

# Week Report 7

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## Practice

### Practice 1



```
Tilix: anthony@cis106: ~  
1: anthony@cis106: ~  
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: ~  
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: ~  
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: ~  
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
```

```

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[ □ ×
```

```
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;
```

```
... 06: ~/Documents/Csv A[ □ ×
```

```
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
```

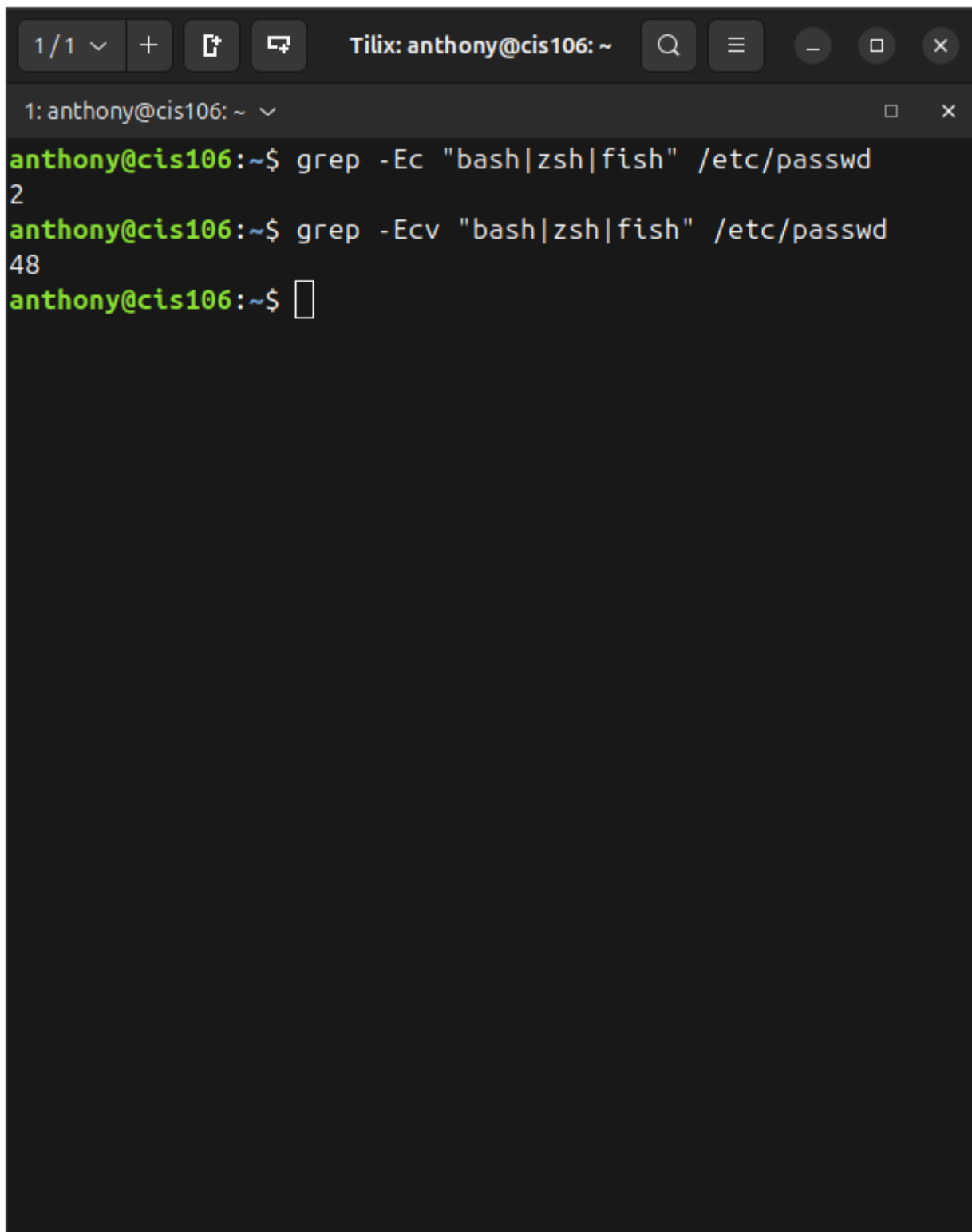
```
AMC Concord,24.3,4,151.0,90.00,3003.,20.1,80,US
```

```
AMC Concord d/l,18.1,6,258.0,
```

