

Lab 5 | Handling files Answers to Lab

Question 1

```

[~]cvfermin@CIS106VM:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin

[~]cvfermin@CIS106VM:~$ tac /etc/passwd
vboxadd:x:998:1::/var/run/vboxadd:/bin/false
_flatpak:x:126:134:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
systemd-coredump:x:999:999:systemd Core Dumper:/usr/sbin/nologin
cvfermin:x:1000:1000:Cristian V. Fermin,,,:/home/cvfermin:/bin/bash
gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-initial-setup:x:124:65534::/run/gnome-initial-setup:/bin/false

[~]cvfermin@CIS106VM:~$ cat -nE /etc/passwd
 1 root:x:0:0:root:/root:/bin/bash$
 2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin$
 3 bin:x:2:2:bin:/bin:/usr/sbin/nologin$
 4 sys:x:3:3:sys:/dev:/usr/sbin/nologin$
 5 sync:x:4:65534:sync:/bin:/bin/sync$
 6 games:x:5:60:games:/usr/games:/usr/sbin/nologin$
 7 man:x:6:12:man:/var/cache/man:/usr/sbin/nologin$
 8 lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin$
 9 mail:x:8:8:mail:/var/mail:/usr/sbin/nologin$
10 news:x:9:9:news:/var/spool/news:/usr/sbin/nologin$
11 uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin$
12 proxy:x:13:13:proxy:/bin:/usr/sbin/nologin$
13 www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin$
14 backup:x:34:34:backup:/var/backups:/usr/sbin/nologin$
15 list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin$
16 irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin$
17 gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$

[~]cvfermin@CIS106VM:~$ head -5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
[~]cvfermin@CIS106VM:~$ tail -5 /etc/passwd
gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false
cvfermin:x:1000:1000:Cristian V. Fermin,,,:/home/cvfermin:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper:/usr/sbin/nologin
_flatpak:x:126:134:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
vboxadd:x:998:1::/var/run/vboxadd:/bin/false
[~]cvfermin@CIS106VM:~$

```

Question 2

```
[cvfermin@CIS106VM]~[~/Lab5]
$cut -d ":" -f 1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
```

```
[cvfermin@CIS106VM]~[~/Lab5]
$tail -5 /etc/passwd | cut -d ":" -f 1
gdm
cvfermin
systemd-coredump
_flatpak
vboxadd
[cvfermin@CIS106VM]~[~/Lab5]
$
```

```
[cvfermin@CIS106VM]~[~/Lab5]
$cut -d ':' -s -f1,7 --output-delimiter='=' /etc/passwd
root = /bin/bash
daemon = /usr/sbin/nologin
bin = /usr/sbin/nologin
sys = /usr/sbin/nologin
sync = /bin/sync
games = /usr/sbin/nologin
man = /usr/sbin/nologin
lp = /usr/sbin/nologin
mail = /usr/sbin/nologin
news = /usr/sbin/nologin
uucp = /usr/sbin/nologin
proxy = /usr/sbin/nologin
www-data = /usr/sbin/nologin
backup = /usr/sbin/nologin
list = /usr/sbin/nologin
irc = /usr/sbin/nologin
gnats = /usr/sbin/nologin
nobody = /usr/sbin/nologin
systemd-network = /usr/sbin/nologin
systemd-resolve = /usr/sbin/nologin
systemd-timesync = /usr/sbin/nologin
messagebus = /usr/sbin/nologin
syslog = /usr/sbin/nologin
apt = /usr/sbin/nologin
```

```
[cvfermin@CIS106VM]~[~/Lab5]
$ cut -d ':' -f1,3 /etc/passwd | sort
apt:105
avahi:115
avahi-autoipd:109
backup:34
bin:2
colord:121
cups-pk-helper:113
cvfermin:1000
daemon:1
dnsmasq:112
flatpak:126
games:5
gdm:125
geoclue:122
gnats:41
gnome-initial-setup:124
hplip:119
irc:39
```

```
[cvfermin@CIS106VM]~[~/Lab5]
$ cut -d ':' -f1,3 /etc/passwd | sort | tail -5
uucp:10
uuid:107
vboxadd:998
whoopsie:120
www-data:33
[cvfermin@CIS106VM]~[~/Lab5]
```

