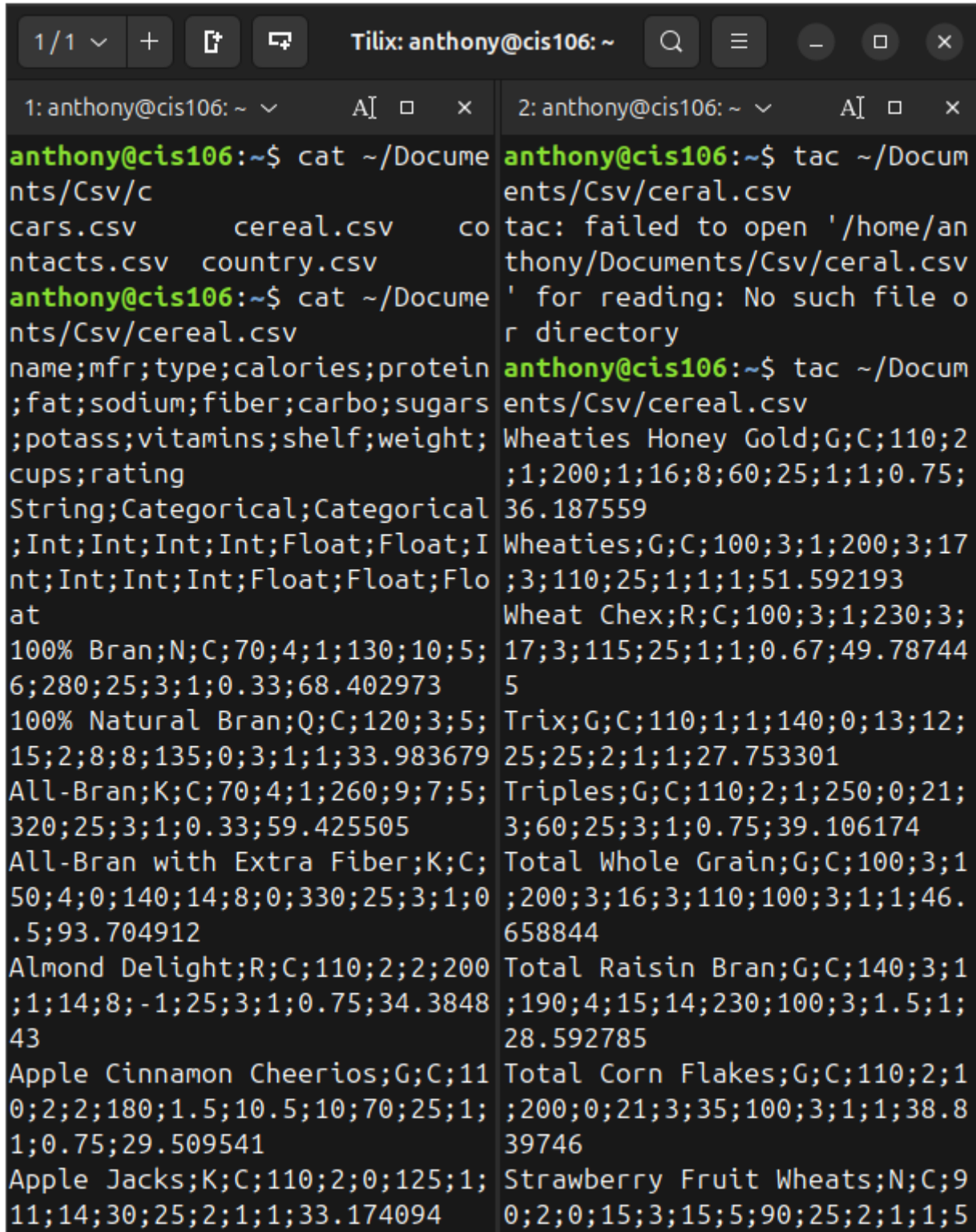


Lab 7 Submission

Question 1



```

1: anthony@cis106: ~  AI  x
anthony@cis106:~$ cat ~/Documents/Csv/cars.csv
cars.csv      cereal.csv    contacts.csv  country.csv
anthony@cis106:~$ cat ~/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

2: anthony@cis106: ~  AI  x
anthony@cis106:~$ tac ~/Documents/Csv/cereal.csv
tac: failed to open '/home/anthony/Documents/Csv/cereal.csv' for reading: No such file or directory
anthony@cis106:~$ tac ~/Documents/Csv/cereal.csv
Wheaties Honey Gold;G;C;110;2;1;200;1;16;8;60;25;1;1;0.75;36.187559
Wheaties;G;C;100;3;1;200;3;17;3;110;25;1;1;1;51.592193
Wheat Chex;R;C;100;3;1;230;3;17;3;115;25;1;1;0.67;49.787445
Trix;G;C;110;1;1;140;0;13;12;25;25;2;1;1;27.753301
Triples;G;C;110;2;1;250;0;21;3;60;25;3;1;0.75;39.106174
Total Whole Grain;G;C;100;3;1;200;3;16;3;110;100;3;1;1;46.658844
