

lab7

Question 1

```
daabualia@cis106:~$ 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:/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:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:102:105::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
syslog:x:104:111::/home/syslog:/usr/sbin/nologin
mopidy:x:130:29::/var/lib/mopidy:/usr/sbin/nologin
_daabualia@cis106:~$ tac /etc/passwd
mopidy:x:130:29::/var/lib/mopidy:/usr/sbin/nologin
_flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
vboxadd:x:999:1::/var/run/vboxadd:/bin/false
daabualia:x:1000:1000:daabualia,,,:/home/daabualia:/bin/bash
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup:/bin/false
pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
saned:x:122:129::/var/lib/saned:/usr/sbin/nologin
nm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
fwupd-refresh:x:120:126:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sssd:x:118:125:sssd system user,,,:/var/lib/sssd:/usr/sbin/nologin
whoopsie:x:117:124::/nonexistent:/bin/false
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
kernooops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq - /var/lib/misc:/usr/sbin/nologin
```

```
root:x:0:0:root:/root:/bin/bash
daabualia@cis106:~$ 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:/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$
21 messagebus:x:102:105::/nonexistent:/usr/sbin/nologin$
22 systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:
/usr/sbin/nologin$
23 syslog:x:104:111:~/home/syslog:/usr/sbin/nologin
nt:/usr/sbin/nologin
 51 mopidy:x:130:29::/var/lib/mopidy:/usr/sbin/nologin$
daabualia@cis106:~$ 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
daabualia@cis106:~$ tail -5 /etc/passwd
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
daabualia:x:1000:1000:daabualia,,,:/home/daabualia:/bin/bash
vboxadd:x:999:1::/var/run/vboxadd:/bin/false
_flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/
sbin/nologin
mopidy:x:130:29::/var/lib/mopidy:/usr/sbin/nologin
```

Question 2

```
daabualia@cis106:~$ cut -d':' -f1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
systemd-network
systemd-resolve
messagebus
systemd-timesync
syslog
```

```
daabualia@cis106:~$ cut -d':' -f1,7 /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
messagebus:/usr/sbin/nologin
systemd-timesync:/usr/sbin/nologin
syslog:/usr/sbin/nologin
_apt:/usr/sbin/nologin
tss:/bin/false
uuidd:/usr/sbin/nologin
systemd-oom:/usr/sbin/nologin
```

```
daabualia@cis106:~$ 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
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
messagebus=/usr/sbin/nologin
systemd-timesync=/usr/sbin/nologin
syslog=/usr/sbin/nologin
_apt=/usr/sbin/nologin
tss=/bin/false
uuidd=/usr/sbin/nologin
systemd-oom=/usr/sbin/nologin
tcpdump=/usr/sbin/nologin
```

TSV

```
daabualia@cis106:~$ 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
games:x:60:games:/usr/games:/usr/sbin/nologin
man:x:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:105::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
```

Question 3

```
daabualia@cis106:~$ curl -s https://cis106.com/assets/shopping.txt -o shopping.txt
daabualia@cis106:~$ curl -s https://cis106.com/assets/tasks.txt -o tasks.txt
daabualia@cis106:~$ cd ~/Documents/Books
daabualia@cis106:~/Documents/Books$ wc -l dracula.txt
15845 dracula.txt
daabualia@cis106:~/Documents/Books$ wc -w dracula.txt
164354 dracula.txt
daabualia@cis106:~/Documents/Books$ cd ~/
daabualia@cis106:~$ 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
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
daabualia:x:1000:1000:daabualia,,,:/home/daabualia:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
```

