

Week Report 6

Practice

Practice 1

```
Tilix: anthony@cis106: ~  
1: anthony@cis106: ~  
anthony@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:/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/lib/ma  
2: anthony@cis106: ~  
anthony@cis106:~$ tac /etc/passwd  
_flatpak:x:122:124:Flatpak system-wide installation helper  
,,,:/nonexistent:/usr/sbin/nologin  
anthony:x:1000:1000:anthony:/home/anthony:/bin/bash  
nm-openvpn:x:121:122:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin  
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false  
3: anthony@cis106: ~  
anthony@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$
```

```

1/1  +  [?] [?]  Tilix: anthony@cis106: ~  [Q] [≡] [–] [□] [X]

1: anthony@cis106: ~  [□] [X]
anthony@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
anthony@cis106:~$ tail -5 /etc/passwd
gnome-initial-setup:x:119:65534::/run/gnome-initial-setup:/bin/false
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false
nm-openvpn:x:121:122:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
anthony:x:1000:1000:anthony:/home/anthony:/bin/bash
_flatpak:x:122:124:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
anthony@cis106:~$

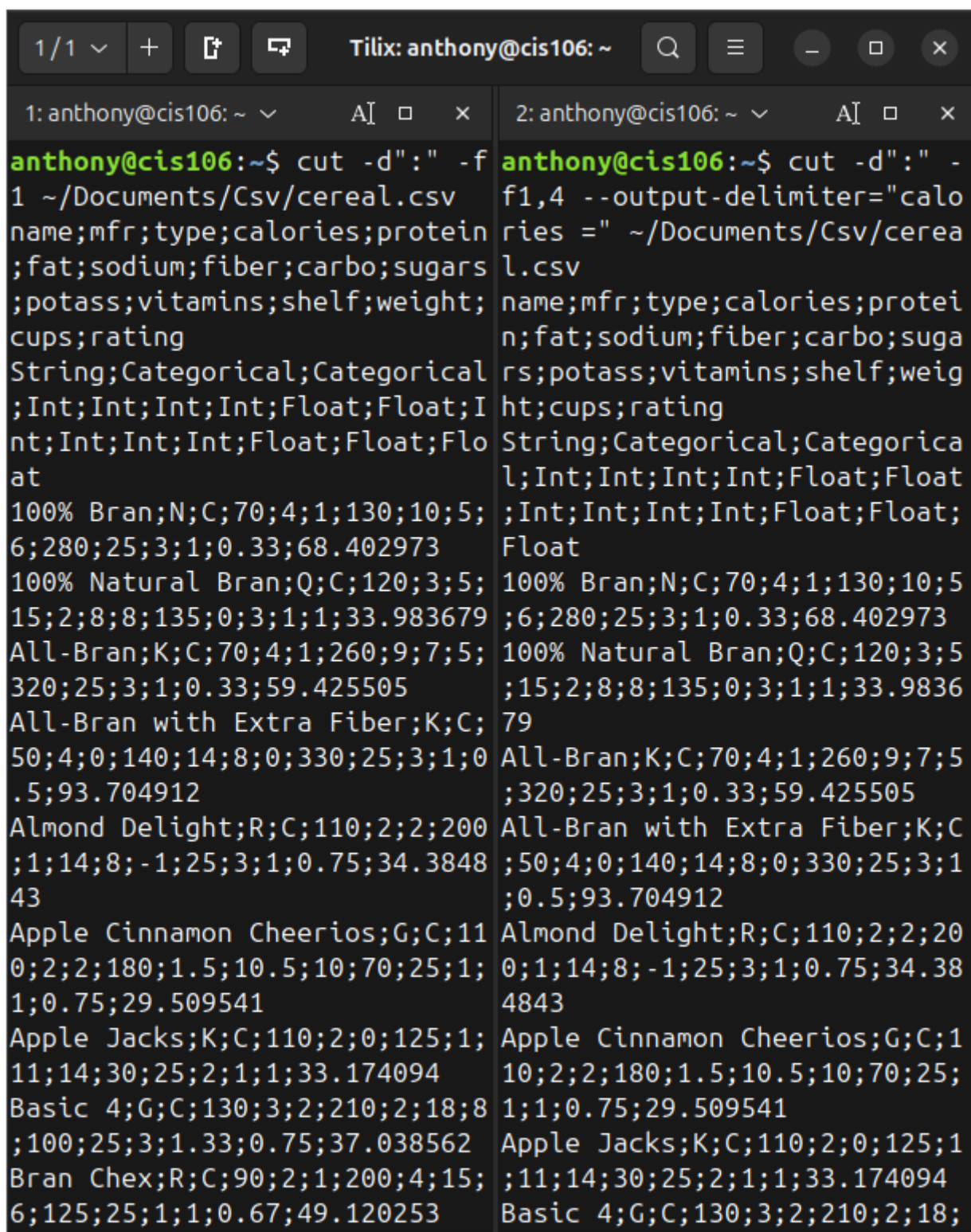
2: anthony@cis106: ~  [□] [X]
anthony@cis106:~$ tail -1 /etc/passwd
_flatpak:x:122:124:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
anthony@cis106:~$ head -1 /etc/passwd
root:x:0:0:root:/root:/bin/bash
anthony@cis106:~$

3: anthony@cis106: ~  [□] [X]
15839
