... name: Diaa Salman course: cis106 semester: fall22 ...

Lab 7

Question 1

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                            Dload  Upload   Total   Spent    Left  Speed
100  7398  100  7398    0      0   8420       0 --:--:-- --:--:-- --:--:--  8416
djsalman@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
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
```

```
djsalman@cis106vm:~$ tac /etc/passwd
sshd:x:129:65534::/run/sshd:/usr/sbin/nologin
flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
vboxadd:x:999:1::/var/run/vboxadd:/bin/false
djsalman:x:1000:1000:Diaa,,,:/home/djsalman:/bin/bash
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
hplip:x:126:7:HPLIP system user,,,:/run/hplip:/bin/false
gnome-initial-setup:x:125:65534::/run/gnome-initial-setup/:/bin/false
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
geoclue:x:123:130::/var/lib/geoclue:/usr/sbin/nologin
colord:x:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
saned:x:121:128::/var/lib/saned:/usr/sbin/nologin
nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/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
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,://:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
tcpdump:x:109:117::/nonexistent:/usr/sbin/nologin
systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
uuidd:x:107:115::/run/uuidd:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false
apt:x:105:65534::/nonexistent:/usr/sbin/nologin
```
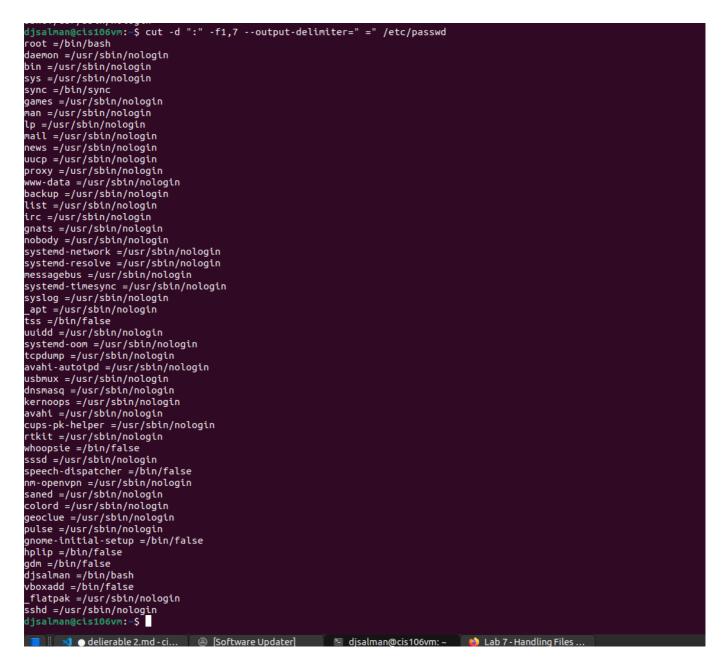
```
djsalman@cis106vm:~$ cat -En /etc/passwd
     1  root:x:0:0:root:/root:/bin/bash$
     2  daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin$
     3  bin:x:2:2:bin:/bin:/usr/sbin/nologin$
     4  sys:x:3:3:sys:/dev:/usr/sbin/nologin$
     5  sync:x:4:65534:sync:/bin:/bin/sync$
     6  games:x:5:60:games:/usr/games:/usr/sbin/nologin$
     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/sbin/nolo
    18  nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
    19  systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbir
    20  systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin$
    21  messagebus:x:102:105::/nonexistent:/usr/sbin/nologin$
    22  systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/s
    23  syslog:x:104:111::/home/syslog:/usr/sbin/nologin$
```

```
djsalman@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
djsalman@cis106vm:~$ tail -5 /etc/passwd
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
djsalman:x:1000:1000:Diaa,,,:/home/djsalman:/bin/bash
vboxadd:x:999:1:::/var/run/vboxadd:/bin/false
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
sshd:x:129:65534::/run/sshd:/usr/sbin/nologin
djsalman@cis106vm:~$
```

Question 2

```
_flatpak:x:128:137:flatpak system-wide installation helper,,,:/none
sshd:x:129:65534:::/run/sshd:/usr/sbin/nologin
djsalman@cis106vm:~$ 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
_apt
tss
uuidd
systemd-oom
tcpdump
avahi-autoipd
usbmux
dnsmasq
kernoops
avahi
cups-pk-helper
rtkit
whoopsie
sssd
speech-dispatcher
nm-openvpn
saned
colord
geoclue
pulse
gnome-initial-setup
hplip
gdm
djsalman
vboxadd
_flatpak
sshd
djsalman@cis106vm:~$
```

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

