

# Lab 7

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## Question 1

```
carlosjcatotavalladares@cis106vm:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
```

```
carlosjcatotavalladares@cis106vm:~$ tac /etc/passwd
_flatpak:x:129:138:Flatpak system-wide installation h
```

```
carlosjcatotavalladares@cis106vm:~$ cat -nE /etc/passwd
1 root:x:0:0:root:/root:/bin/bash$
```

```
carlosjcatotavalladares@cis106vm:~$ head /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
carlosjcatotavalladares@cis106vm:~$ tail /etc/passwd
saned:x:122:129:./var/lib/saned:/usr/sbin/nologin
colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:124:131:./var/lib/geoclue:/usr/sbin/nologin
pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:126:65534:./run/gnome-initial-setup:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
carlosjcatotavalladares:x:1000:1000:CarlosJCatotaValladares,,,:/home/carlosjcatotavalladares:/bin/bash
vboxadd:x:999:1:./var/run/vboxadd:/bin/false
_flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
```

## Question 2

```
carlosjcatotavalladares@cis106vm:~$ cut -d ':' -f1 /etc/passwd
root
daemon
bin
sys
sync
games
```

```
carlosjcatotavalladares@cis106vm:~$ cut -d ':' -f1,7 /etc/passwd
root:/bin/bash
daemon:/usr/sbin/nologin
bin:/usr/sbin/nologin
sys:/usr/sbin/nologin
```

```

carlosjcatotavalladares@cis106vm:~$ cut -d ':' -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

carlosjcatotavalladares@cis106vm:~$ cut -d ':' --complement -s -f3 /etc/passwd
root:x:0:root:/root:/bin/bash
daemon:x:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:bin:/bin:/usr/sbin/nologin
sys:x:3:sys:/dev:/usr/sbin/nologin
sync:x:65534:sync:/bin:/bin/sync

```

### Question 3

```

carlosjcatotavalladares@cis106vm:~$ curl -s https://cis106.com/assets/shopping.txt -o Q3
carlosjcatotavalladares@cis106vm:~$ curl -s https://cis106.com/assets/tasks.txt -o Q3.2
carlosjcatotavalladares@cis106vm:~$ paste ~/Q3 Q3.2
Eggs      Do laundry
Milk      Play Bingo
Juice     Go to Work
Carrots   Go to School
Potatoes  Pay Bills
carlosjcatotavalladares@cis106vm:~$ wc -l Documents/Books/dracula.txt
15871 Documents/Books/dracula.txt
carlosjcatotavalladares@cis106vm:~$ wc -l Documents/Books/pride-and-prejudice.txt
14905 Documents/Books/pride-and-prejudice.txt
carlosjcatotavalladares@cis106vm:~$ sort etc/passwd
sort: cannot read: etc/passwd: No such file or directory
carlosjcatotavalladares@cis106vm:~$ sort /etc/passwd
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
carlosjcatotavalladares:x:1000:1000:CarlosJCatotaValladares,,,:/home/carlosjcatotavalladares:/bin/bash
colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
_flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
fwupd-refresh:x:120:126:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
games:x:5:60:games:/usr/games:/usr/sbin/nologin
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
messagebus:x:102:105::/nonexistent:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
nm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin

```

### Question 4

```

carlosjcatotavalladares@cis106vm:~/Documents/Csv$ cat cereal.csv | tr ';' ','
name,mfr,type,calories,protein,fat,sodium,fiber,carbo,sugars,potass,vitamins,shelf,weight,cups,ratin
String,Categorical,Categorical,Int,Int,Int,Int,Float,Float,Int,Int,Int,Int,Float,Float,Float
100% Bran,N,C,70,4,1,130,10,5,6,280,25,3,1,0.33,68.402973
100% Natural Bran,Q,C,120,3,5,15,2,8,8,135,0,3,1,1,33.983679
All-Bran,K,C,70,4,1,260,9,7,5,320,25,3,1,0.33,59.425505
All-Bran with Extra Fiber,K,C,50,4,0,140,14,8,0,330,25,3,1,0.5,93.704912
carlosjcatotavalladares@cis106vm:~/Documents/Csv$ cd ../Books/
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep 'love' pride-and-prejudice.tx
by allowance" and "loving with personal love." This distinction applies
to their best work than in the case of those others who are loved "by
proper thing to love them. And in the sect--fairly large and yet
All the minor passages--the loves of Jane and Bingley, the advent of Mr.
aversion to actual love. I do not know whether the all-grasping hand of
his falling in love at all is not extremely probable. Here again I
injured in disposition, and thoroughly in love. As for his being in
love, Elizabeth has given as just an exposition of the causes of that
anybody who can read between lines will not find the lovers'
ladies with whom it might be a pleasure to fall in love; there are at
Grant. I should have been most in love with Beatrix and Argemone; I
"So much love and eloquence" 156
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep -Ewn 'love|hate' pride-and-prejudice.txt
99:by allowance" and "loving with personal love." This distinction applies
105:proper thing to love them. And in the sect--fairly large and yet
166:aversion to actual love. I do not know whether the all-grasping hand of
396:his falling in love at all is not extremely probable. Here again I
408:injured in disposition, and thoroughly in love. As for his being in
409:love, Elizabeth has given as just an exposition of the causes of that
470:ladies with whom it might be a pleasure to fall in love; there are at
474:Grant. I should have been most in love with Beatrix and Argemone; I
575:"So much love and eloquence" 156
756: may_ fall in love with one of them, and therefore you must visit him as
933:for your sakes we would do anything. Lydia, my love, though you _are_
972:dancing was a certain step towards falling in love; and very lively
1048:"Come, Darcy," said he, "I must have you dance. I hate to see you
1415:way to be very much in love; but she considered with pleasure that it
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep -n '^love' dracula.txt
2340:loves you honestly, going away and looking all broken-hearted, and to
2423:lover; it's more unselfish anyhow. My dear, I'm going to have a pretty
2454:lover, such a husband, and such a friend.
2539:lovelier than ever, and we drove up to the house at the Crescent in
6094:love her. One, two, three, all open their veins for her, besides one old
6249:love and pride, seen you grow up. Now I want you to make your home here
6279:love me, and he loves me, and I love you with all the moods and tenses
6664:loveliness had come back to her in death, and the hours that had passed,
6848:loveliness. It frightened and amazed me somewhat; and as for Arthur, he
7303:love her. Oh, Madam Mina, by that love, I implore you, help me. It is
8475:lover, but only her physician and her friend. I gave to her my nights
9542:loved and honoured as our host is, everything regarding him is of
10476:love and from the good, good wishes of those other strong men.
11582:love Mina, I know. Oh, do something to save her. It cannot have gone too
14715:loved him and honoured him more than I can say, and that my latest and
15429:loved her, that they did dare much for her sake."
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep -n '^[A-Z0-9]' dracula.txt
3:This eBook is for the use of anyone anywhere in the United States and
11:Title: Dracula
13:Author: Bram Stoker
15:Release Date: October, 1995 [eBook #345]
18:Language: English
20:Character set encoding: UTF-8