Total Raisin Bran;G;C;140;3;1;190;4;15;14;230;100;3;1.5;1;28.592785
Total Corn Flakes;G;C;110;2;1;200;0;21;3;35;100;3;1;1;38.839746
Strawberry Fruit Wheats;N;C;90;2;0;15;3;15;5;90;25;2;1;1;5
  
```

```
Tilix: anthony@cis106: ~  
1: anthony@cis106: ~  
anthony@cis106:~$ cat -nvE ~/Documents/Csv/cereal.csv  
1 name;mfr;type;calories;protein;fat;sodium;fiber;carbo; sugars;potass;vitamins;shelf;weight;cups;rating^M$  
2 String;Categorical;Categorical;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float^M$  
3 100% Bran;N;C;70;4;1;130;10;5;6;280;25;3;1;0.33;68.402973^M$  
4 100% Natural Bran;Q;C;120;3;5;15;2;8;8;135;0;3;1;1;33.983679^M$  
5 All-Bran;K;C;70;4;1;260;9;7;5;320;25;3;1;0.33;59.425505^M$  
6 All-Bran with Extra Fiber;K;C;50;4;0;140;14;8;0;330;25;3;1;0.5;93.704912^M$  
7 Almond Delight;R;C;110;2;2;200;1;14;8;-1;25;3;1;0.75;34.384843^M$  