15840 This website includes information about Project Gutenberg™,
15841 including how to make donations to the Project Gutenberg Literary
15842 Archive Foundation, how to help produce our new eBooks,
15843 subscribe to our email newsletter to hear about new eBooks.
15844
15845
anthony@cis106:~$ cat -n ~/Documents/Books/dracula.txt

```

Practice 2

```
Tilix: anthony@cis106: ~  
1: anthony@cis106: ~  AI □ ×  
anthony@cis106:~$ cut -d":" -f  
1 /etc/passwd  
root  
daemon  
bin  
sys  
sync  
games  
man  
lp  
mail  
news  
uucp  
proxy  
www-data  
backup  
list  
irc  
_apt  
nobody  
systemd-network  
systemd-timesync  
dhcpcd  
messagebus  
syslog  
systemd-resolve  
uidd  
usbmux  
tss  
systemd-oom  
kernoops  
2: anthony@cis106: ~  AI □ ×  
anthony@cis106:~$ cut -d":" -  
f1,6 /etc/passwd  
root:/root  
daemon:/usr/sbin  
bin:/bin  
sys:/dev  
sync:/bin  
games:/usr/games  
man:/var/cache/man  
lp:/var/spool/lpd  
mail:/var/mail  
news:/var/spool/news  
3: anthony@cis106: ~  AI □ ×  
anthony@cis106:~$ cut -d":" -  
f1,6,7 --output-delimiter=">"  
/etc/passwd  
root>/root>/bin/bash  
daemon>/usr/sbin>/usr/sbin/no  
login  
bin>/bin>/usr/sbin/nologin  
sys>/dev>/usr/sbin/nologin  
sync>/bin>/bin/sync  
games>/usr/games>/usr/sbin/no  
login  
man>/var/cache/man>/usr/sbin/  
nologin  
lp>/var/spool/lpd>/usr/sbin/n  
ologin  
mail>/var/mail>/usr/sbin/nolo  
gin
```



```

1: anthony@cis106: ~  AI  x
anthony@cis106:~$ cut -d":" -f 1 ~/Documents/Csv/cereal.csv
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

