

Lab 7 Screenshots

Question 1

```
1: phernandez@cis106: ~/Documents/Csv
phernandez@cis106:~/Documents$ cd Csv/
phernandez@cis106:~/Documents/Csv$ ls
cars.csv cereal.csv contacts.csv country.csv film.csv
phernandez@cis106:~/Documents/Csv$ cat cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cup;rating
String;Categorical;Categorical;Int;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;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

phernandez@cis106:~/Documents/Csv$ tac 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
Tripples;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;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;0;3;20;0;120;0;1;1;0.67;72.801787
Shredded Wheat 'n Bran;N;C;90;3;0;0;4;19;0;140;0;1;1;0.67;74.472949
Shredded Wheat;N;C;80;2;0;0;3;16;0;95;0;1;0.83;1;68.235885
Rice Krispies;K;C;110;2;0;290;0;22;3;35;25;1;1;1;40.560159
Rice Chex;R;C;110;1;0;240;0;23;2;30;25;1;1;1;13.41.998933
Raisin Squares;K;C;90;2;0;0;2;15;6;110;25;3;1;0.5;55.333142
Raisin Nut Bran;G;C;100;3;2;140;2;5;10;5;8;140;25;3;1;0.5;39.703400
Raisin Bran;K;C;120;3;1;210;5;14;12;240;25;2;1;33;0.75;39.259197

1: phernandez@cis106: ~/Documents/Csv
phernandez@cis106:~/Documents/Csv$ cat -nEV cereal.csv
 1 name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cup;rating*M$
 2 String;Categorical;Categorical;Int;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;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$
10 Basic 4;G;C;130;3;2;210;2;18;0;100;25;3;1.33;0.75;37.038562*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;53.313813*M$
13 Cap'n Crunch;Q;C;120;1;2;220;0;12;12;35;25;2;1;0.75;18.042851*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;0.75;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$

1: phernandez@cis106: ~/Documents/Csv
phernandez@cis106:~/Documents/Csv$ head -n 2 cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cup;rating
String;Categorical;Categorical;Int;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float
phernandez@cis106:~/Documents/Csv$ tail -n 2 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
phernandez@cis106:~/Documents/Csv$
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Question 2

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phernandez@cis106:~/Documents/Csv$ head -1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
phernandez@cis106:~/Documents/Csv$ cut -d";" -f1 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
```

```
1: phernandez@cis106: ~/Documents/Csv
phernandez@cis106:~/Documents/Csv$ cut -d";" -f1,3 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
Dodge Challenger SE;8
Plymouth 'Cuda 340;8
Ford Mustang Boss 302;8
Chevrolet Monte Carlo;8
Buick Estate Wagon (sw);8
Toyota Corolla Mark ii;4
Plymouth Duster;6
AMC Hornet;6
```

```
phernandez@cis106:~/Documents/Csv$ cut -d";" -f1,3 cars.csv --output-delimiter=" = "
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
Dodge Challenger SE = 8
Plymouth 'Cuda 340 = 8
Ford Mustang Boss 302 = 8
Chevrolet Monte Carlo = 8
Buick Estate Wagon (sw) = 8
Toyota Corolla Mark ii = 4
Plymouth Duster = 6
AMC Hornet = 6
Ford Maverick = 6
```

```
1: phernandez@cis106: ~/Documents/Csv
phernandez@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;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;2901.;16.0;74;US
AMC Hornet;22.5;6;232.0;90.0;3085.;17.6;76;US
AMC Hornet Sportabout (sw);18.0;6;258.0;110.0;2962.;13.5;71;US
AMC Matador;14.0;8;304.0;150.0;3672.;11.5;73;US
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phernandez@cis106:~/Documents/Csv$ sort -t";" -k4 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;G;C;100;2;1;220;2;15;6;90;25;1;1;1.40.105965
Frosted Mini-Wheats;K;C;100;3;0;0;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;1.46.658044
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;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;Q;C;100;4;2;150;2;12;6;95;25;2;1;0.67;45.328074
Quaker Oatmeal;Q;H;100;5;2;0;2;7;-1;-1;110;0;1;1;0.67;50.828392
Honey-comb;P;C;110;1;0;180;0;14;11;35;25;1;1;1.33;28.742414
Frosted Flakes;K;C;110;1;0;200;1;14;11;25;25;1;1;0.75;31.435973
Rice Chex;R;C;110;1;0;240;0;23;2;30;25;1;1;1.13;41.998933
