

Lab 7

Question 1

```
1/1 v + [ ] [ ]
Tilix: mig@cis106: ~
1: mig@cis106: ~
mig@cis106:~$ cat ~/Documents/Csv/cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;suga
rs;potass;vitamins;shelf;weight;cup;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;33.9836
79
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;34.38
4843
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;37.03856
2
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;53.31381
3
Cap'n Crunch;Q;C;120;1;2;220;0;12;12;35;25;2;1;0.75;18.042
851
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;0.7
5;19.823573
4: mig@cis106: ~
mig@cis106:~$ head -2 ~/Documents/Csv/cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;suga
rs;potass;vitamins;shelf;weight;cup;rating
String;Categorical;Categorical;Int;Int;Int;Int;Float;Float
Int;Int;Int;Int;Float;Float;Float
mig@cis106:~$

2: mig@cis106: ~
mig@cis106:~$ tac ~/Documents/Csv/cereal.csv
Wheaties Honey Gold;G;C;110;2;1;200;1;16;8;60;25;1;1;0.75;3
6.187559
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;46.6
58844
Total Raisin Bran;G;C;140;3;1;190;4;15;14;230;100;3;1.5;1;2
8.592785
Total Corn Flakes;G;C;110;2;1;200;0;21;3;35;100;3;1;1;38.83
9746
Strawberry Fruit Wheaties;N;C;90;2;0;15;3;15;5;90;25;2;1;1;59
.363993
Special K;K;C;110;6;0;230;1;16;3;55;25;1;1;1;53.131324
Smacks;K;C;110;2;1;70;1;9;15;40;25;2;1;0.75;31.230054
Shredded Wheat spoon size;N;C;90;3;0;80;3;20;0;120;0;1;1;0.6
5
5: mig@cis106: ~
mig@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;3
6.187559
mig@cis106:~$

3: mig@cis106: ~
mig@cis106:~$ cat -nve ~/Documents/Csv/cereal.csv
1 name;mfr;type;calories;protein;fat;sodium;fiber;carbo;suga
rs;potass;vitamins;shelf;weight;cup;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;33.9836
79^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;34.38
4843^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$
10 Basic 4;G;C;130;3;2;210;2;18;8;100;25;3;1.33;0.75;37.03856
2^M$
11 Bran Chex;R;C;90;2;1;200;4;15;6;125;25;1;1;0.67;49.120253^
^M$
12 Bran Flakes;P;C;90;3;0;210;5;13;5;190;25;3;1;0.67;53.31381
3^M$
13 Cap'n Crunch;Q;C;120;1;2;220;0;12;12;35;25;2;1;0.75;18.042
851^M$
14 Cheerios;G;C;110;6;2;290;2;17;1;105;25;1;1;1.25;50.764999^
^M$
15 Cinnamon Toast Crunch;G;C;120;1;3;210;0;13;9;45;25;2;1;0.7
5;19.823573^M$
16 Clusters;G;C;110;3;2;140;2;13;7;105;25;3;1;0.5;40.400208^
^M$
17 Cocoa Puffs;G;C;110;1;1;180;0;12;13;55;25;2;1;1;22.736446^
^M$
18 Corn Chex;R;C;110;2;0;280;0;22;3;25;25;1;1;1;41.445019^M$
19 Corn Flakes;K;C;100;2;0;290;1;21;2;35;25;1;1;1;45.863324^
^M$
20 Corn Puffs;G;C;110;1;1;180;0;12;13;55;25;2;1;1;22.736446^
^M$
21 Cream of Wheat (Quick);N;H;100;3;0;80;1;21;0;-1;0;2;1;1;64.533816
22 Grape Nuts Flakes;P;C;100;3;1;140;3;15;5;85;25;3;1;0.88;52.076897
23 Total Whole Grain;G;C;100;3;1;200;3;16;3;110;100;3;1;1;46.658844
24 Wheaties;G;C;100;3;1;200;3;17;3;110;25;1;1;1;51.592193
25 Wheat Chex;R;C;100;3;1;230;3;17;3;115;25;1;1;0.67;49.787445
26 Raisin Nut Bran;G;C;100;3;2;140;2;5;10.5;8;140;25;3;1;0.5;39.703400
27 Mayo;A;H;100;4;1;0;16;3;95;25;2;1;1;54.850917
28 Quaker Oat Squares;Q;C;100;4;1;135;2;14;6;110;25;3;1;0.5;49.511874
29 Life;O;C;100;4;2;150;2;12;6;95;25;2;1;0.67;45.328074
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Question 2

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1/1 v + [ ] [ ]
Tilix: mig@cis106: ~/Documents/Csv
1: mig@cis106: ~
mig@cis106:~$ cut -d";" -f1,3 ~/Documents/Csv/cars.csv
Car;cylinders
STRING;INT
Chevrolet Chevelle Malibu;8
Buick Skylark 320;8
Plymouth Satellite;8
AMC Rebel SST;8
Ford Torino;8
Ford Galaxie 500;8
Chevrolet Impala;8
Plymouth Fury iii;8
Pontiac Catalina;8
AMC Ambassador DPL;8
Citroen DS-21 Pallas;4
Chevrolet Chevelle Concours (sw);8
Ford Torino (sw);8
Plymouth Satellite (sw);8
AMC Rebel SST (sw);8
5: mig@cis106: ~/Documents/Csv
mig@cis106:~$ cd ~/Documents/Csv/