2: anthony@cis106: ~  AI  x
anthony@cis106:~$ cut -d":" -f 1,4 --output-delimiter="calories =" ~/Documents/Csv/cereal.csv
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

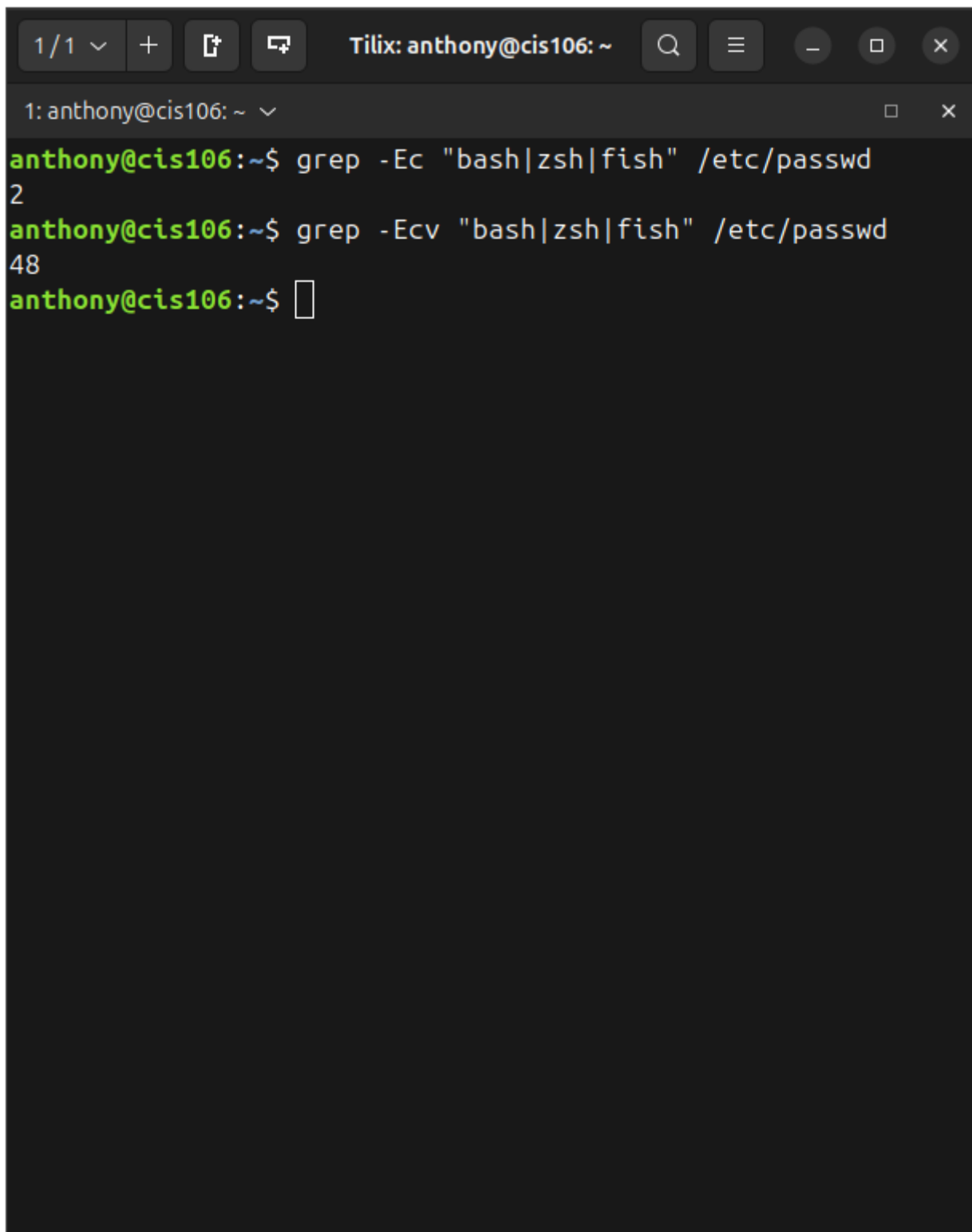
```

Practice 3


```
1/1 + [ ] ... 106: ~/Documents/Csv Q ≡ - □ ×  
1: anthony@cis106: ~ A[ □ × ... 06: ~/Documents/Csv A[ □ ×  
anthony@cis106:~$ sort ~/Documents/Csv/cars.csv  
AMC Ambassador Brougham;13.0;8;360.0;175.0;3821.;11.0;73;US  
AMC Ambassador DPL;15.0;8;390.0;190.0;3850.;8.5;70;US  
AMC Ambassador SST;17.0;8;304.0;150.0;3672.;11.5;72;US  
AMC Concord;19.4;6;232.0;90.00;3210.;17.2;78;US  
AMC Concord;24.3;4;151.0;90.00;3003.;20.1;80;US  
AMC Concord d/l;18.1;6;258.0;120.0;3410.;15.1;78;US  
AMC Concord DL;23.0;4;151.0;0;3035.;20.5;82;US  
AMC Concord DL 6;20.2;6;232.0;90.00;3265.;18.2;79;US  
AMC Gremlin;18.0;6;232.0;100.0;2789.;15.0;73;US  
AMC Gremlin;19.0;6;232.0;100.0;2634.;13.0;71;US  
AMC Gremlin;20.0;6;232.0;100.0;2914.;16.0;75;US  
AMC Gremlin;21.0;6;199.0;90.00;2648.;15.0;70;US  
AMC Hornet;18.0;6;199.0;97.00;2774.;15.5;70;US  
AMC Hornet;18.0;6;232.0;100.0;2945.;16.0;73;US  
AMC Hornet;19.0;6;232.0;100.0;  
anthony@cis106:~$ cd ~/Documents/Csv/  
anthony@cis106:~/Documents/Csv$ sort cars.csv > sorted_cars.csv  
... 06: ~/Documents/Csv A[ □ ×  
anthony@cis106:~$ man wc  
anthony@cis106:~$ cd ~/Documents/Csv/  
anthony@cis106:~/Documents/Csv$ wc -l sorted_cars.csv  
408 sorted_cars.csv  
anthony@cis106:~/Documents/Csv$ wc -m sorted_cars.csv  
