
salmane@salmane-VirtualBox:~$ grep 'localhost' /etc/hosts
127.0.0.1        localhost
::1            ip6-localhost ip6-loopback
salmane@salmane-VirtualBox:~$ grep -n 'localhost' /etc/hosts
1:127.0.0.1        localhost
5:::1            ip6-localhost ip6-loopback
salmane@salmane-VirtualBox:~$ grep -o 'localhost' /etc/hosts | wc -l
2
```

5. Display a list of /usr/share/doc subdirectories containing information about shells.

```
salmane@salmane-VirtualBox:~$ find /usr/share/doc -type d | grep -i 'shell'
/usr/share/doc/gnome-shell-extension-appindicator
/usr/share/doc/gnome-shell-extension-ubuntu-dock
/usr/share/doc/gnome-shell-common
/usr/share/doc/yaru-theme-gnome-shell
/usr/share/doc/gnome-shell
/usr/share/doc/gnome-shell-extension-desktop-icons-ng
```

6. How many README files do these subdirectories contain? Don't count anything in the form of "README.a_string"

```
salmane@salmane-VirtualBox:~$ find /usr/share/doc -type d | grep -i 'shell' | xargs -I {} find {} -type f -name 'README.md' ! -name 'README.a_string.md'
/usr/share/doc/gnome-shell-extension-appindicator/README.md
/usr/share/doc/gnome-shell/README.md
salmane@salmane-VirtualBox:~$ find /usr/share/doc -type d | grep -i 'shell' | xargs -I {} find {} -type f -name 'README.md' ! -name 'README.a_string.md' | wc -l
2
```

7. Make a list of files in your home directory that were changed less than 10 hours ago, using grep, but leave out directories.

```
salmane@salmane-VirtualBox:~$ find ~ -maxdepth 1 -type f -mmin -600
/home/salmane/.vboxclient-seamless-tty2-service.pid
/home/salmane/.vboxclient-clipboard-tty2-control.pid
/home/salmane/.vboxclient-clipboard-tty2-service.pid
/home/salmane/.vboxclient-draganddrop-tty2-control.pid
/home/salmane/.vboxclient-vmsvga-session-tty2-service.pid
/home/salmane/.vboxclient-hostversion-tty2-control.pid
/home/salmane/.vboxclient-vmsvga-session-tty2-control.pid
/home/salmane/.vboxclient-draganddrop-tty2-service.pid
/home/salmane/.vboxclient-seamless-tty2-control.pid
```

8. Can you find an alternative for wc -l , using grep?

Yes using parameter -c on grep.

```
salmane@salmane-VirtualBox:~$ grep -o 'localhost' /etc/hosts | wc -l
2
salmane@salmane-VirtualBox:~$ grep -c 'localhost' /etc/hosts
2
```

9. Using the file system table (/etc/fstab for instance), list local disk devices

```
salmane@salmane-VirtualBox:~$ grep '/dev/' /etc/fstab
# / was on /dev/sda3 during installation
# /boot/efi was on /dev/sda2 during installation
```

10. Display configuration files in /etc that contain numbers in their names.

```
salmane@salmane-VirtualBox:~$ ls /etc | grep '[0-9]'
dbus-1
e2scrub.conf
gdm3
gtk-2.0
gtk-3.0
iproute2
libnl-3
mke2fs.conf
pnm2ppa.conf
polkit-1
python3
python3.10
rc0.d
rc1.d
rc2.d
rc3.d
rc4.d
rc5.d
rc6.d
sensors3.conf
udisks2
X11
```

11. At least two games from Regex Crossword