8 Apple Cinnamon Cheerios;G;C;110;2;2;180;1.5;10.5;10;70;25;1;1;0.75;29.509541^M$  
9 Apple Jacks;K;C;110;2;0;125;1;11;14;30;25;2;1;1;33.174094^M$  
2: anthony@cis106: ~  
anthony@cis106:~$ head -2 ~/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  
anthony@cis106:~$ tail -2 ~/Documents/Csv/cereal.csv  
Wheaties;G;C;100;3;1;200;3;17;3;110;25;1;1;1;51.592193  
Wheaties Honey Gold;G;C;110;2;1;200;1;16;8;60;25;1;1;0.75;36.187559  
anthony@cis106:~$
```

Question 2

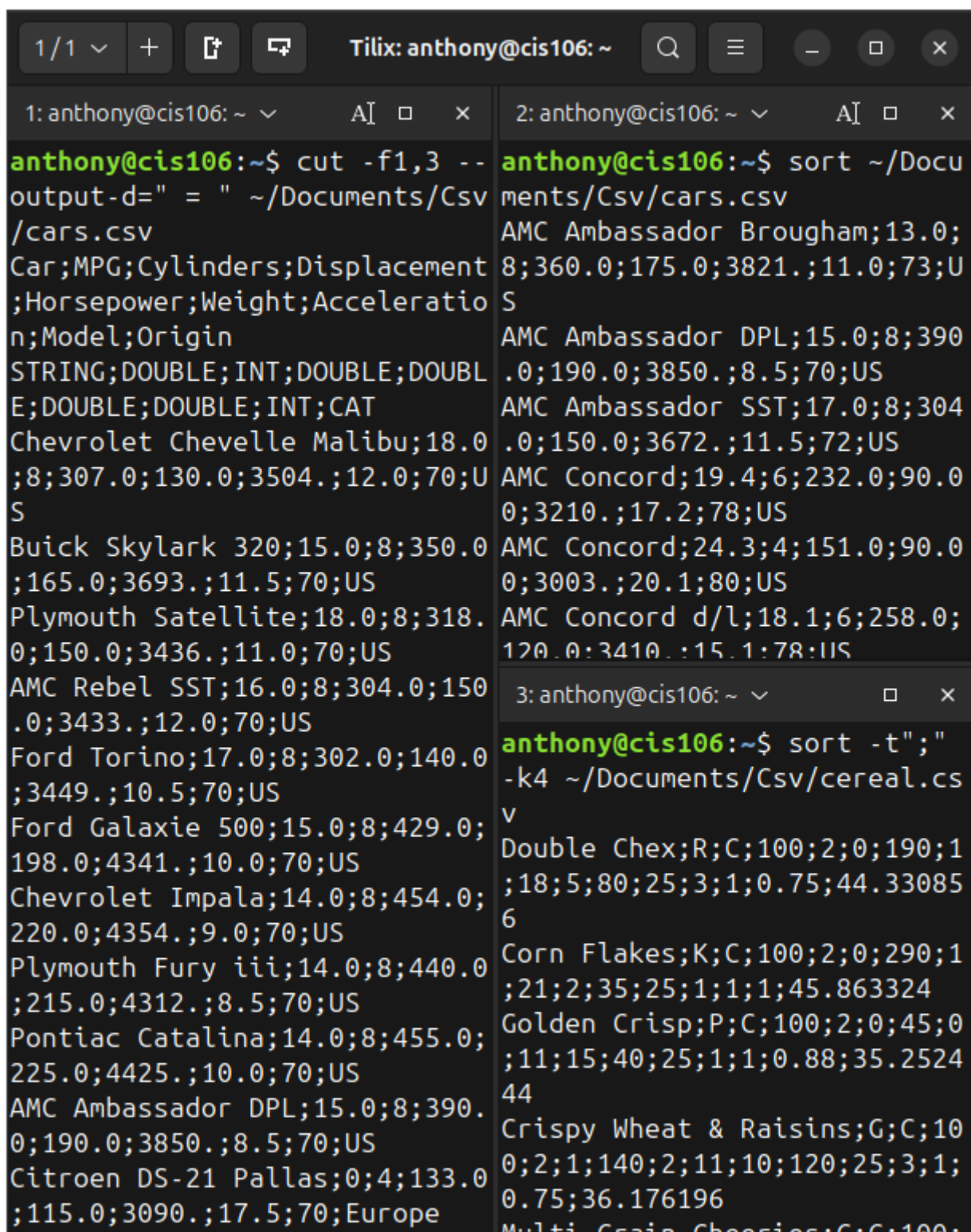
The image shows a terminal window titled "Tilix: anthony@cis106: ~". It contains two side-by-side terminal panes, labeled "1:" and "2:". Both panes show the execution of the command `cut -f1 ~/Documents/Csv/cars.csv`. The output of the command is a list of car models followed by their specifications, separated by semicolons. The output is identical in both panes.