22663 sorted_cars.csv  
anthony@cis106:~/Documents/Csv$ cat sorted_cars.csv |tr ' ;' ', '  
AMC Ambassador Brougham,13.0,8,360.0,175.0,3821.,11.0,73,US  
AMC Ambassador DPL,15.0,8,390.0,190.0,3850.,8.5,70,US  
AMC Ambassador SST,17.0,8,304.0,150.0,3672.,11.5,72,US  
AMC Concord,19.4,6,232.0,90.00,3210.,17.2,78,US  
AMC Concord,24.3,4,151.0,90.00,3003.,20.1,80,US  
AMC Concord d/l,18.1,6,258.0,
```

Practice 4

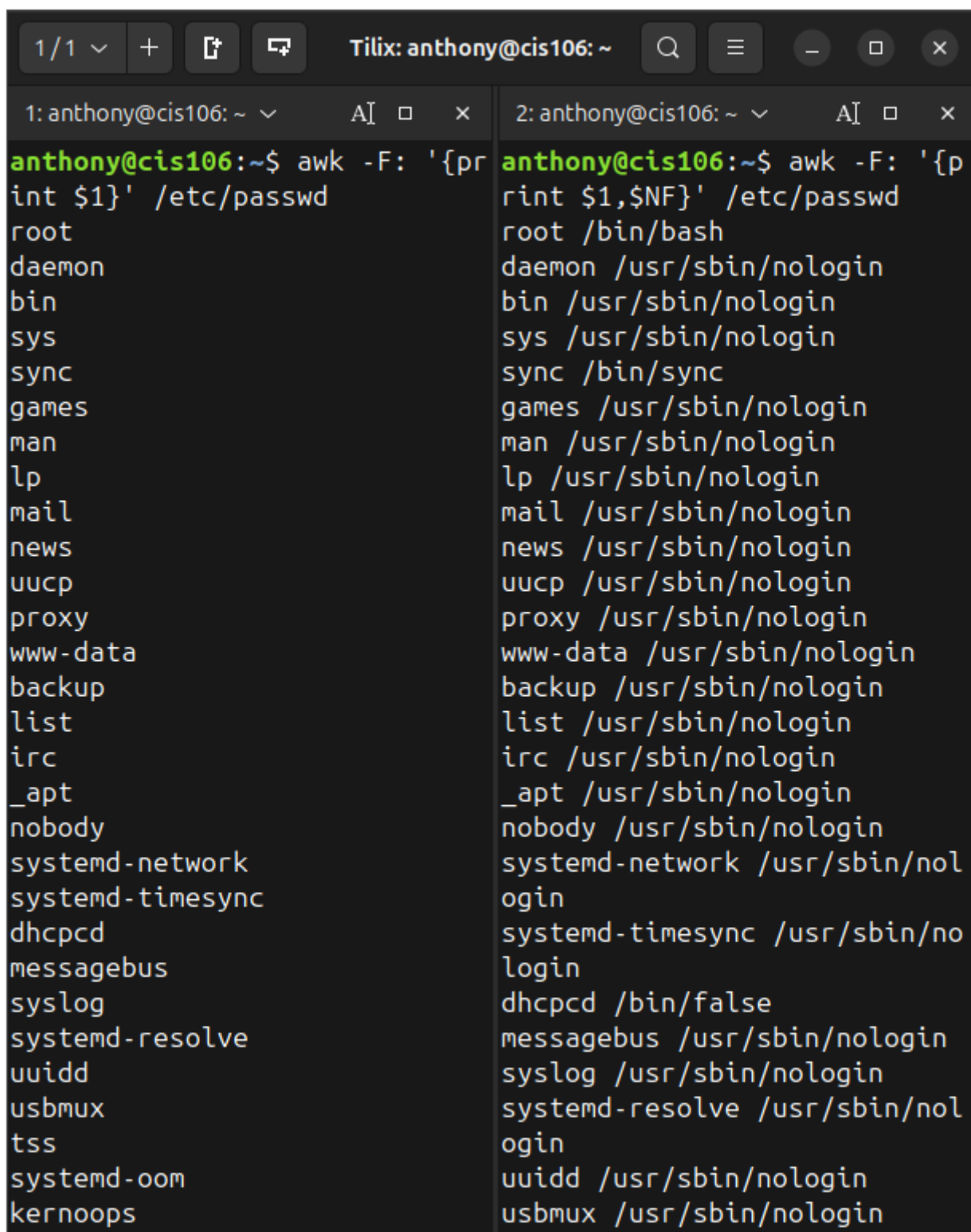
```
Tilix: anthony@cis106: ~  
1/1 + [?] [?] [?] [?] [?] [?] [?] [?] [?]  
1: anthony@cis106: ~  
anthony@cis106:~$ grep -in "love" ~/Documents/Books/pride-and-prejudice.txt  
75:by allowance" and "loving with personal love." This distinction applies  
79:to their best work than in the case of those others who are loved "by  
81:proper thing to love them. And in the sect--fairly large and yet  
129:All the minor passages--the loves of Jane and Bingley, the advent of Mr.  
142:aversion to actual love. I do not know whether the all-grasping hand of  
372:his falling in love at all is not extremely probable. Here again I  
384:injured in disposition, and thoroughly in love. As for his being in  
385:love, Elizabeth has given as just an exposition of the causes of that  
437:anybody who can read between lines will not find the lovers'  
446:ladies with whom it might  
2: anthony@cis106: ~  
anthony@cis106:~$ grep -ic "love" ~/Documents/Books/pride-and-prejudice.txt  
131  
anthony@cis106:~$ grep -ivc "love" ~/Documents/Books/pride-and-prejudice.txt  
14406  