Corn Pops;K;C;110;1;0;90;1;13;12;20;25;2;1;1.35.782791
Fruity Pebbles;P;C;110;1;1;135;0;13;12;25;25;2;1;0.75;28.025765
Trix;G;C;110;1;1;140;0;13;12;25;25;2;1;1.27.753301
Cocoa Puffs;G;C;110;1;1;180;0;12;13;55;25;2;1;1.22.736446
Count Chocula;G;C;110;1;1;180;0;12;13;65;25;2;1;1.22.396513
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Question 3

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phernandez@cis106:~/Documents/Books$ grep "War" 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
```

```
phernandez@cis106:~/Documents/Books$ grep -i "War" 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 me, they are reaping the reward of their
through his lorgnette, suddenly turned completely round toward the
Prince Andrew, who had evidently wished to tone down the awkwardness of
his kindly, simple, and modest expression. Anna Pávlovna turned toward
awkwardness or intentionally (no one could have said which) after the
to tell you. There is a war now against Napoleon. If it were a war for
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phernandez@cis106:~/Documents/Books$ grep -ic "War" war-and-peace.txt
1255
phernandez@cis106:~/Documents/Books$ grep -iwc "War" war-and-peace.txt
293
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```
phernandez@cis106:~/Documents/Books$ grep -in "^peace" 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
59768:peaceful refuge where he could recover himself, rest, and think over
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1: phernandez@cis106: ~/Documents/Books
phernandez@cis106:~/Documents/Books$ grep -nw "The" war-and-peace.txt
712:The prince was silent and looked indifferent. But, with the womanly and
882:The prince bowed to signify his respect and gratitude.
884:The prince answered nothing, but she looked at him significantly,
881:The Abbé Morio and many others had also come.
1102:The young Princess Bolkonskaya 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 Pávlovna.
1223:The vicomte was a nice-looking young man with soft features and polished
1240:The vicomte bowed and smiled courteously in token of his willingness to
1251:The vicomte wished to begin his story and gave a subtle smile.
1257:The princess smiled. She rose with the same unchanging smile with which
1279:The princess rested her bare round arm on a little table and considered
1289:The little princess had also left the tea table and followed Hélène.
1332:The vicomte told his tale very neatly. It was an anecdote, then current,
1340:The story was very pretty and interesting, especially at the point
1351:The vicomte appreciated this silent praise and smiling gratefully
1483:The elderly lady was a Princess Drubetskaya, belonging to one of the
1605:The princess listened, smiling.
1677:The vicomte merely shrugged his shoulders. Pierre looked solemnly at his
1756:The vicomte who was meeting him for the first time saw clearly that
1897:The princess, picking up her dress, was taking her seat in the dark
1907:The postilion started, the carriage wheels rattled. Prince Hippolyte
1902:The rustle of a woman's dress was heard in the next room. Prince
1920:The princess started. Evidently Pierre's words touched her to the
1972:The princess blushed, and raised her arms with a gesture of despair.
1979:The princess said nothing, but suddenly her short downy lip quivered.
1139:The friends were silent. Neither cared to begin talking. Pierre
1380:The bottle of rum was brought. The window frame which prevented anyone
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1: phernandez@cis106: ~/Documents/Books
phernandez@cis106:~/Documents/Books$ grep -Rwl "love" ./
./bible.txt:Genesis 27:4      And make me savory meat, such as I love, and bring it to me, that I may eat; that my soul may bless thee before I die.
./bible.txt:Genesis 29:20    And Jacob served seven years for Rachel; and they seemed unto him but a few days, for the love he had to her.
./bible.txt:Genesis 29:32    And Leah conceived, and bare a son, and she called his name Reuben: for she said, Surely the LORD hath looked upon my affliction; now thou shalt love me.
./bible.txt:Exodus 20:6      And showing mercy unto thousands of them that love me, and keep my commandments.