mig@cis106:~/Documents/Csv$ sort 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
AMC Concord DL;23.0;4;151.0;90.0;3035.;20.5;82;US
AMC Concord DL 6;20.2;6;232.0;90.0;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;90.0;2648.;15.0;70;US
AMC Hornet;18.0;6;199.0;97.0;2774.;15.5;78;US
AMC Hornet;18.0;6;232.0;100.0;2945.;16.0;73;US
AMC Hornet;19.0;6;232.0;100.0;2901.;16.0;74;US
AMC Hornet;22.5;6;232.0;90.0;3085.;17.6;76;US
2: mig@cis106: ~
mig@cis106:~$ cut -d";" -f1 ~/Documents/Csv/cars.csv
nts/Csv/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
Plymouth 'Cuda 340
Ford Mustang Boss 302
Chevrolet Monte Carlo
Buick Estate Wagon (sw)
Toyota Corolla Mark ii
Plymouth Duster
AMC Hornet
Ford Maverick
Datsun PL510
Volkswagen 1131 Deluxe Sedan
Peugeot 504
Audi 100 LS
Saab 99e
BMW 2002
AMC Gremlin
Ford F250
Chevy
3: mig@cis106: ~
mig@cis106:~$ cut -d";" -f1,3 --output-delimiter=" " ~/Documents/Csv/cars.csv
Car = Cylinders
STRING = INT
Chevrolet Chevelle Malibu = 8
Buick Skylark 320 = 8
Plymouth Satellite = 8
AMC Rebel SST = 8
Ford Torino = 8
Ford Galaxie 500 = 8
Chevrolet Impala = 8
Plymouth Fury iii = 8
Pontiac Catalina = 8
AMC Ambassador DPL = 8
Citroen DS-21 Pallas = 4
Chevrolet Chevelle Concours (sw) = 8
Ford Torino (sw) = 8
Plymouth Satellite (sw) = 8
4: mig@cis106: ~
mig@cis106:~$ sort -t";" -k4 ~/Documents/Csv/cars.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;1;0.75;36.1761
96
Multi-Grain Cheerios;G;C;100;2;1;220;2;15;6;90;25;1;1;1;40.105965
Frosted Mini-Wheaties;K;C;100;3;0;80;3;14;7;100;25;2;1;0.8;58.345141
Product 19;K;C;100;3;0;320;1;20;3;45;100;3;1;1;41.503540
Cream of Wheat (Quick);N;H;100;3;0;80;1;21;0;-1;0;2;1;1;64.533816
Grape Nuts Flakes;P;C;100;3;1;140;3;15;5;85;25;3;1;0.88;52.076897
Total Whole Grain;G;C;100;3;1;200;3;16;3;110;100;3;1;1;46.658844
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
Raisin Nut Bran;G;C;100;3;2;140;2;5;10.5;8;140;25;3;1;0.5;39.703400
Maypo;A;H;100;4;1;0;16;3;95;25;2;1;1;54.850917
Quaker Oat Squares;Q;C;100;4;1;135;2;14;6;110;25;3;1;0.5;49.511874
Life;O;C;100;4;2;150;2;12;6;95;25;2;1;0.67;45.328074
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Question 3 part 1

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1: mig@cis106: ~
nig@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 w
as
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 car
e
to the Emperor Francis; he remembered the Minister of War, the polite
his own house. The Minister of War came up and congratulated him on th
e
That same night, having taken leave of the Minister of War, Bolkónski
4: mig@cis106: ~
nig@cis106:~$ grep -i 'War' ~/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 downward. "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 me, they are reaping the reward of their
through his torgnette, suddenly turned completely round toward the
Prince Andrew, who had evidently wished to tone down the awkwardness o
f
his kindly, simple, and modest expression. Anna Pávlovna turned toward
awkwardness or intentionally (no one could have said which) after the
2: mig@cis106: ~
nig@cis106:~$ grep -ic 'war' ~/Documents/Books/war-and-peace.txt
1255
nig@cis106:~$ grep -w 'war' ~/Documents/Books/war-and-peace.txt
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
to get himself killed. Tell me what this wretched war is for?" she
to tell you. There is a war now against Napoleon. If it
were a war for
"Well, why are you going to the war?" asked Pierre.
wants to go to the war," replied Pierre, addressing the
princess
so to me? What have I done to you? You are going to the
war and have no
the enchanted circle I cannot escape from. I am now goi
ng to the war,
the greatest war there ever was, and I know nothing and
am fit for
"But they say that war has been declared," replied the
visitor.
of the war that had been announced in a manifesto, and
about the
sir, for shame! It would be better if you went to the w
ar."