anthony@cis106:~$ grep -io "love" ~/Documents/Books/pride-and-prejudice.txt|wc -l  
135  
anthony@cis106:~$  
3: anthony@cis106: ~  
anthony@cis106:~$ grep -i "^dracula" ~/Documents/Books/dracula.txt  
DRACULA  
Dracula, jumping to his feet, said:--  
Dracula, as it may help me to understand. To-night he may talk of  
Dracula was speaking, there was that in his eyes and in his bearing  
Dracula." I suspected him, and determined to test his sincerity
```



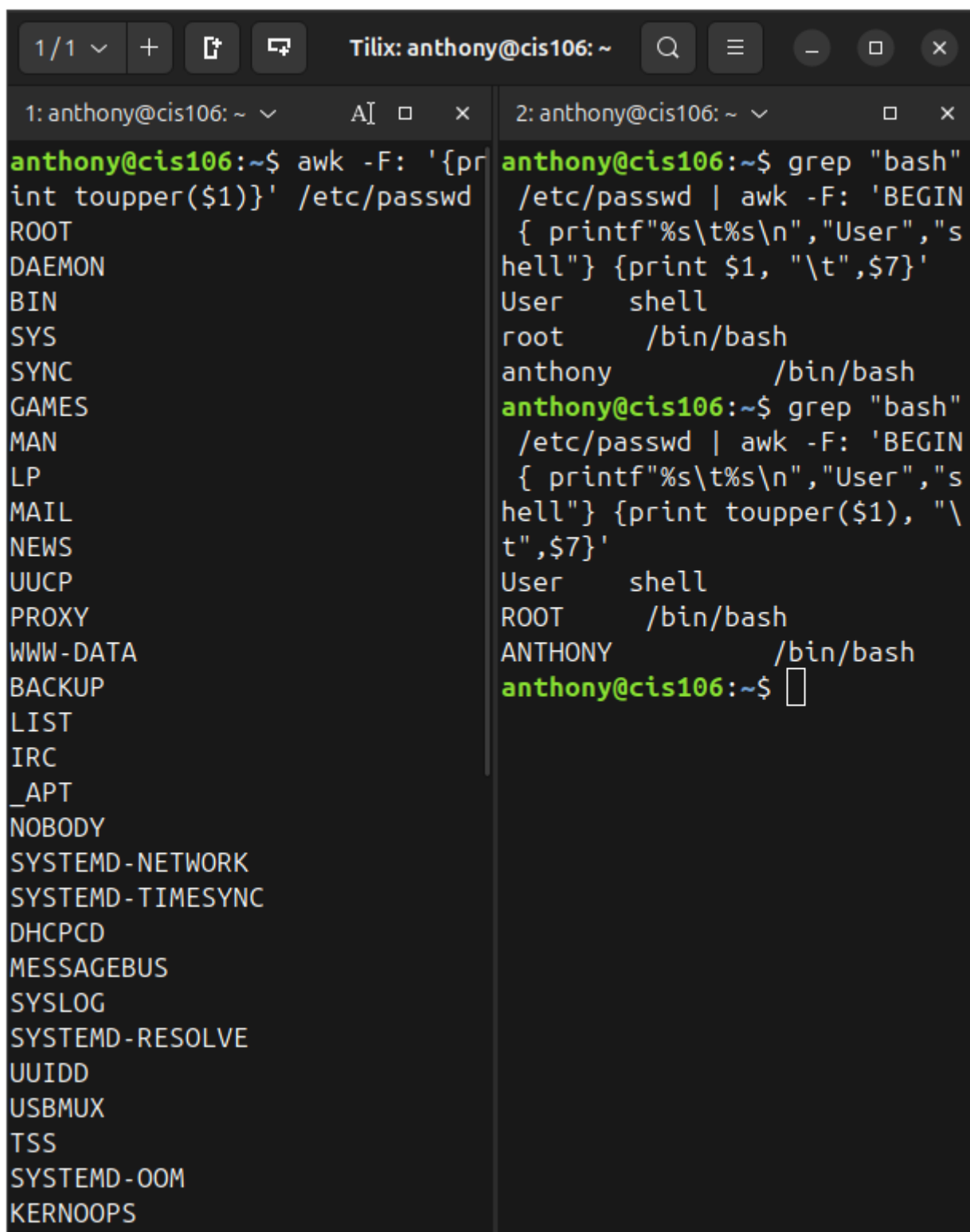
A terminal window titled "Tilix: anthony@cis106: ~" with standard window controls. The terminal shows the following commands and output:

```
1: anthony@cis106: ~  
anthony@cis106:~$ grep -Ec "bash|zsh|fish" /etc/passwd  
2  
anthony@cis106:~$ grep -Ecv "bash|zsh|fish" /etc/passwd  
48  
anthony@cis106:~$
```

Practice 5



```
1/1 + [T] [F] Tilix: anthony@cis106: ~ 🔍 ☰ - □ ×  
1: anthony@cis106: ~ AI □ × anthony@cis106:~$ awk -F: '{print $1}' /etc/passwd  
root  
daemon  
bin  
sys  
sync  
games  
man  
lp  
mail  
news  
uucp  
proxy  
www-data  
backup  
list  
irc  
_apt  
nobody  
systemd-network  
systemd-timesync  
dhcpd  
messagebus  
syslog  
systemd-resolve  
uidd  
usbmux  
tss  
systemd-oom  
kernoops  
2: anthony@cis106: ~ AI □ × anthony@cis106:~$ awk -F: '{print $1,$NF}' /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  
_apt /usr/sbin/nologin  
nobody /usr/sbin/nologin  
systemd-network /usr/sbin/nologin  
systemd-timesync /usr/sbin/nologin  
dhcpd /bin/false  
messagebus /usr/sbin/nologin  
