

Lab 5 | Handling files Answers to lab 5

Question 1

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~$ mkdir Lab5
inoquendoosorio@CIS-106VM:~$ cd Lab5/
inoquendoosorio@CIS-106VM:~/Lab5$ 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
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin

inoquendoosorio@CIS-106VM:~/Lab5$ tac /etc/passwd
vboxadd:x:998:1::/var/run/vboxadd:/bin/false
lightdm:x:128:136:Light Display Manager:/var/lib/lightdm:/bin/false
_flatpak:x:127:135:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
inoquendoosorio:x:1000:1000:Isaac Oquendo,,,:/home/inoquendoosorio:/bin/bash
sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-initial-setup:x:124:65534:/:run/gnome-initial-setup:/bin/false
pulse:x:123:128:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
geoclue:x:122:127:/:var/lib/geoclue:/usr/sbin/nologin
colord:x:121:126:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
whoopsie:x:120:125:/:nonexistent:/bin/false
hplip:x:119:7:HPLIP system user,,,:run/hplip:/bin/false
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ cd Lab5/
inoquendoosorio@CIS-106VM:~/Lab5$ cat /etc/passwd -bE
 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$

43 gnome-initial-setup:x:124:65534::/run/gnome-initial-setup:/bin/false$
44 gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false$
45 sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin$
46 inoquendoosorio:x:1000:1000:Isaac Oquendo,,,:/home/inoquendoosorio:/bin/
bash$
47 systemd-coredump:x:999:999:systemd Core Dumper::/usr/sbin/nologin$
48 _flatpak:x:127:135:Flatpak system-wide installation helper,,,:/nonexiste
nt:/usr/sbin/nologin$
49 lightdm:x:128:136:Light Display Manager:/var/lib/lightdm:/bin/false$
50 vboxadd:x:998:1::/var/run/vboxadd:/bin/false$
inoquendoosorio@CIS-106VM:~/Lab5$ 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
inoquendoosorio@CIS-106VM:~/Lab5$ tail -5 /etc/passwd
inoquendoosorio:x:1000:1000:Isaac Oquendo,,,:/home/inoquendoosorio:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper::/usr/sbin/nologin
_flatpak:x:127:135:Flatpak system-wide installation helper,,,:/nonexistent:/usr/
sbin/nologin
lightdm:x:128:136:Light Display Manager:/var/lib/lightdm:/bin/false
vboxadd:x:998:1::/var/run/vboxadd:/bin/false
inoquendoosorio@CIS-106VM:~/Lab5$
```

Question 2

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ cut -d ':' -f 1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
vboxadd
inoquendoosorio@CIS-106VM:~/Lab5$ tail -5 /etc/passwd | cut -d ':' -f 1
inoquendoosorio
systemd-coredump
_flatpak
lightdm
vboxadd
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
Try 'cut --help' for more information.
inoquendoosorio@CIS-106VM:~/Lab5$ cut -d ':' -s -f1,7 --output " = " /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
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
www-data:33
inoquendoosorio@CIS-106VM:~/Lab5$ cut -d ':' -f1,3 /etc/passwd | sort -nk 2
_apt:105
avahi:115
avahi-autoipd:109
backup:34
bin:2
colord:121
cups-pk-helper:113
daemon:1
dnsmasq:112
_flatpak:127
games:5
gdm:125
geoclue:122
gnats:41
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
www-data:33
inoquendoosorio@CIS-106VM:~/Lab5$ cut -d ':' -f1,3 /etc/passwd | sort -nk 2 | tail -5
uucp:10
uidd:107
vboxadd:998
whoopsie:120
www-data:33
inoquendoosorio@CIS-106VM:~/Lab5$
```

Question 3

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ wc -l /etc/passwd
50 /etc/passwd
inoquendoosorio@CIS-106VM:~/Lab5$ wc -w /etc/passwd
93 /etc/passwd
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ grep '/bin/bash' /etc/passwd
root:x:0:0:root:/root:/bin/bash
inoquendoosorio:x:1000:1000:Isaac Oquendo,,,:/home/inoquendoosorio:/bin/bash
inoquendoosorio@CIS-106VM:~/Lab5$ grep '/bin/bash' /etc/passwd | wc -l
2
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM: ~/Lab5
_flatpak:x:127:135:Flatpak system-wide installation helper,,,:/usr/sbin/nologin
inoquendoosorio@CIS-106VM:~/Lab5$ grep '/sbin/nologin' /etc/passwd | wc -l
39
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM:~/Lab5$ grep '/inoquendoosorio' /etc/passwd
inoquendoosorio:x:1000:1000:Isaac Oquendo,,,:/home/inoquendoosorio:/bin/bash
inoquendoosorio@CIS-106VM:~/Lab5$
```

Question 4

```
inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -i '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::49c3:948f:6c3c:caa4/64 scope link noprefixroute
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -i 'inet' | wc -l
4
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -i 'inet6' | tac
inet6 fe80::49c3:948f:6c3c:caa4/64 scope link noprefixroute
inet6 ::1/128 scope host
inoquendoosorio@CIS-106VM:~/Lab5$
```

```
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -iE 'inet6|inet' | sort -o allIPAddress.txt
inoquendoosorio@CIS-106VM:~/Lab5$ ls
allIPAddress.txt
inoquendoosorio@CIS-106VM:~/Lab5$ cat allIPAddress.txt
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
inet6 ::1/128 scope host
inet6 fe80::49c3:948f:6c3c:caa4/64 scope link noprefixroute
inoquendoosorio@CIS-106VM:~/Lab5$
```