```
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
avahi-autoipd:/usr/sbin/nologin
usbmux:/usr/sbin/nologin
dnsmasq:/usr/sbin/nologin
kernoops:/usr/sbin/nologin
avahi:/usr/sbin/nologin
cups-pk-helper:/usr/sbin/nologin
rtkit:/usr/sbin/nologin
whoopsie:/bin/false
sssd:/usr/sbin/nologin
speech-dispatcher:/bin/false
nm-openvpn:/usr/sbin/nologin
saned:/usr/sbin/nologin
colord:/usr/sbin/nologin
geoclue:/usr/sbin/nologin
pulse:/usr/sbin/nologin
gnome-initial-setup:/bin/false
hplip:/bin/false
gdm:/bin/false
djsalman:/bin/bash
vboxadd:/bin/false
_flatpak:/usr/sbin/nologin
sshd:/usr/sbin/nologin
djsalman@cis106vm:~$
```

```
djsalman@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
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
avahi-autoipd =/usr/sbin/nologin
usbmux =/usr/sbin/nologin
dnsmasq =/usr/sbin/nologin
kernoops =/usr/sbin/nologin
avahi =/usr/sbin/nologin
cups-pk-helper =/usr/sbin/nologin
rtkit =/usr/sbin/nologin
whoopsie =/bin/false
sssd =/usr/sbin/nologin
speech-dispatcher =/bin/false
nm-openvpn =/usr/sbin/nologin
saned =/usr/sbin/nologin
colord =/usr/sbin/nologin
geoclue =/usr/sbin/nologin
pulse =/usr/sbin/nologin
gnome-initial-setup =/bin/false
hplip =/bin/false
gdm =/bin/false
djsalman =/bin/bash
vboxadd =/bin/false
_flatpak =/usr/sbin/nologin
sshd =/usr/sbin/nologin
djsalman@cis106vm:~$
```

🔳 ⌗ ⌐ ● delierable 2.md - ci...   Ⓐ [Software Updater]   ⌆ djsalman@cis106vm: ~   🦊 Lab 7 - Handling Files ...

```
djsalman@cis106vm:~$ cut -d ':' -f1,2,3,4,5,6,7 /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:/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
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false
uuidd:x:107:115::/run/uuidd:/usr/sbin/nologin
systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
tcpdump:x:109:117::/nonexistent:/usr/sbin/nologin
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/:/usr/sbin/nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
whoopsie:x:117:124::/nonexistent:/bin/false
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
saned:x:121:128::/var/lib/saned:/usr/sbin/nologin
colord:x:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:123:130::/var/lib/geoclue:/usr/sbin/nologin
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:125:65534::/run/gnome-initial-setup/:/bin/false
hplip:x:126:7:HPLIP system user,,,:/run/hplip:/bin/false
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
djsalman:x:1000:1000:Diaa,,,:/home/djsalman:/bin/bash
vboxadd:x:999:1::/var/run/vboxadd:/bin/false
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
sshd:x:129:65534::/run/sshd:/usr/sbin/nologin
djsalman@cis106vm:~$
```

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[□]  | [delierable 2.md - ci...] | [Software Updater] | [djsalman@cis106vm: ~] | [Lab 7 - Handling Files ...]
```

Question 3

```
sshd:x:129:65534::/run/sshd:/usr/sbin/nologin
djsalman@cis106vm:~$ curl -s https://cis106.com/assets/tasks.txt -o task-to-complete
djsalman@cis106vm:~$ curl -s https://cis106.com/assets/shopping.txt -o shopping-list
djsalman@cis106vm:~$ paste shopping-list task-to-complete
Eggs    Do laundry
Milk    Play Bingo
Juice   Go to Work
Carrots         Go to School
Potatoes        Pay Bills
djsalman@cis106vm:~$ wc -l Documents/Books/dracula.txt
wc: Documents/Books/dracula.txt: No such file or directory
djsalman@cis106vm:~$ wc -l Documents/Books/pride-and-prejudice.txt
wc: Documents/Books/pride-and-prejudice.txt: No such file or directory
djsalman@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
colord:x:122:129: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
djsalman:x:1000:1000:Diaa,,,:/home/djsalman:/bin/bash
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
games:x:5:60:games:/usr/games:/usr/sbin/nologin
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
geoclue:x:123:130::/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:125:65534::/run/gnome-initial-setup/:/bin/false
hplip:x:126:7: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:120:126: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
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
root:x:0:0:root:/root:/bin/bash
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
saned:x:121:128::/var/lib/saned:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
```