syslog /usr/sbin/nologin  
systemd-resolve /usr/sbin/nologin  
uidd /usr/sbin/nologin  
usbmux /usr/sbin/nologin
```

```
1/1 + [T] [C] Tilix: anthony@cis106: ~ 🔍 ☰ - □ ×  
1: anthony@cis106: ~ ▾ AI □ × 2: anthony@cis106: ~ ▾ □ ×  
anthony@cis106:~$ awk -F: '{pr  
int toupper($1)}' /etc/passwd  
ROOT  
DAEMON  
BIN  
SYS  
SYNC  
GAMES  
MAN  
LP  
MAIL  
NEWS  
UUCP  
PROXY  
WWW-DATA  
BACKUP  
LIST  
IRC  
_APT  
NOBODY  
SYSTEMD-NETWORK  
SYSTEMD-TIMESYNC  
DHCPD  
MESSAGEBUS  
SYSLOG  
SYSTEMD-RESOLVE  
UUID  
USBMUX  
TSS  
SYSTEMD-OOM  
KERNOPS  
anthony@cis106:~$ grep "bash"  
/etc/passwd | awk -F: 'BEGIN  
{ printf"%s\t%s\n","User","s  
hell"} {print $1, "\t",$7}'  
User shell  
root /bin/bash  
anthony /bin/bash  
anthony@cis106:~$ grep "bash"  
/etc/passwd | awk -F: 'BEGIN  
{ printf"%s\t%s\n","User","s  
hell"} {print toupper($1), "\  
t",$7}'  
User shell  
ROOT /bin/bash  
ANTHONY /bin/bash  
anthony@cis106:~$
```

Practice 6

```
1/1 + [T] [C] Tmux: anthony@cis106: ~/Documents/Csv
1: anthony@cis106: ~/Documents/Csv
anthony@cis106:~$ cd ~/Documents/Csv/
anthony@cis106:~/Documents/Csv$ grep -i "honda" cars.csv | s
ed 's/Honda/tesla/g'
tesla Civic;24.0;4;120.0;97.00;2489.;15.0;74;Japan
tesla Civic CVCC;33.0;4;91.00;53.00;1795.;17.5;75;Japan
tesla Civic;33.0;4;91.00;53.00;1795.;17.4;76;Japan
tesla Accord CVCC;31.5;4;98.00;68.00;2045.;18.5;77;Japan
tesla Civic CVCC;36.1;4;91.00;60.00;1800.;16.4;78;Japan
tesla Accord LX;29.5;4;98.00;68.00;2135.;16.6;78;Japan