```

1: anthony@cis106: ~  AI  x
anthony@cis106:~$ cut -f1 ~/Documents/Csv/cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;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;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 (s

2: anthony@cis106: ~  x
anthony@cis106:~$ cut -f1,3 ~/Documents/Csv/cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;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;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 (

```

```

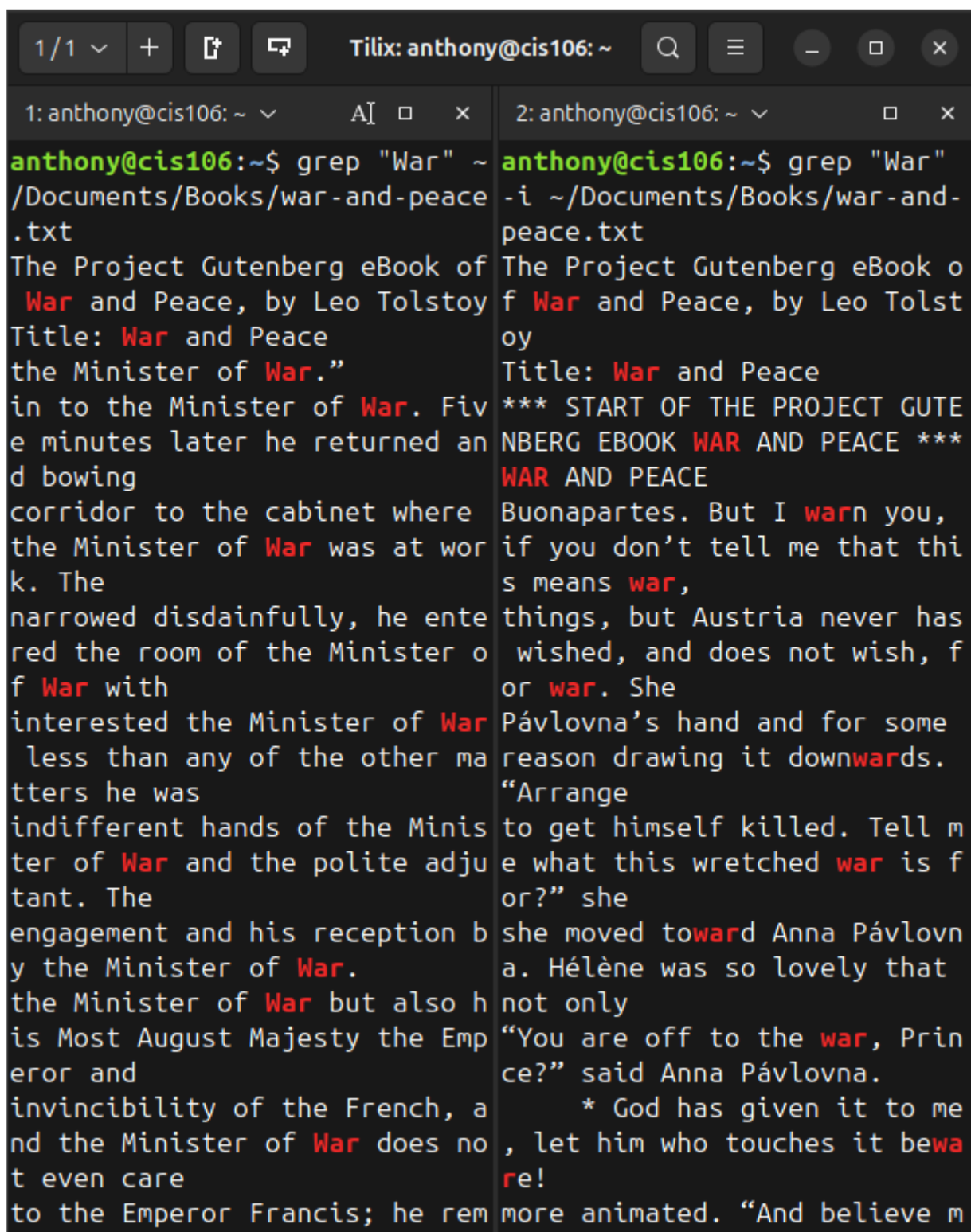
1: anthony@cis106: ~  AI  x
anthony@cis106:~$ cut -f1,3 --output-d=" " ~/Documents/Csv/cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;DOUBLE;INT;CAT
Chevrolet Chevelle Malibu;18.0;8;307.0;130.0;3504.;12.0;70;US
Buick Skylark 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

2: anthony@cis106:~  AI  x
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;90.0;3210.;17.2;78;US
AMC Concord;24.3;4;151.0;90.0;3003.;20.1;80;US
AMC Concord d/l;18.1;6;258.0;120.0;3410.;15.1;78;US

3: anthony@cis106:~  x
anthony@cis106:~$ sort -t";" -k4 ~/Documents/Csv/cereal.csv
Double Chex;R;C;100;2;0;190;1;18;5;80;25;3;1;0.75;44.330856
Corn Flakes;K;C;100;2;0;290;1;21;2;35;25;1;1;1;45.863324
Golden Crisp;P;C;100;2;0;45;0;11;15;40;25;1;1;0.88;35.252444
Crispy Wheat & Raisins;G;C;100;2;1;140;2;11;10;120;25;3;1;0.75;36.176196
Multi Grain Cheerios;C;C;100;

```

Question 3



The image shows a screenshot of a Tilix terminal window with two panes. The title bar at the top reads "Tilix: anthony@cis106: ~". The left pane shows the command `grep "War" ~/Documents/Books/war-and-peace.txt` and its output, which includes the title "War and Peace" and several occurrences of the word "War" in a text excerpt. The right pane shows the command `grep "War" -i ~/Documents/Books/war-and-peace.txt` and its output, which includes the title "War and Peace", a Project Gutenberg header, and occurrences of "warn", "war", and "ward" in a text excerpt.