## Practice 4



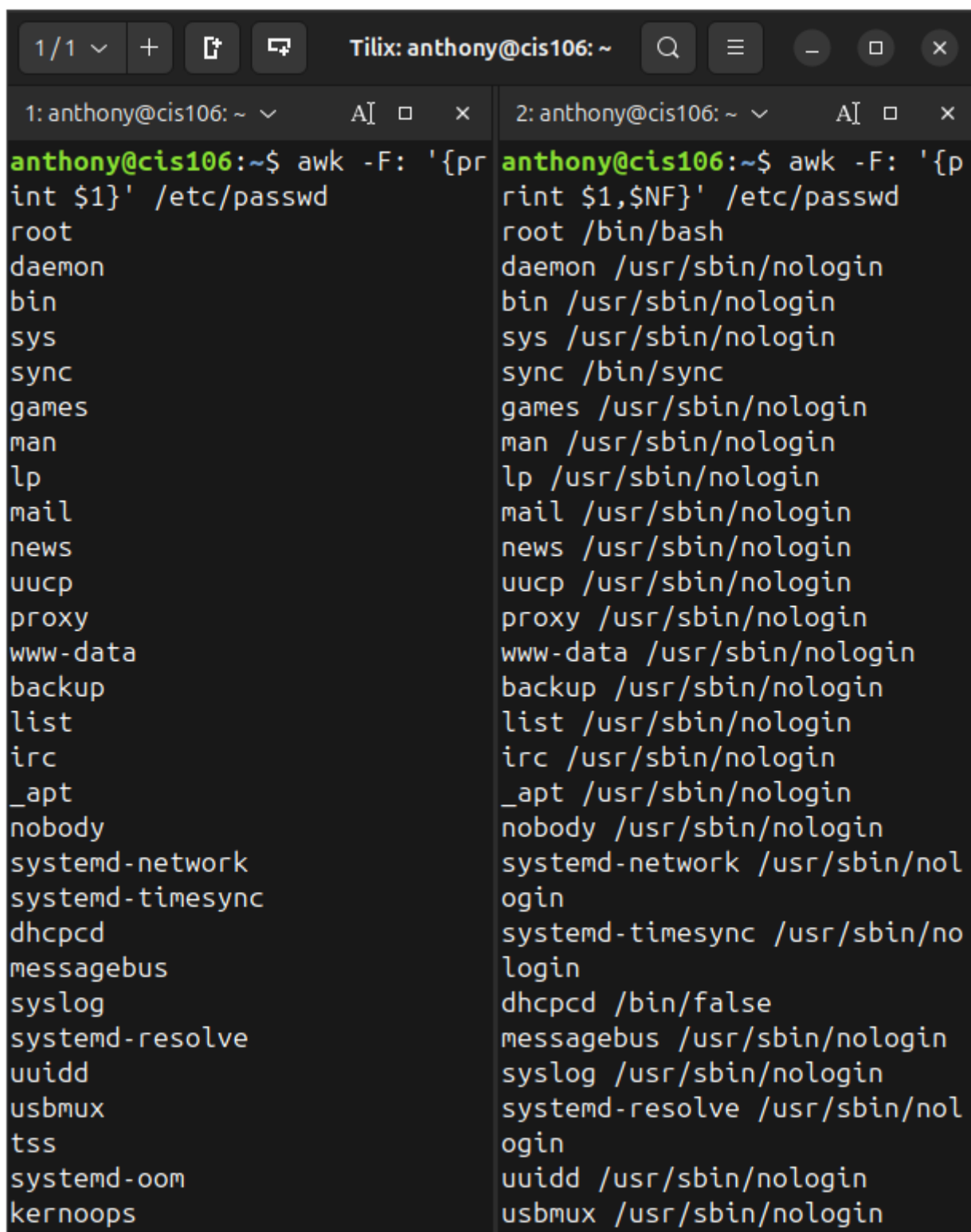
```
Tilix: anthony@cis106: ~  
1/1 + [?] [?] 1: anthony@cis106: ~ 2: anthony@cis106: ~  
anthony@cis106:~$ grep -in "love" ~/Documents/Books/pride-and-prejudice.txt  
75:by allowance" and "loving with personal love." This distinction applies  
79:to their best work than in the case of those others who 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  
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:~$
```