tesla Civic 1500 gl;44.6;4;91.00;67.00;1850.;13.8;80;Japan
tesla Accord;32.4;4;107.0;72.00;2290.;17.0;80;Japan
tesla Civic 1300;35.1;4;81.00;60.00;1760.;16.1;81;Japan
tesla Prelude;33.7;4;107.0;75.00;2210.;14.4;81;Japan
tesla Accord;36.0;4;107.0;75.00;2205.;14.5;82;Japan
tesla Civic;38.0;4;91.00;67.00;1965.;15.0;82;Japan

3: anthony@cis106: ~/Documents/Csv
anthony@cis106:~$ cd ~/Documents/Csv/
anthony@cis106:~/Documents/Csv$ sed '/Honda/d' cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleratio
n;Model;Origin
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;DOUBLE;INT;CAT
Chevrolet Chevelle Malibu;18.0;8;307.0;130.0;3504.;12.0;70;U
S
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

4: anthony@cis106: ~/Documents/Csv
anthony@cis106:~/Documents/Csv$ grep -i "honda" cars.csv | s
ed '1,3 s/Honda/tesla/g'
tesla Civic;24.0;4;120.0;97.00;2489.;15.0;74;Japan
tesla Civic CVCC;33.0;4;91.00;53.00;1795.;17.5;75;Japan
tesla Civic;33.0;4;91.00;53.00;1795.;17.4;76;Japan
Honda Accord CVCC;31.5;4;98.00;68.00;2045.;18.5;77;Japan
Honda Civic CVCC;36.1;4;91.00;60.00;1800.;16.4;78;Japan
Honda Accord LX;29.5;4;98.00;68.00;2135.;16.6;78;Japan
Honda Civic 1500 gl;44.6;4;91.00;67.00;1850.;13.8;80;Japan
Honda Accord;32.4;4;107.0;72.00;2290.;17.0;80;Japan
Honda Civic 1300;35.1;4;81.00;60.00;1760.;16.1;81;Japan
Honda Prelude;33.7;4;107.0;75.00;2210.;14.4;81;Japan
Honda Accord;36.0;4;107.0;75.00;2205.;14.5;82;Japan
Honda Civic;38.0;4;91.00;67.00;1965.;15.0;82;Japan
Honda Civic (auto);22.0;4;91.00;67.00;1965.;15.0;82;Japan