Question 4

```
daabualia@cis106:~$ cd Documents/Csv/
daabualia@cis106:~/Documents/Csv$ cat cereal.csv |tr ';' ',' 
name,mfr,type,calories,protein,fat,sodium,fiber,carbo,sugars,potass,vitamins,she
lf,weight,cups,rating
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
Almond Delight,R,C,110,2,2,200,1,14,8,-1,25,3,1,0.75,34.384843
Apple Cinnamon Cheerios,G,C,110,2,2,180,1.5,10.5,10,70,25,1,1,0.75,29.509541
Apple Jacks,K,C,110,2,0,125,1,11,14,30,25,2,1,1,33.174094
Basic 4,G,C,130,3,2,210,2,18,8,100,25,3,1,33,0.75,37.038562
Bran Chex,R,C,90,2,1,200,4,15,6,125,25,1,1,0.67,49.120253
Bran Flakes,P,C,90,3,0,210,5,13,5,190,25,3,1,0.67,53.313813
Cap'n'Crunch,Q,C,120,1,2,220,0,12,12,35,25,2,1,0.75,18.042851
Cheerios,G,C,110,6,2,290,2,17,1,105,25,1,1,1.25,50.764999
Cinnamon Toast Crunch,G,C,120,1,3,210,0,13,9,45,25,2,1,0.75,19.823573
Clusters G,C,110,3,2,140,2,13,7,105,25,3,1,0.5,40.400208
```

```
daabualia@cis106:~$ cd Documents/Books
daabualia@cis106:~/Documents/Books$ grep -i "love" pride-and-prejudice.txt
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
_may_ fall in love with one of them, and therefore you must visit him as
persuade you at last. I was sure you loved your girls too well to
for your sakes we would do anything. Lydia, my love, though you _are_
dancing was a certain step towards falling in love; and very lively
way to be very much in love; but she considered with pleasure that it
very few of us who have heart enough to be really in love without
in love as much as she chooses."
imagination is very rapid; it jumps from admiration to love, from love
Jane, make haste and tell us; make haste, my love."
brother Gardiner's in town so much in love with her, that my
discovered the efficacy of poetry in driving away love!"  

"I have been used to consider poetry as the _food_ of love," said Darcy.  

"Of a fine, stout, healthy love it may. Everything nourishes what is
be a great loss to _me_ to have many such acquaintance. I dearly love a
to-day. Lydia, my love, ring the bell. I must speak to Hill this
```

```
daabualia@cis106:~/Documents/Books$ grep -n -w -e "love" -e "hate" "Pride and Prejudice.txt"
grep: Pride and Prejudice.txt: No such file or directory
daabualia@cis106:~/Documents/Books$ grep -nwe "love" -e "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
1430:very few of us who have heart enough to be really in love without
1450:in love as much as she chooses."
1657:imagination is very rapid; it jumps from admiration to love, from love
1764:Jane, make haste and tell us; make haste, my love."
2334:brother Gardiner's in town so much in love with her, that my
2341:discovered the efficacy of poetry in driving away love!"
2343:"I have been used to consider poetry as the _food_ of love," said Darcy.
2345:"Of a fine, stout, healthy love it may. Everything nourishes what is
2821:be a great loss to me to have many such acquaintance. I dearly love a
```

```
daabualia@cis106:~/Documents/Books$ grep -w "love" dracula.txt
know her is to love her. I long to go through the crowded streets of