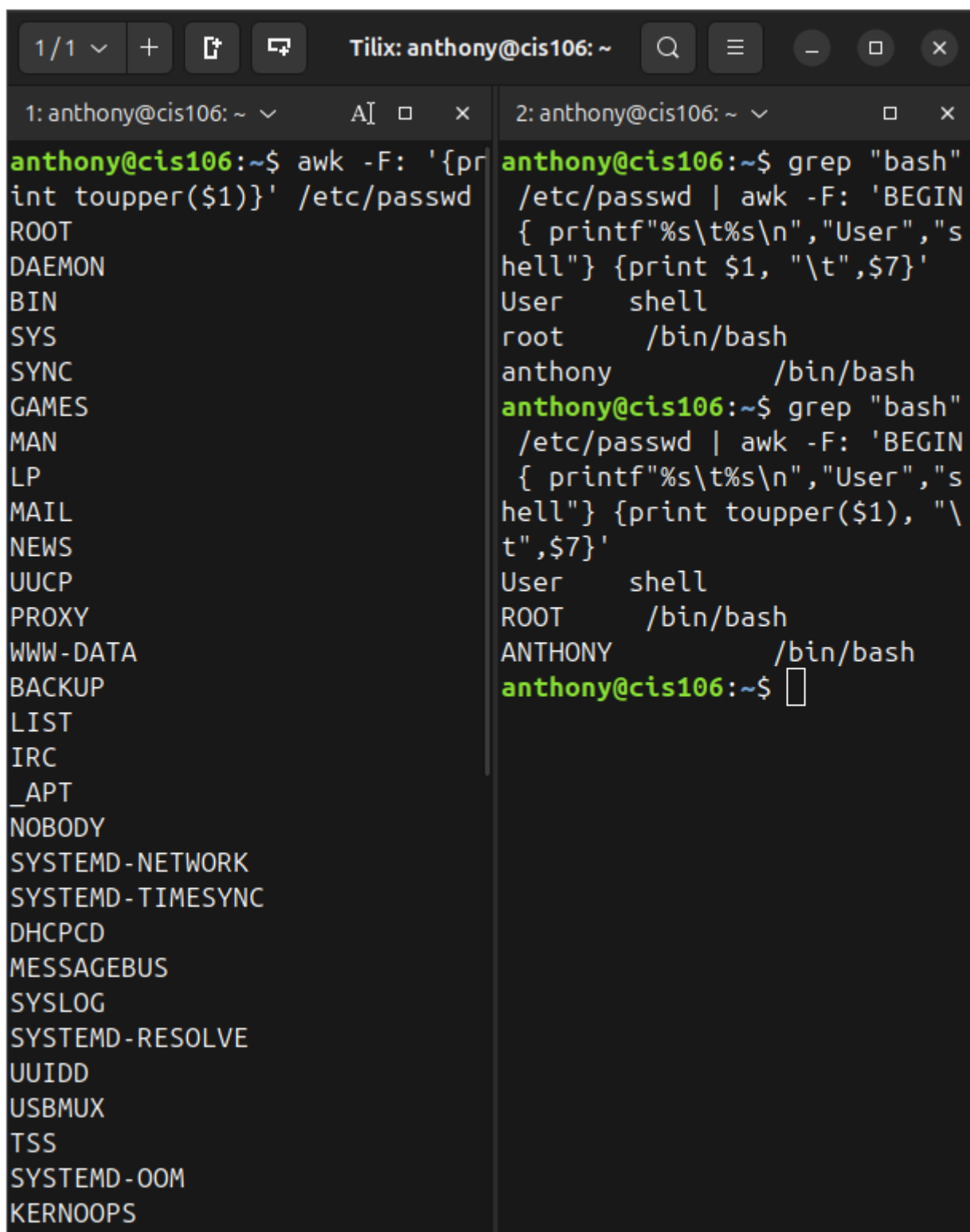
Practice 5



```
1/1 + [T] [C] Tilix: anthony@cis106: ~ [Q] [≡] [−] [□] [×]

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: ~ [Q] [≡] [−] [□] [×]

1: anthony@cis106: ~ AI □ ×
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

2: anthony@cis106: ~ □ ×
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 $
```