./bible.txt:Exodus 21:5      And if the servant shall plainly say, I love my master, my wife, and my children; I will not go out free:
./bible.txt:Leviticus 19:18   Thou shalt not avenge, nor bear any grudge against the children of thy people, but thou shalt love thy neighbor as thyself: I am the LORD thy God.
./bible.txt:Leviticus 19:34   But the stranger that dwelleth with you shall be unto you as one born among you, and thou shalt love him as thyself; for ye were strangers in the land of Egypt: I am the LORD your God.
./bible.txt:Deuteronomy 5:10  And showing mercy unto thousands of them that love me and keep my commandments.
./bible.txt:Deuteronomy 6:5   And thou shalt love the LORD thy God with all thine heart, and with all thy soul, and with all thy might.
./bible.txt:Deuteronomy 7:7   The LORD did not set his love upon you, nor choose you, because ye were more in number than any people; for ye were the fewest of all people that were upon the face of the earth.

phernandez@cis106:~/Documents/Books$ grep -nR "^l..d" ./
./war-and-peace.txt:5254:liked to. He looked inquiringly at his mistress and saw that she was
./war-and-peace.txt:7296:liked to tell him. He gathered up the papers and with a bow to both,
./war-and-peace.txt:12933:liked to repeat to herself. It was the story of a girl who had been
./war-and-peace.txt:13034:loved more than himself. He kept telling himself that he would consider
./war-and-peace.txt:13817:liked to help young men, was flattered by being asked for his assistance
./war-and-peace.txt:21373:lived for glory.—And after all what is glory? The same love of others,
./war-and-peace.txt:21375:lived for others, and not almost, but quite, ruined my life. And I have
./war-and-peace.txt:22829:lie down in my room and have a rest."
./war-and-peace.txt:23565:lived for myself alone while others live so apart from it, but so that
./war-and-peace.txt:25906:liked her voice. She asked this and then became confused, feeling that
./war-and-peace.txt:25908:liked her singing as he liked everything she did.
./war-and-peace.txt:26188:loved.) "I... but no, I will talk to you later on," and with a
./war-and-peace.txt:26971:loved his wife, she died, but that was not enough: he wanted to bind
./war-and-peace.txt:28969:lived in animals, and will go back into animals again."
./war-and-peace.txt:28985:lived for a whole eternity."

1: phernandez@cis106: ~/Documents/Books
phernandez@cis106:~/Documents/Books$ grep -wnR "^d[aeiou]..." ./
./war-and-peace.txt:1928:don't feel that weakness in myself as yet, I know a little person who
./war-and-peace.txt:2026:don't need it? Now you shall judge between us. I always tell him: Here
./war-and-peace.txt:2755:day," said the visitor. "What a charming child," she added,
./war-and-peace.txt:2864:dear, there's friendship for you," he repeated. "He's joining
./war-and-peace.txt:2882:don't wish to let me go, I'll stay. But I know I am no use anywhere
./war-and-peace.txt:2884:don't know how to hide what I feel." As he spoke he kept glancing
./war-and-peace.txt:3220:do it."
./war-and-peace.txt:3284:door, and added in a whisper so that her son should not hear, "Wish me
./war-and-peace.txt:3291:dear. We will see how Tarás distinguishes himself today. He says Count
./war-and-peace.txt:3608:doesn't make a mess of things!"
./war-and-peace.txt:3667:don't know me. We have not met for such a long time... not since we
./war-and-peace.txt:4242:dared to treat Márya Dmitrievna in this fashion.
./war-and-peace.txt:4288:dirty feather bed on the top of the chest, crumpling her gauzy pink
./war-and-peace.txt:4335:day... Natásha, what have I done to deserve it?..."
./war-and-peace.txt:4460:dance) began to sound, all the doorways of the ballroom were suddenly
./war-and-peace.txt:4863:door. While he was getting down from the carriage steps two men, who
./war-and-peace.txt:5173:doing right. Anna Mikháylovna nodded approvingly. Again Pierre fell
./war-and-peace.txt:5178:down. Anna Mikháylovna indicated by her attitude her consciousness of

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1: phernandez@cis106: ~/Documents/Books
phernandez@cis106:~/Documents/Books$ grep -iE "a{2}" 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

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