also that there is a chapel of old times. We Transylvanian nobles love
battlements and casements. I love the shade and the shadow, and would
thought and many blushes, her ill-spelt love-letter, and writing in my
"You yourself never loved; you never love!" On this the other women
"Yes, I too can love; you yourselves can tell it from the past. Is it
to speak more. Oh, Mina, couldn't you guess? I love him. I am blushing
words. But oh, Mina, I love him; I love him; I love him! There, that
I could love him in time; and when I shook my head his hands trembled,
what I would do if I were a man and wanted to make a girl love me. No, I
began pouring out a perfect torrent of love-making, laying his very
"Yes, there is some one I love, though he has not told me yet that he
my dear, and a fine fellow, or you could not love him--hasn't spoken
She is so sweet with old people; I think they all fell in love with her
but what it is I do not yet know. His redeeming quality is a love of
own heart a bit. But, Lord love ye, miss, I ain't afraid of dyin', not a
looks, oh, so sweet. If Mr. Holmwood fell in love with her seeing her
to have become as much in love with the spot as I am, and it is hard to
suffering from a violent brain fever. He wishes me to convey his love,
poor dear should have fallen in love with any other girl. The idea of
except myself, my life, and my trust, and that with these went my love
>Oceans of love and millions of kisses, and may you soon be in your own
together; and I love him more than ever. He _tells_ me that he loves me
more, but I doubt that, for at first he told me that he couldn't love me
"P. S.--Mother sends her love. She seems better, poor dear.
back to happiness, and to those that love them. It is much to do, and,
that you have done all for her you love. Come now and be silent. You
```

```
Some one my sex coloved and coprotect one others, made my head worry.  
daabualia@cis106:~/Documents/Books$ grep -E '^[A-Z0-9]' dracula.txt  
This eBook is for the use of anyone anywhere in the United States and  
Title: Dracula  
Author: Bram Stoker  
Release Date: October, 1995 [eBook #345]  
Language: English  
Produced by: Chuck Greif and the Online Distributed Proofreading Team  
Contents  
CHAPTER I. Jonathan Harker's Journal  
CHAPTER II. Jonathan Harker's Journal  
CHAPTER III. Jonathan Harker's Journal  
CHAPTER IV. Jonathan Harker's Journal  
CHAPTER V. Letters—Lucy and Mina  
CHAPTER VI. Mina Murray's Journal  
CHAPTER VII. Cutting from "The Dailygraph," 8 August  
CHAPTER VIII. Mina Murray's Journal  
CHAPTER IX. Mina Murray's Journal  
CHAPTER X. Mina Murray's Journal  
CHAPTER XI. Lucy Westenra's Diary  
CHAPTER XII. Dr. Seward's Diary  
CHAPTER XIII. Dr. Seward's Diary  
CHAPTER XIV. Mina Harker's Journal  
CHAPTER XV. Dr. Seward's Diary  
CHAPTER XVI. Dr. Seward's Diary  
CHAPTER XVII. Dr. Seward's Diary  
CHAPTER XVIII. Dr. Seward's Diary  
CHAPTER XIX. Jonathan Harker's Journal  
CHAPTER XX. Jonathan Harker's Journal
```