```

## Question 5



```
carlosjcatotavalladares@cis106vm:~$ awk -F';' '{print $1,$NF}' Documents/Csv/cars.csv
Car Origin
STRING CAT
Chevrolet Chevelle Malibu US
```

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' '{print "The",$1,"is made in",$NF}' Documents/Csv/cars.csv
The Car is made in Origin
The STRING is made in CAT
The Chevrolet Chevelle Malibu is made in US
The Buick Skylark 320 is made in US
The Plymouth Satellite is made in US
The AMC Rebel SST is made in US
The Ford Torino is made in US
The Ford Galaxie 500 is made in US
The Chevrolet Impala is made in US
The Plymouth Fury iii is made in US
The Pontiac Catalina is made in US
```

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' '{print "The",$1,"has",$3,"cyinders and is made in",$NF}' Documents/Csv/cars.csv
The Car has Cylinders cyinders and is made in Origin
The STRING has INT cyinders and is made in CAT
The Chevrolet Chevelle Malibu has 8 cyinders and is made in US
The Buick Skylark 320 has 8 cyinders and is made in US
The Plymouth Satellite has 8 cyinders and is made in US
The AMC Rebel SST has 8 cyinders and is made in US
The Ford Torino has 8 cyinders and is made in US
The Ford Galaxie 500 has 8 cyinders and is made in US
The Chevrolet Impala has 8 cyinders and is made in US
```

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' 'NR >3 {print "The",$1,"has",$3,"cyinders and is made in",$NF}' Documents/Csv/cars.csv
The Buick Skylark 320 has 8 cyinders and is made in US
The Plymouth Satellite has 8 cyinders and is made in US
```

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' 'NR >3 {print "The",toupper($1),"has",$3,"cyinders and is made in",$NF}' Documents/Csv/cars.csv
The BUICK SKYLARK 320 has 8 cyinders and is made in US
The PLYMOUTH SATELLITE has 8 cyinders and is made in US
The AMC REBEL SST has 8 cyinders and is made in US
The FORD TORINO has 8 cyinders and is made in US
```

```
carlosjcatotavalladares@cis106vm:~$ sed 's/Dracula/Alucard/g' Documents/Books/dracula.txt _
```

```
carlosjcatotavalladares@cis106vm:~$ sed G /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
```

```
carlosjcatotavalladares@cis106vm:~/Documents/Books$ cat pride-and-prejudice.txt | tr 'n/n/n/n/n/' 'n/' _
```

## Question 6

```
carlosjcatotavalladares@cis106vm:~$ grep -c '/bin/bash' /etc/passwd
2
carlosjcatotavalladares@cis106vm:~$ grep -c '/sbin/nologin' /etc/passwd
40
carlosjcatotavalladares@cis106vm:~$ cd Documents/Csv/
carlosjcatotavalladares@cis106vm:~/Documents/Csv$ grep -ic 'ford' cars.csv
53
carlosjcatotavalladares@cis106vm:~/Documents/Csv$ cd ~/Documents/Books/
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep -ic '....' bi
grep: bi: No such file or directory
carlosjcatotavalladares@cis106vm:~/Documents/Books$ grep -ic '....' bible.txt
29713
carlosjcatotavalladares@cis106vm:~/Documents/Books$ _
```

## Question 7 challenge

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' 'NR > 3 {print $1}' Documents/Csv/cereal.csv
100% Natural Bran
All-Bran
All-Bran with Extra Fiber
Almond Delight
Apple Cinnamon Cheerios
```

```
carlosjcatotavalladares@cis106vm:~$ awk -F';' 'NR > 3 {print $1}' Documents/Csv/cereal.csv | sort
100% Natural Bran
All-Bran
All-Bran with Extra Fiber
Almond Delight
Apple Cinnamon Cheerios
Apple Jacks
```

```
carlosjcatotavalladares@cis106vm:~$ cut -d";" -f1,4 Documents/Csv/cereal.csv
name;calories
String;Int
100% Bran;70
100% Natural Bran;120
All-Bran;70
```

```
carlosjcatotavalladares@cis106vm:~$ cut -d";" -f1,4 --output-delimiter="," Documents/Csv/cereal.csv
name,calories
String,Int
100% Bran,70
100% Natural Bran,120
```