Question 3

```
[cvfermin@CIS106VM]~[~/Lab5]
$ wc -l /etc/passwd
48 /etc/passwd
[cvfermin@CIS106VM]~[~/Lab5]
$
```

1. 48 lines in the file

```
[cvfermin@CIS106VM]~[~/Lab5]
$ wc -m /etc/passwd
2895 /etc/passwd
[cvfermin@CIS106VM]~[~/Lab5]
$
```

2. 2895
3. 2 users

```
[cvfermin@CIS106VM]~[~/Lab5]
$ grep -n "/bin/bash" /etc/passwd
1:root:x:0:0:root:/root:/bin/bash
45:cvfermin:x:1000:1000:Cristian V. Fermin,,,:/home/cvfermin:/bin/bash
[cvfermin@CIS106VM]~[~/Lab5]
$ grep "/bin/bash" /etc/passwd | wc -l
2
[cvfermin@CIS106VM]~[~/Lab5]
$
```

```
[cvfermin@CIS106VM]--[~/Lab5]
$ grep "/sbin/nologin" /etc/passwd | wc -l
38
[cvfermin@CIS106VM]--[~/Lab5]
$
```

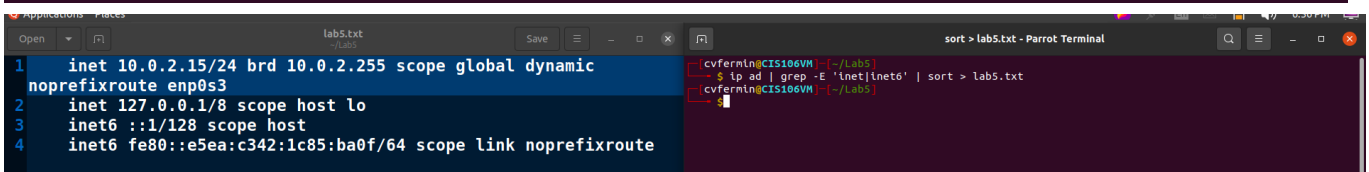
4. 38

```
[cvfermin@CIS106VM]--[~/Lab5]
$ grep "cvfermin" /etc/passwd
cvfermin:x:1000:1000:Cristian V. Fermin,,,:/home/cvfermin:/bin/bash
[cvfermin@CIS106VM]--[~/Lab5]
$
```

Question 4

```
[cvfermin@CIS106VM]--[~/Lab5]
$ ip ad | grep 'inet'
inet 127.0.0.1/8 scope host lo
inet6 ::1/128 scope host
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inet6 fe80::e5ea:c342:1c85:ba0f/64 scope link noprefixroute
[cvfermin@CIS106VM]--[~/Lab5]
$
```

```
[cvfermin@CIS106VM]--[~/Lab5]
$ ip ad | grep 'inet6' | tac
inet6 fe80::e5ea:c342:1c85:ba0f/64 scope link noprefixroute
inet6 ::1/128 scope host
[cvfermin@CIS106VM]--[~/Lab5]
$ ip ad | grep 'inet6'
inet6 ::1/128 scope host
inet6 fe80::e5ea:c342:1c85:ba0f/64 scope link noprefixroute
[cvfermin@CIS106VM]--[~/Lab5]
$
```



The screenshot shows a terminal window with the following content:

```
1 inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic
  noprefixroute enp0s3
2 inet 127.0.0.1/8 scope host lo
3 inet6 ::1/128 scope host
4 inet6 fe80::e5ea:c342:1c85:ba0f/64 scope link noprefixroute
```

On the right side of the terminal, there is a command prompt showing the execution of the following command:

```
$ ip ad | grep -E 'inet|inet6' | sort > lab5.txt
```

```
[cvfermin@CIS106VM]--[~/Lab5]
$ ip ad | grep 'inet' | head -3 | tail -1
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
[cvfermin@CIS106VM]--[~/Lab5]
$ ip ad | grep -E '[[[:digit:]]{1,3}\.[:digit:]{1,3}\.[:digit:]{1,3}]' | sort
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inet 127.0.0.1/8 scope host lo
[cvfermin@CIS106VM]--[~/Lab5]
$
```