Question 5

```
daabualia@cis106:~/Documents/Csv$ awk -F';' '{print $1,$NF}' cars.csv
Car Origin
STRING CAT
Chevrolet Chevelle Malibu US
Buick Skylark 320 US
Plymouth Satellite US
AMC Rebel SST US
Ford Torino US
Ford Galaxie 500 US
Chevrolet Impala US
Plymouth Fury iii US
Pontiac Catalina US
AMC Ambassador DPL US
Citroen DS-21 Pallas Europe
Chevrolet Chevelle Concours (sw) US
Ford Torino (sw) US
Plymouth Satellite (sw) US
AMC Rebel SST (sw) US
Dodge Challenger SE US
Plymouth 'Cuda 340 US
Ford Mustang Boss 302 US
Chevrolet Monte Carlo US
Buick Estate Wagon (sw) US
Toyota Corolla Mark ii Japan
Plymouth Duster US
AMC Hornet US
Ford Maverick US
Datsun PL510 Japan
Volkswagen 1131 Deluxe Sedan Europe
```

```
daabualia@cis106:~/Documents/Csv$ awk -F';' '{OFS=" made in "} {print $1,$NF}' cars.csv
Car made in Origin
STRING made in CAT
Chevrolet Chevelle Malibu made in US
Buick Skylark 320 made in US
Plymouth Satellite made in US
AMC Rebel SST made in US
Ford Torino made in US
Ford Galaxie 500 made in US
Chevrolet Impala made in US
Plymouth Fury iii made in US
Pontiac Catalina made in US
AMC Ambassador DPL made in US
Citroen DS-21 Pallas made in Europe
Chevrolet Chevelle Concours (sw) made in US
Ford Torino (sw) made in US
Plymouth Satellite (sw) made in US
AMC Rebel SST (sw) made in US
Dodge Challenger SE made in US
Plymouth 'Cuda 340 made in US
Ford Mustang Boss 302 made in US
Chevrolet Monte Carlo made in US
Buick Estate Wagon (sw) made in US
Toyota Corolla Mark ii made in Japan
Plymouth Duster made in US
AMC Hornet made in US
Ford Maverick made in US
```

```
daabualia@cis106:~/Documents/Csv$ awk -F';' '{print "The",$1," has",$3,"cylinder  
s ","and is made in ",$NF}' cars.csv  
The Car has Cylinders cylinders and is made in Origin  
The STRING has INT cylinders and is made in CAT  
The Chevrolet Chevelle Malibu has 8 cylinders and is made in US  
The Buick Skylark 320 has 8 cylinders and is made in US  
The Plymouth Satellite has 8 cylinders and is made in US  
The AMC Rebel SST has 8 cylinders and is made in US  
The Ford Torino has 8 cylinders and is made in US  
The Ford Galaxie 500 has 8 cylinders and is made in US  
The Chevrolet Impala has 8 cylinders and is made in US  
The Plymouth Fury iii has 8 cylinders and is made in US  
The Pontiac Catalina has 8 cylinders and is made in US  
The AMC Ambassador DPL has 8 cylinders and is made in US  
The Citroen DS-21 Pallas has 4 cylinders and is made in Europe  
The Chevrolet Chevelle Concours (sw) has 8 cylinders and is made in US  
The Ford Torino (sw) has 8 cylinders and is made in US  
The Plymouth Satellite (sw) has 8 cylinders and is made in US  
The AMC Rebel SST (sw) has 8 cylinders and is made in US  
The Dodge Challenger SE has 8 cylinders and is made in US  
The Plymouth 'Cuda 340 has 8 cylinders and is made in US  
The Ford Mustang Boss 302 has 8 cylinders and is made in US  
The Chevrolet Monte Carlo has 8 cylinders and is made in US  
The Buick Estate Wagon (sw) has 8 cylinders and is made in US  
The Toyota Corolla Mark ii has 4 cylinders and is made in Japan  
The Plymouth Duster has 6 cylinders and is made in US  
The AMC Hornet has 6 cylinders and is made in US
```

```
