Lab 5 | Handling Text Files Answers to lab

Question 1

```
harold@harold-VirtualBox:~/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
```

```
harold@harold-VirtualBox:~/lab5$ tac /etc/passwd
vboxadd:x:998:1::/var/run/vboxadd:/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
harold:x:1000:1000:harold,,,:/home/harold:/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/no
login
whoopsie:x:120:125::/nonexistent:/bin/false
hplip:x:119:7:HPLIP system user,,,:/run/hplip:/bin/false
nm-openvpn:x:118:124:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin
/nologin
```

```
harold@harold-VirtualBox:~/lab5$ cat -n -E /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/sbi
n/nologin$
    18  nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
    19  systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/us
r/sbin/nologin$
    20  systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nol
ogin$
```

```
harold@harold-VirtualBox:~/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
harold@harold-VirtualBox:~/lab5$ tail -5 /etc/passwd
sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
harold:x:1000:1000:harold,,,:/home/harold:/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
vboxadd:x:998:1:::/var/run/vboxadd:/bin/false
harold@harold-VirtualBox:~/lab5$
```

Question 2

```
harold@harold-VirtualBox:~/lab5$ cut -d : -f1 /etc/passwd
root
daemon
bin
sys
sync
games
man                                             3 / 5
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
systemd-network
systemd-resolve
systemd-timesync
messagebus
syslog
_apt
tss
uuidd
tcpdump
avahi-autoipd
```

```
harold@harold-VirtualBox:~/lab5$ tail -5 /etc/passwd | cut -d : -f1
sssd
harold
systemd-coredump
_flatpak
vboxadd
harold@harold-VirtualBox:~/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
```

```
harold@harold-VirtualBox:~/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
daemon:1
dnsmasq:112
_flatpak:127
games:5
gdm:125
geoclue:122
gnats:41
gnome-initial-setup:124
harold:1000
hplip:119
irc:39
kernoops:116
list:38
lp:7
mail:8
man:6
messagebus:103
news:9
nm-openvpn:118
nobody:65534
proxy:13
```

```
harold@harold-VirtualBox:~/lab5$ cut -d ':' -f1,3 /etc/passwd | sort | tail -5
uucp:10
uuidd:107
vboxadd:998
whoopsie:120
www-data:33
harold@harold-VirtualBox:~/lab5$
```

Question 3

```
harold@harold-VirtualBox:~/lab5$ wc -l /etc/passwd
49 /etc/passwd
harold@harold-VirtualBox:~/lab5$ wc -w /etc/passwd
89 /etc/passwd
harold@harold-VirtualBox:~/lab5$ grep '/bin/bash' /etc/passwd
root:x:0:0:root:/root:/bin/bash
harold:x:1000:1000:harold,,,:/home/harold:/bin/bash
harold@harold-VirtualBox:~/lab5$ grep "/sbin/nologin" /etc/passwd | wc -l
39
harold@harold-VirtualBox:~/lab5$ grep 'harold' /etc/passwd
harold:x:1000:1000:harold,,,:/home/harold:/bin/bash
harold@harold-VirtualBox:~/lab5$
```

Question 4

```
harold@harold-VirtualBox:~/lab5$ ip ad | grep 'inet' | wc -l
4
harold@harold-VirtualBox:~/lab5$ ip ad | grep 'inet6' | tac
    inet6 fe80::4f7d:7800:ecf2:4473/64 scope link noprefixroute
    inet6 ::1/128 scope host
harold@harold-VirtualBox:~/lab5$ ip ad | grep -E 'inet|inet6' | sort > file.txt
harold@harold-VirtualBox:~/lab5$ cat file.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::4f7d:7800:ecf2:4473/64 scope link noprefixroute
harold@harold-VirtualBox:~/lab5$ ip ad | grep --color 'inet' | head -3 | tail -1
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
harold@harold-VirtualBox:~/lab5$ ip ad | grep -oE '[[:digit:]]{1,3}\.[[:digit:]]{1,3}\.[[:digit:]]{1,3}\.[[:digit:]]{1,3}'
127.0.0.1
10.0.2.15
10.0.2.255
harold@harold-VirtualBox:~/lab5$ 
```

Question 5

```
harold@harold-VirtualBox:~/lab5$ echo "# Information about my pc" > car.md
harold@harold-VirtualBox:~/lab5$ ls
car.md  file.txt
harold@harold-VirtualBox:~/lab5$ echo "## CPU Information" >> car.md
harold@harold-VirtualBox:~/lab5$ cat car.md
# Information about my pc
## CPU Information
harold@harold-VirtualBox:~/lab5$ lscpu | grep -Ei 'architecture|thread|core|model name|mhz|virtualization'
Architecture:           x86_64
Thread(s) per core:     1
Core(s) per socket:     2
Model name:             Intel(R) Core(TM) i3-6006U CPU @ 2.00GHz
CPU MHz:                1992.003
Virtualization type:    full
harold@harold-VirtualBox:~/lab5$ echo "## RAM Information" >> car.md
harold@harold-VirtualBox:~/lab5$ cat car.md
# Information about my pc
## CPU Information
## RAM Information
harold@harold-VirtualBox:~/lab5$ 
```