Question 4

```
djsalman@cis106vm:~/Documents/Csv$ cat cereal.csv | tr ';' ','
name,mfr,type,calories,protein,fat,sodium,fiber,carbo,sugars,potass,vitamins,shelf,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
Cocoa Puffs,G,C,110,1,1,180,0,12,13,55,25,2,1,1,22.736446
Corn Chex,R,C,110,2,0,280,0,22,3,25,25,1,1,1,41.445019
Corn Flakes,K,C,100,2,0,290,1,21,2,35,25,1,1,1,45.863324
Corn Pops,K,C,110,1,0,90,1,13,12,20,25,2,1,1,35.782791
Count Chocula,G,C,110,1,1,180,0,12,13,65,25,2,1,1,22.396513
Cracklin' Oat Bran,K,C,110,3,3,140,4,10,7,160,25,3,1,0.5,40.448772
Cream of Wheat (Quick),N,H,100,3,0,80,1,21,0,-1,0,2,1,1,64.533816
Crispix,K,C,110,2,0,220,1,21,3,30,25,3,1,1,46.895644
Crispy Wheat & Raisins,G,C,100,2,1,140,2,11,10,120,25,3,1,0.75,36.176196
Double Chex,R,C,100,2,0,190,1,18,5,80,25,3,1,0.75,44.330856
Froot Loops,K,C,110,2,1,125,1,11,13,30,25,2,1,1,32.207582
Frosted Flakes,K,C,110,1,0,200,1,14,11,25,25,1,1,0.75,31.435973
Frosted Mini-Wheats,K,C,100,3,0,0,3,14,7,100,25,2,1,0.8,58.345141
Fruit & Fibre Dates, Walnuts, and Oats,P,C,120,3,2,160,5,12,10,200,25,3,1.25,0.67,40.917047
Fruitful Bran,K,C,120,3,0,240,5,14,12,190,25,3,1.33,0.67,41.015492
Fruity Pebbles,P,C,110,1,1,135,0,13,12,25,25,2,1,0.75,28.025765
Golden Crisp,P,C,100,2,0,45,0,11,15,40,25,1,1,0.88,35.252444
Golden Grahams,G,C,110,1,1,280,0,15,9,45,25,2,1,0.75,23.804043
Grape Nuts Flakes,P,C,100,3,1,140,3,15,5,85,25,3,1,0.88,52.076897
Grape-Nuts,P,C,110,3,0,170,3,17,3,90,25,3,1,0.25,53.371007
Great Grains Pecan,P,C,120,3,3,75,3,13,4,100,25,3,1,0.33,45.811716
Honey Graham Ohs,Q,C,120,1,2,220,1,12,11,45,25,2,1,1,21.871292
Honey Nut Cheerios,G,C,110,3,1,250,1.5,11.5,10,90,25,1,1,0.75,31.072217
Honey-comb,P,C,110,1,0,180,0,14,11,35,25,1,1,1.33,28.742414
Just Right Crunchy  Nuggets,K,C,110,2,1,170,1,17,6,60,100,3,1,1,36.523683
Just Right Fruit & Nut,K,C,140,3,1,170,2,20,9,95,100,3,1.3,0.75,36.471512
Kix,G,C,110,2,1,260,0,21,3,40,25,2,1,1.5,39.241114
Life,Q,C,100,4,2,150,2,12,6,95,25,2,1,0.67,45.328074
Lucky Charms,G,C,110,2,1,180,0,12,12,55,25,2,1,1,26.734515
Maypo,A,H,100,4,1,0,0,16,3,95,25,2,1,1,54.850917
Muesli Raisins, Dates, & Almonds,R,C,150,4,3,95,3,16,11,170,25,3,1,1,37.136863
Muesli Raisins, Peaches, & Pecans,R,C,150,4,3,150,3,16,11,170,25,3,1,1,34.139765
Mueslix Crispy Blend,K,C,160,3,2,150,3,17,13,160,25,3,1.5,0.67,30.313351
Multi-Grain Cheerios,G,C,100,2,1,220,2,15,6,90,25,1,1,1,40.105965
Nut&Honey Crunch,K,C,120,2,1,190,0,15,9,40,25,2,1,0.67,29.924285
Nutri-Grain Almond-Raisin,K,C,140,3,2,220,3,21,7,130,25,3,1.33,0.67,40.692320
Nutri-grain Wheat,K,C,90,3,0,170,3,18,2,90,25,3,1,1,59.642837
```

```
djsalman@cis106vm:~/Documents$ cd Books
djsalman@cis106vm:~/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
o-day. Lydia, my love, ring the bell. I must speak to Hill this
His plan did not vary on seeing them. Miss Bennet's lovely face
effects of your loveliness and amiable qualifications. As I must,
shall choose to attribute it to your wish of increasing my love by
successful love; for Mrs. Bennet, having dawdled about in the vestibule
n love with you and wants him to marry Miss Darcy. She follows him to
is not such a simpleton. Could she have seen half as much love in Mr.
of being in love with you, he is very much in love with her friend."
she dared to hope that so much love and eloquence awaited her there.
    "So much love and eloquence"

djsalman@cis106vm:~/Documents/Books$ grep -E 'love|hate' 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
"Come, Darcy," said he, "I must have you dance. I hate to see you
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."
"To walk three miles, or four miles, or five miles, or whatever it is,
to employ for captivation. Whatever bears affinity to cunning is
"Whatever I do is done in a hurry," replied he; "and therefore if I
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
thankful; and then you may say whatever you like of me."
be a great loss to _me_ to have many such acquaintance. I dearly love a
"And _your_ defect is a propensity to hate everybody."
to-day. Lydia, my love, ring the bell. I must speak to Hill this
him to write to you at all, and very hypocritical. I hate such false
His plan did not vary on seeing them. Miss Bennet's lovely face
different sort of men, and that he hates me."
everybody. Whatever he said, was said well; and whatever he did, done
throw into the account of accident or mistake whatever could not be
scruple whatever on that head, and was very far from dreading a rebuke,
a man agreeable whom one is determined to hate! Do not wish me such an
He smiled, and assured her that whatever she wished him to say should be
effects of your loveliness and amiable qualifications. As I must,
shall choose to attribute it to your wish of increasing my love by
"I do assure you, sir, that I have no pretensions whatever to that kind
successful love; for Mrs. Bennet, having dawdled about in the vestibule
in love with you and wants him to marry Miss Darcy. She follows him to
is not such a simpleton. Could she have seen half as much love in Mr.
of being in love with you, he is very much in love with her friend."

djsalman@cis106vm: ...   Lab 7 - Handling Files ...   GitHub — Mozilla Fir...