daabualia@cis106:~/Documents/Csv$ awk 'NR > 3 {print}' cars.csv
Buick Skylark 320;15.0;8;350.0;165.0;3693.;11.5;70;US
Plymouth Satellite;18.0;8;318.0;150.0;3436.;11.0;70;US
AMC Rebel SST;16.0;8;304.0;150.0;3433.;12.0;70;US
Ford Torino;17.0;8;302.0;140.0;3449.;10.5;70;US
Ford Galaxie 500;15.0;8;429.0;198.0;4341.;10.0;70;US
Chevrolet Impala;14.0;8;454.0;220.0;4354.;9.0;70;US
Plymouth Fury iii;14.0;8;440.0;215.0;4312.;8.5;70;US
Pontiac Catalina;14.0;8;455.0;225.0;4425.;10.0;70;US
AMC Ambassador DPL;15.0;8;390.0;190.0;3850.;8.5;70;US
Citroen DS-21 Pallas;0;4;133.0;115.0;3090.;17.5;70;Europe
Chevrolet Chevelle Concours (sw);0;8;350.0;165.0;4142.;11.5;70;US
Ford Torino (sw);0;8;351.0;153.0;4034.;11.0;70;US
Plymouth Satellite (sw);0;8;383.0;175.0;4166.;10.5;70;US
AMC Rebel SST (sw);0;8;360.0;175.0;3850.;11.0;70;US
Dodge Challenger SE;15.0;8;383.0;170.0;3563.;10.0;70;US
Plymouth 'Cuda 340;14.0;8;340.0;160.0;3609.;8.0;70;US
Ford Mustang Boss 302;0;8;302.0;140.0;3353.;8.0;70;US
Chevrolet Monte Carlo;15.0;8;400.0;150.0;3761.;9.5;70;US
Buick Estate Wagon (sw);14.0;8;455.0;225.0;3086.;10.0;70;US
Toyota Corolla Mark ii;24.0;4;113.0;95.00;2372.;15.0;70;Japan
Plymouth Duster;22.0;6;198.0;95.00;2833.;15.5;70;US
AMC Hornet;18.0;6;199.0;97.00;2774.;15.5;70;US
Ford Maverick;21.0;6;200.0;85.00;2587.;16.0;70;US
Datsun PL510;27.0;4;97.00;88.00;2130.;14.5;70;Japan
Volkswagen 1131 Deluxe Sedan;26.0;4;97.00;46.00;1835.;20.5;70;Europe
Peugeot 504;25.0;4;110.0;87.00;2672.;17.5;70;Europe
Audi 100 LS;24.0;4;107.0;90.00;2430.;14.5;70;Europe
Saab 99e;25.0;4;104.0;95.00;2375.;17.5;70;Europe
```

```
daabualia@cis106:~/Documents/Csv$ awk -F: '{print toupper($1)}' cars.csv
CAR;MPG;CYLINDERS;DISPLACEMENT;HORSEPOWER;WEIGHT;ACCELERATION;MODEL;ORIGIN
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;INT;CAT
CHEVROLET CHEVELLE MALIBU;18.0;8;307.0;130.0;3504.;12.0;70;US
BUICK SKYLARK 320;15.0;8;350.0;165.0;3693.;11.5;70;US
PLYMOUTH SATELLITE;18.0;8;318.0;150.0;3436.;11.0;70;US
AMC REBEL SST;16.0;8;304.0;150.0;3433.;12.0;70;US
FORD TORINO;17.0;8;302.0;140.0;3449.;10.5;70;US
FORD GALAXIE 500;15.0;8;429.0;198.0;4341.;10.0;70;US
CHEVROLET IMPALA;14.0;8;454.0;220.0;4354.;9.0;70;US
PLYMOUTH FURY III;14.0;8;440.0;215.0;4312.;8.5;70;US
PONTIAC CATALINA;14.0;8;455.0;225.0;4425.;10.0;70;US
AMC AMBASSADOR DPL;15.0;8;390.0;190.0;3850.;8.5;70;US
CITROEN DS-21 PALLAS;0;4;133.0;115.0;3090.;17.5;70;EUROPE
CHEVROLET CHEVELLE CONCOURS (SW);0;8;350.0;165.0;4142.;11.5;70;US
FORD TORINO (SW);0;8;351.0;153.0;4034.;11.0;70;US
PLYMOUTH SATELLITE (SW);0;8;383.0;175.0;4166.;10.5;70;US
AMC REBEL SST (SW);0;8;360.0;175.0;3850.;11.0;70;US
DODGE CHALLENGER SE;15.0;8;383.0;170.0;3563.;10.0;70;US
PLYMOUTH 'CUDA 340;14.0;8;340.0;160.0;3609.;8.0;70;US
FORD MUSTANG BOSS 302;0;8;302.0;140.0;3353.;8.0;70;US
CHEVROLET MONTE CARLO;15.0;8;400.0;150.0;3761.;9.5;70;US
BUICK ESTATE WAGON (SW);14.0;8;455.0;225.0;3086.;10.0;70;US
TOYOTA COROLLA MARK II;24.0;4;113.0;95.00;2372.;15.0;70;JAPAN
PLYMOUTH DUSTER;22.0;6;198.0;95.00;2833.;15.5;70;US
AMC HORNET;18.0;6;199.0;97.00;2774.;15.5;70;US
FORD MAVERICK;21.0;6;200.0;85.00;2587.;16.0;70;US
DATSUN PL510;27.0;4;97.00;88.00;2130.;14.5;70;JAPAN
VOLKSWAGEN 1131 DELUXE SEDAN;26.0;4;97.00;46.00;1835.;20.5;70;EUROPE
```