The colonel told them that the declaration of war had a
lready appeared
heard that the war was being discussed had turned from
his partner with
"It's all about the war," the count shouted down the ta
ble. "You
All Moscow talks of nothing but war. One of my two brot
hers is already
3: mig@cis106: ~
nig@cis106:~$ grep -ni '^peace' ~/Documents/Books/war-and-peace.txt
5542:peace. The old man was beside himself: moved the chai
r 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 Ru
ssian soil and told
34397:peace with you. As for the Swedes—it is their fate t
o be governed by
35057:peace nor war, neither an advance nor a defensive ca
mp 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 pro
claimed
51593:peace arising from consciousness of having stifled t
hose personal dreams
58824:peace, he said: There can be no peace, for such is t
he people's will. He
59768:peaceful refuge where he could recover himself, rest
, and think over
nig@cis106:~$ grep -ni '^The' ~/Documents/Books/war-and-peace.txt
916:the noblest role on earth, and he is so virtuous and n
oble that God will
957:the baron.
972:The prince was silent and looked indifferent. But, wit
h the womanly and
982:The prince bowed to signify his respect and gratitude.
1004:The prince answered nothing, but she looked at him si
gnificantly,
1034:the head that he was considering this information.
1044:the well-known Prince Bolkónski who had to retire fro
m the army under
1045:the late Emperor, and was nicknamed 'the King of Prus

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Question 3 part 2

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1: mig@cis106: ~
nig@cis106:~$ grep -iRw 'love' ~/Documents/Books/
/home/mig/Documents/Books/great-expectations.txt:because the dear fellow let me love him,—a
nd, as to him, my inner self
/home/mig/Documents/Books/great-expectations.txt:"Cousin Raymond," observed another lady, "
we are to love our
/home/mig/Documents/Books/great-expectations.txt:anxiety of those I love. If I could be les
s affectionate and sensitive,
/home/mig/Documents/Books/great-expectations.txt:("Much higher than your head, my love," sa
id Mr. Camilla.)
/home/mig/Documents/Books/great-expectations.txt:thank you, my love?"
/home/mig/Documents/Books/great-expectations.txt:and depart. It's something to have seen th
e object of one's love and
/home/mig/Documents/Books/great-expectations.txt:"If I could only get myself to fall in lov
e with you,—you don't mind my
/home/mig/Documents/Books/great-expectations.txt:or anywhere else you like—a certain man, w
ho made love to Miss
/home/mig/Documents/Books/great-expectations.txt:Miss Havisham's counsels, and she was too
haughty and too much in love
4: mig@cis106: ~
nig@cis106:~$ grep -E "a{2}" ~/Documents/Books/dracula.txt
help me deck the room with my garlic, which is all the way from Haarlem,
Haarlem. To-night Dr. Van Helsing is going away, as he has to be for a
nig@cis106:~$
2: mig@cis106: ~
nig@cis106:~$ grep -nR '^l...d' ~/Documents/Books/
/home/mig/Documents/Books/great-expectations.txt:129:lamed by stones, and cut by flints, and
d stung by nettles, and torn by
/home/mig/Documents/Books/great-expectations.txt:1672:loved Joe,—perhaps for no better reas
on in those early days than
/home/mig/Documents/Books/great-expectations.txt:2117:lived in a large and dismal house bar
ricaded against robbers, and who
/home/mig/Documents/Books/great-expectations.txt:3085:liked sometimes to smoke his pipe the
re. I had received strict orders
/home/mig/Documents/Books/great-expectations.txt:9726:loved her none the less because I kne
w it, and it had no more influence
/home/mig/Documents/Books/great-expectations.txt:14015:laundress or her niece, he was to ke
ep himself out of their view until
/home/mig/Documents/Books/great-expectations.txt:14303:lived, before going up the stairs, G
arden Court was as still and
/home/mig/Documents/Books/great-expectations.txt:14615:lived at the top of Compeyson's hous
e (over nigh Brentford it was), and
/home/mig/Documents/Books/great-expectations.txt:16596:lived in the supplementary house acr
3: mig@cis106: ~
nig@cis106:~$ grep -Rw '^d[aeiou]..' ~/Documents/Books/
/home/mig/Documents/Books/great-expectations.txt:didn't seem to enjoy. He turned it about i
n his mouth much longer than
/home/mig/Documents/Books/great-expectations.txt:dead."
/home/mig/Documents/Books/great-expectations.txt:down the river on a strong spring-tide, to
the Hulks; a ghostly pirate
/home/mig/Documents/Books/great-expectations.txt:down, for it made him stumble,—and then he
ran into the mist, stumbling
/home/mig/Documents/Books/great-expectations.txt:day,—But this man"; he had said all the re
st, as if he had forgotten my
/home/mig/Documents/Books/great-expectations.txt:dirt itself. Cleanliness is next to Godlin
ess, and some people do the
/home/mig/Documents/Books/great-expectations.txt:done. Under the weight of my wicked secret
, I pondered whether the
/home/mig/Documents/Books/great-expectations.txt:dusk, my orders are. That'll do."
/home/mig/Documents/Books/great-expectations.txt:dusk. Anybody here seen anything of any su
ch game?"
/home/mig/Documents/Books/great-expectations.txt:deer. and Joe too.

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