```
was exactly what Darcy had hoped to see. They were able to love each
as well as Elizabeth, really loved them; and they were both ever
djsalman@cis106vm:~/Documents/Books$ grep -iw '^love' dracula.txt
love her. One, two, three, all open their veins for her, besides one old
love and pride, seen you grow up. Now I want you to make your home here
love me, and he loves me, and I love you with all the moods and tenses
love her. Oh, Madam Mina, by that love, I implore you, help me. It is
love and from the good, good wishes of those other strong men.
love Mina, I know. Oh, do something to save her. It cannot have gone too
djsalman@cis106vm:~/Documents/Books$
```

```
disalman@cis106vm: ...      Lab 7 - Handling Files ...      GitHub — Mozilla Fir...
```

```
love Mina, I know. Oh, do something to save her. It cannot have gone too
djsalman@cis106vm:~/Documents/Books$ grep -E '^[A-Z]|^[0-9]' 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
Character set encoding: UTF-8
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
```

Question 5

```
Most people start at our website which has the main PG search
This website includes information about Project Gutenberg-tm,
Archive Foundation, how to help produce our new eBooks, and how to
djsalman@cis106vm:~/Documents/Books$ awk -F ';' '{print $1, $NF}' Documents/Csv/cars.csv
awk: cannot open Documents/Csv/cars.csv (No such file or directory)
djsalman@cis106vm:~/Documents/Books$ cd
djsalman@cis106vm:~$ awk -F ';' '{print $1, $NF}' Documents/Csv/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
```

```
djsalman@cis106vm:~/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
Datsun PL510 made in Japan
Volkswagen 1131 Deluxe Sedan made in Europe
Peugeot 504 made in Europe
Audi 100 LS made in Europe
Saab 99e made in Europe
BMW 2002 made in Europe
AMC Gremlin made in US
Ford F250 made in US
Chevy C20 made in US
Dodge D200 made in US
Hi 1200D made in US
Datsun PL510 made in Japan
Chevrolet Vega 2300 made in US
Toyota Corolla made in Japan
Ford Pinto made in US
Volkswagen Super Beetle 117 made in Europe
AMC Gremlin made in US
Plymouth Satellite Custom made in US
```

```
jsalman@cis106vm:~/Documents/Csv$ awk -F ';' '{print " The ",$1, " has ",$3, " cylinders and is made in ",$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
```

```
djsalman@cis106vm:~/Documents/Csv$ awk 'NR > 2 { print }' cars.csv
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
```