```
1: anthony@cis106: ~ ▾ AI □ ×
anthony@cis106:~$ grep "War" ~/Documents/Books/war-and-peace.txt
The Project Gutenberg eBook of War and Peace, by Leo Tolstoy
Title: War and Peace
the Minister of War.”
in to the Minister of War. Five minutes later he returned and bowing
corridor to the cabinet where the Minister of War was at work. The
narrowed disdainfully, he entered the room of the Minister of War with
interested the Minister of War less than any of the other matters he was
indifferent hands of the Minister of War and the polite adjutant. The
engagement and his reception by the Minister of War.
the Minister of War but also his Most August Majesty the Emperor and
invincibility of the French, and the Minister of War does not even care
to the Emperor Francis; he rem
```

```
2: anthony@cis106: ~ ▾ □ ×
anthony@cis106:~$ grep "War" -i ~/Documents/Books/war-and-peace.txt
The Project Gutenberg eBook of War and Peace, by Leo Tolstoy
Title: War and Peace
*** START OF THE PROJECT GUTENBERG EBOOK WAR AND PEACE ***
WAR AND PEACE
Buonapartes. But I warn you, if you don't tell me that this means war,
things, but Austria never has wished, and does not wish, for war. She
Pávlovna's hand and for some reason drawing it downwards.
"Arrange to get himself killed. Tell me what this wretched war is for?" she
she moved toward Anna Pávlovna. Hélène was so lovely that not only
"You are off to the war, Prince?" said Anna Pávlovna.
* God has given it to me, let him who touches it beware!
more animated. "And believe m
```

```
Tilix: anthony@cis106: ~  
1/1 + [?] [?] 1: anthony@cis106: ~ AI □ × 2: anthony@cis106: ~ AI □ ×  
anthony@cis106:~$ grep "war" -ic ~/Documents/Books/war-and-peace.txt  
1255  
anthony@cis106:~$ grep "war" -c ~/Documents/Books/war-and-peace.txt  
1219  
anthony@cis106:~$ grep "^The" -n ~/Documents/Books/war-and-peace.txt  
972:The prince was silent and looked indifferent. But, with the womanly and  
982:The prince bowed to signify his respect and gratitude.  
1004:The prince answered nothing, but she looked at him significantly,  
1081:The Abbé Morio and many others had also come.  
1102:The young Princess Bolkon'skaya had brought some work in a  
1118:The little princess went round the table with quick, short, swaying  
1221:The third group was gathered round Mortemart and Anna Pavlovna.  
1223:The vicomte was a nice-lo  
anthony@cis106:~$ grep "^peace" -n ~/Documents/Books/war-and-peace.txt  
5542:peace. The old man was beside himself: moved the chair on which he was  
20046:peace."  