edition.

Most people start at our website which has the main PG search facility: www.gutenberg.org.

This website includes information about Project Gutenberg™, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.

```
daabualia@cis106:~/Documents/Books$ sed 's/Dracula/Alucard/g' dracula.txt _
```

```
daabualia@cis106:~$ 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

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
```

Question 6

```
1: daabualia@cis106: ~/Documents/Books ~
daabualia@cis106:~$ grep "/bin/bash" /etc/passwd
root:x:0:0:root:/root:/bin/bash
daabualia:x:1000:1000:daabualia,,,:/home/daabualia:/bin/bash
daabualia@cis106:~$ grep -c "/bin/bash" /etc/passwd
2
daabualia@cis106:~$ grep -c "/bin/bash" /sbin/nologin
0
daabualia@cis106:~$ cd Documents/Csv
daabualia@cis106:~/Documents/Csv$ grep -i 'ford' cars.csv
Ford Torino;17.0;8;302.0;140.0;3449.;10.5;70;US
Ford Galaxie 500;15.0;8;429.0;198.0;4341.;10.0;70;US
Ford Torino (sw);0;8;351.0;153.0;4034.;11.0;70;US
Ford Mustang Boss 302;0;8;302.0;140.0;3353.;8.0;70;US
Ford Maverick;21.0;6;200.0;85.00;2587.;16.0;70;US
Ford F250;10.0;8;360.0;215.0;4615.;14.0;70;US
Ford Pinto;25.0;4;98.00;0;2046.;19.0;71;US
Ford Torino 500;19.0;6;250.0;88.00;3302.;15.5;71;US
Ford Galaxie 500;14.0;8;351.0;153.0;4154.;13.5;71;US
Ford Country Squire (sw);13.0;8;400.0;170.0;4746.;12.0;71;US
Ford Mustang;18.0;6;250.0;88.00;3139.;14.5;71;US
Ford Pinto Runabout;21.0;4;122.0;86.00;2226.;16.5;72;US
Ford Galaxie 500;14.0;8;351.0;153.0;4129.;13.0;72;US
Ford Gran Torino (sw);13.0;8;302.0;140.0;4294.;16.0;72;US
Ford Pinto (sw);22.0;4;122.0;86.00;2395.;16.0;72;US
daabualia@cis106:~$ cd Documents/Books
daabualia@cis106:~/Documents/Books$ grep -o -w "[a-z][A-Z]"\"{4\} bible.txt
daabualia@cis106:~/Documents/Books$ grep -o -w "[a-z][A-Z]"\"{4\} bible.txt | wc -l
0
```

Challenge question

```
daabualia@cis106:~/Documents/Csv$ awk -F';' 'NR > 3 {print $1,$4}' cereal.csv
100% Natural Bran 120
All-Bran 70
All-Bran with Extra Fiber 50
Almond Delight 110
Apple Cinnamon Cheerios 110
Apple Jacks 110
Basic 4 130
Bran Chex 90
Bran Flakes 90
Cap'n'Crunch 120
Cheerios 110
Cinnamon Toast Crunch 120
Clusters 110
Cocoa Puffs 110
Corn Chex 110
Corn Flakes 100
Corn Pops 110
Count Chocula 110
Cracklin' Oat Bran 110
Cream of Wheat (Quick) 100
Crispix 110
Crispy Wheat & Raisins 100
Double Chex 100
```

```
daabualia@cis106:~/Documents/Csv$ awk -F';' 'NR > 3 {print $1}' cereal.csv | sort
100% Natural Bran
All-Bran
All-Bran with Extra Fiber
Almond Delight
Apple Cinnamon Cheerios
Apple Jacks
Basic 4
Bran Chex
Bran Flakes
Cap'n'Crunch
Cheerios
Cinnamon Toast Crunch
Clusters
Cocoa Puffs
Corn Chex
Corn Flakes
Corn Pops
Count Chocula
Cracklin' Oat Bran
Cream of Wheat (Quick)
Crispix
Crispy Wheat & Raisins
```

```
daabualia@cis106:~/Documents/Csv$ awk -F';' 'NR > 3 {print $1,$4}' cereal.csv
100% Natural Bran 120
All-Bran 70
All-Bran with Extra Fiber 50
Almond Delight 110
Apple Cinnamon Cheerios 110
Apple Jacks 110
Basic 4 130
Bran Chex 90
Bran Flakes 90
Cap'n'Crunch 120
Cheerios 110
Cinnamon Toast Crunch 120
Clusters 110
Cocoa Puffs 110
Corn Chex 110
Corn Flakes 100
Corn Pops 110
Count Chocula 110
Cracklin' Oat Bran 110
Cream of Wheat (Quick) 100
Crispix 110
Crispy Wheat & Raisins 100
Double Chex 100
```