2: anthony@cis106: ~/Documents/Csv
anthony@cis106:~/Documents/Csv$ grep -i "honda civic" cars.c
sv | sed G
Honda Civic;24.0;4;120.0;97.00;2489.;15.0;74;Japan

Honda Civic CVCC;33.0;4;91.00;53.00;1795.;17.5;75;Japan

Honda Civic;33.0;4;91.00;53.00;1795.;17.4;76;Japan

Honda Civic CVCC;36.1;4;91.00;60.00;1800.;16.4;78;Japan

Honda Civic 1500 gl;44.6;4;91.00;67.00;1850.;13.8;80;Japan

Honda Civic 1300;35.1;4;81.00;60.00;1760.;16.1;81;Japan

Honda Civic;38.0;4;91.00;67.00;1965.;15.0;82;Japan
```

Practice 7

```
1/1 + ... 106: ~/Documents/Csv ... is106: ~/Documents/Csv
```

```
anthony@cis106:~/Documents/Csv$ awk 'NR > 3 {print}' cars.csv | sort > cars-no-header.csv
anthony@cis106:~/Documents/Csv$ cat cars-no-header.csv | tr ';' ' ' | awk -F, '{print $1,$NF}'
AMC Ambassador Brougham US
AMC Ambassador DPL US
AMC Ambassador SST US
AMC Concord US
AMC Concord US
AMC Concord d/l US
AMC Concord DL US
AMC Concord DL 6 US
AMC Gremlin US
AMC Gremlin US
AMC Gremlin US
AMC Gremlin US
AMC Hornet US
AMC Hornet US
AMC Hornet US
AMC Hornet US
AMC Hornet Sportabout (sw) US
AMC Matador US
AMC Matador US
AMC Matador US
AMC Matador US
AMC Matador (sw) US
AMC Matador (sw) US

anthony@cis106:~/Documents/Csv$ cat cars-no-header.csv | tr ';' ' ' | awk -F, '{print $1}' > cars-brands.csv
anthony@cis106:~/Documents/Csv$ grep ";US" cars.csv | awk -F ';' '{print $1}' | sort > americanCars.csv
anthony@cis106:~/Documents/Csv$ grep ";Japan" cars.csv | awk -F ';' '{print $1}' | sort > americanCars.csv
anthony@cis106:~/Documents/Csv$
```