```
Dodge Rampage;32.0;4;135.0;84.00;2295.;11.6;82;US
Ford Ranger;28.0;4;120.0;79.00;2625.;18.6;82;US
Chevy S-10;31.0;4;119.0;82.00;2720.;19.4;82;US
djsalman@cis106vm:~/Documents/Csv$ awk -F ';' '{print toupper9$1)}' cars.csv
awk: line 1: extra ')'
djsalman@cis106vm:~/Documents/Csv$ awk -F ';' '{print toupper($1)}' cars.csv
CAR
STRING
CHEVROLET CHEVELLE MALIBU
BUICK SKYLARK 320
PLYMOUTH SATELLITE
AMC REBEL SST
FORD TORINO
FORD GALAXIE 500
CHEVROLET IMPALA
PLYMOUTH FURY III
PONTIAC CATALINA
AMC AMBASSADOR DPL
CITROEN DS-21 PALLAS
CHEVROLET CHEVELLE CONCOURS (SW)
FORD TORINO (SW)
PLYMOUTH SATELLITE (SW)
AMC REBEL SST (SW)
DODGE CHALLENGER SE
```

```
djsalman@cis106vm:~/Documents/Books$ sed 's/Dracula/Alucard/g' dracula.txt | grep Alucard
The Project Gutenberg eBook of Alucard, by Bram Stoker
Title: Alucard
Castle Alucard, as there are no maps of this country as yet to compare
town named by Count Alucard, is a fairly well-known place. I shall enter
Count Alucard had directed me to go to the Golden Krone Hotel, which I
was all he knew. When I asked him if he knew Count Alucard, and could
"Count Alucard?" He bowed in a courtly way as he replied:--
"I am Alucard; and I bid you welcome, Mr. Harker, to my house. Come in;
Alucard, jumping to his feet, said:--
Alucard, as it may help me to understand. To-night he may talk of
the Turk on his own ground? This was a Alucard indeed! Woe was it that
Turk and brought the shame of slavery on them! Was it not this Alucard,
Hungarian yoke, we of the Alucard blood were amongst their leaders, for
Szekelys--and the Alucard as their heart's blood, their brains, and
Alucard was speaking, there was that in his eyes and in his bearing
Alucard." I suspected him, and determined to test his sincerity.
to my own room. The last I saw of Count Alucard was his kissing his hand
had just been received. It is only a line dated from Castle Alucard,
terrible events at Whitby when Count Alucard landed, so I shall look
had found in his absence: that the house which Alucard had bought was
sisters in the castle of Alucard. He become so small--we ourselves saw
has been. He must, indeed, have been that Voivode Alucard who won his
grave, and are even now arrayed against us. The Alucards were, says
'pokol'--Satan and hell; and in one manuscript this very Alucard is
```

```
djsalman@cis106vm:~/Documents/Books$ 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
```

```
necessarily keep eBooks in compliance with any particular paper

edition.


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facility: www.gutenberg.org


This website includes information about Project Gutenberg-tm,

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subscribe to our email newsletter to hear about new eBooks.

djsalman@cis106vm:~/Documents/Books$ ▮
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🖥 | 🖳 djsalman@cis106vm: ... | 🦊 Lab 7 - Handling Files ... | 🦊 GitHub — Mozilla Fir... | ⚡ ● lab7.md - cis106 - V...

Question 6

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This website includes information about Project Gutenberg-tm,

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.

djsalman@cis106vm:~/Documents/Books$ cd
djsalman@cis106vm:~$ grep -c "/bin/bash" /etc/passwd
2
djsalman@cis106vm:~$ grep -c "/sbin/nologin" /etc/passwd
40
djsalman@cis106vm:~$ cd Documents/Csv/
djsalman@cis106vm:~/Documents/Csv$ grep -i 'ford' cars.csv | wc -l
53
djsalman@cis106vm:~/Documents/Csv$ cd
djsalman@cis106vm:~$ cd Documents/Books/
djsalman@cis106vm:~/Documents/Books$ cat bible.txt | grep -Eo '\b[a-z0-9]{4}\b' | wc -l
158138
djsalman@cis106vm:~/Documents/Books$ ▮
```

Challenge questions

Question 1

```
Documents/ Downloads/
djsalman@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
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
```

Question 2

```
djsalman@cis106vm:~/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
```

Question 3

```
Total Whole Grain
Triples
Trix
Wheat Chex
Wheaties
Wheaties Honey Gold
djsalman@cis106vm:~/Documents/Csv$ awk -F ';' 'NR > 3 {print $1,$4}' cereal.csv |sort
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
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