26471:peace." But however much they left her in peace she could not now be  
33900:peace so long as a single armed enemy remained on Russian soil and told  
34397:peace with you. As for the Swedes—it is their fate to be governed by  
35057:peace nor war, neither an advance nor a defensive camp at the Drissa  
36617:peace and the abolition of war, and secondly, by the fact that when he  
44768:peaceful, and glorious fatherland, I should have proclaimed  
51593:peace arising from consciousness of having stifled those personal dreams  
58824:peace, he said: There can be no peace, for such is the people's will. He
```

```
Tilix: anthony@cis106: ~/Documents/Books

1: anthony@cis106: ~/Documents/Books  AI  □  ×
anthony@cis106:~$ cd ~/Documents/Books/
anthony@cis106:~/Documents/Books$ grep -Rwi "love" ./
./dracula.txt:know her is to love her. I long
to go through the crowded streets of
./dracula.txt:also that there is a chapel of o
ld times. We Transylvanian nobles love
./dracula.txt:battlements and casements. I lov
e the shade and the shadow, and would
./dracula.txt:thought and many blushes, her il
l-spelt love-letter, and writing in my
./dracula.txt:"You yourself never loved; you n
ever love!" On this the other women
./dracula.txt:"Yes, I too can love; you yourse
lves can tell it from the past. Is it
./dracula.txt:to speak more. Oh, Mina, couldn'
t you guess? I love him. I am blushing
./dracula.txt:words. But oh, Mina, I love him;
I love him; I love him! There, that
./dracula.txt:I could love him in time; and wh
en I shook my head his hands trembled,
./dracula.txt:what I would do if I were a man
and wanted to make a girl love me. No, I
./dracula.txt:began pouring out a perfect torr
ent of love-making, laying his very
./dracula.txt:"Yes, there is some one I love,
though he has not told me yet that he
./dracula.txt:my dear, and a fine fellow, or y
ou could not love him--hasn't spoken
./dracula.txt:She is so sweet with old people;
I think they all fell in love with her

2: anthony@cis106: ~/Documents/Books  AI  □  ×
anthony@cis106:~/Documents/Books$ grep -Rn "^
l...d" ./
./dracula.txt:5597:lay down, and when I went
over to Bersicker he let me stroke his ears
./dracula.txt:9540:loved and honoured as our
host is, everything regarding him is of
./dracula.txt:14713:loved him and honoured hi
m more than I can say, and that my latest and
./dracula.txt:15427:loved her, that they did
dare much for her sake."
./great-expectations.txt:153:lamed by stones
, and cut by flints, and stung by nettles, an
d torn by
./great-expectations.txt:1696:loved Joe,—per
haps for no better reason in those early days
than
./great-expectations.txt:2141:lived in a lar
ge and dismal house barricaded against robber
s, and who
./great-expectations.txt:3109:liked sometime
s to smoke his pipe there. I had received str
ict orders
./great-expectations.txt:9750:loved her none
the less because I knew it, and it had no mo
re influence
./great-expectations.txt:14039:laundress or
her niece, he was to keep himself out of thei
r view until
./great-expectations.txt:14327:lived, before
going up the stairs, Garden Court was as sti
ll and
```



```
Tilix: anthony@cis106: ~/Documents/Books

...hony@cis106: ~/Documents/Books
anthony@cis106:~/Documents/Books$ gr
ep -R "^d[aeiou]..." ./
./dracula.txt:don't know how I shoul
d be able to get on without it.
./dracula.txt:descendants of the Dac
ians; Magyars in the West, and Szeke
lys in the
./dracula.txt:directing him to secur
e the best place on the coach for me
; but on
./dracula.txt:did not know what to d
o, for, as an English Churchman, I h
ave been
./dracula.txt:down, and, lest who re
ads them may fancy that I dined too
well before I
./dracula.txt:disagreeable. I had on
ly a couple of glasses of this, and
nothing else.
./dracula.txt:dictionary from my bag
and looked them out. I must say the
y were not
./dracula.txt:deep blue and purple i
n the shadows of the peaks, green an
d brown where
./dracula.txt:devotion to have neith
er eyes nor ears for the outer world
. There were
./dracula.txt:darkness. It was evide
nt that something very exciting was
either
```