```

inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep 'inet' | head -3 | tail -1
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inoquendoosorio@CIS-106VM:~/Lab5$

inoquendoosorio@CIS-106VM:~/Lab5$ grep -E '[:digit:]]{1,3}\.[:digit:]]{1,3}\.[:digit:]]{1,3}\.[:digit:]]{1,3}' ip add
grep: ip: No such file or directory
grep: add: No such file or directory
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -E '[:digit:]]{1,3}\.[:digit:]]{1,3}\.[:digit:]]{1,3}\.[:digit:]]{1,3}'
inet 127.0.0.1/8 scope host lo
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inoquendoosorio@CIS-106VM:~/Lab5$ ip add | grep -E '[:digit:]]{1,3}\.[: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
inoquendoosorio@CIS-106VM:~/Lab5$

```

Question 5

```

inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ echo "# Information about my pc" > mypc.md
inoquendoosorio@CIS-106VM:~/Lab5$ ls
allIPAddress.txt  mypc.md
inoquendoosorio@CIS-106VM:~/Lab5$ echo "## CPU Information" >> mypc.md
inoquendoosorio@CIS-106VM:~/Lab5$ cat mypc.md
# Information about my pc
## CPU Information
inoquendoosorio@CIS-106VM:~/Lab5$

inoquendoosorio@CIS-106VM:~/Lab5$ lscpu | grep -iE 'thread|core|architecture|model name|cpu|virtualization'
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
CPU(s):                2
On-line CPU(s) list:   0,1
Thread(s) per core:    1
Core(s) per socket:    2
CPU family:            23
Model name:            AMD Ryzen 5 4500U with Radeon Graphics
CPU MHz:               2370.548
Virtualization type:   full
NUMA node0 CPU(s):     0,1
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr s
se sse2 ht syscall nx mmxext fxsr_opt rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid tsc_known_freq pni
pclmulqdq ssse3 cx16 sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx rdrand hypervisor lahf_lm cmp_legacy cr8_legacy abm s
se4a misalignsse 3dnowprefetch ssbd vmmcall fsgsbase avx2 rdseed clflushopt arat
inoquendoosorio@CIS-106VM:~/Lab5$ lscpu | grep -iE 'thread|core|architecture|model name|cpu|virtualization' >> mypc.md
inoquendoosorio@CIS-106VM:~/Lab5$ cat mypc.md
# Information about my pc
## CPU Information
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
CPU(s):                2
On-line CPU(s) list:   0,1
Thread(s) per core:    1
Core(s) per socket:    2
CPU family:            23
Model name:            AMD Ryzen 5 4500U with Radeon Graphics
CPU MHz:               2370.548
Virtualization type:   full
NUMA node0 CPU(s):     0,1
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr s
se sse2 ht syscall nx mmxext fxsr_opt rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid tsc_known_freq pni

```



```

inoquendoosorio@CIS-106VM: ~/Lab5
inoquendoosorio@CIS-106VM:~/Lab5$ echo "## RAM Information"
## RAM Information
inoquendoosorio@CIS-106VM:~/Lab5$ echo "## RAM Information" >> mypc.md
inoquendoosorio@CIS-106VM:~/Lab5$ sudo lshw | grep -iE 'size' >> mypc.md
[sudo] password for inoquendoosorio:
inoquendoosorio@CIS-106VM:~/Lab5$

inoquendoosorio@CIS-106VM:~/Lab5$ cat mypc.md
# Information about my pc
## CPU Information
Architecture:                x86_64
CPU op-mode(s):              32-bit, 64-bit
CPU(s):                      2
On-line CPU(s) list:         0,1
Thread(s) per core:          1
Core(s) per socket:          2
CPU family:                   23
Model name:                   AMD Ryzen 5 4500U with Radeon Graphics
CPU MHz:                      2370.548
Virtualization type:         full
NUMA node0 CPU(s):           0,1
Flags:                        fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2
ht syscall nx mmxext fxsr_opt rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid tsc_known_freq pni pclmulqdq sss
e3 cx16 sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx rdrand hypervisor lahf_lm cmp_legacy cr8_legacy abm sse4a misalignsse 3dno
wprefetch ssbd vmxcall fsgsbase avx2 rdseed clflushopt arat
## RAM Information
size: 128KiB
size: 2GiB
resources: irq:0 ioport:1f0(size=8) ioport:3f6 ioport:170(size=8) ioport:376 ioport:d000(size=16)
resources: irq:18 ioport:d010(size=16) memory:e0000000-e7ffffff memory:f0000000-f01ffffff memory:c0000-dffff
size: 1Gbit/s
resources: irq:19 memory:f0200000-f021ffff ioport:d020(size=8)
resources: irq:20 ioport:d040(size=32) memory:f0400000-f07ffffff memory:f0800000-f0803fff
resources: irq:21 ioport:d060(size=8) ioport:d068(size=4) ioport:d070(size=8) ioport:d078(size=4) ioport:d080(size=16)
) memory:f0806000-f0807fff
configuration: ansiversion=5 mount.fstype=iso9660 mount.options=ro,nosuid,nodev,relatime,nojoliet,check=s,map=n,block
size=2048,uid=1000,gid=1000,dmode=500,fmode=400 state=mounted status=ready
configuration: mount.fstype=iso9660 mount.options=ro,nosuid,nodev,relatime,nojoliet,check=s,map=n,blocksize=2048,u
id=1000,gid=1000,dmode=500,fmode=400 state=mounted
size: 50GiB (53GB)
configuration: ansiversion=5 logicalsectorsize=512 sectorsize=512 signature=48ca2e32
size: 510MiB
size: 49GiB
size: 49GiB

```