

Lab 7

Q1

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1: ig@ig-VirtualBox: ~/Documents/Csv ▾
ig@ig-VirtualBox:~$ cd Documents/Csv/
ig@ig-VirtualBox:~/Documents/Csv$ cat 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
ig@ig-VirtualBox:~/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
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
ig@ig-VirtualBox:~/Documents/Csv$ cat -nEv 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$
1: ig@ig-VirtualBox: ~/Documents/Csv ▾
ig@ig-VirtualBox:~/Documents/Csv$ head -n 2 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
ig@ig-VirtualBox:~/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
ig@ig-VirtualBox:~/Documents/Csv$
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Q2

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1: ig@ig-VirtualBox: ~/Documents/Csv ~
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ig@ig-VirtualBox:~/Documents/Csv$ head -n 1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
ig@ig-VirtualBox:~/Documents/Csv$ cut -d";" -f1 cars.csv
Car
STRING
Chevrolet Chevelle Malibu
Buick Skylark 320
Plymouth Satellite
AMC Rebel SST
Ford Torino
```

```
ig@ig-VirtualBox:~/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
```

```
ig@ig-VirtualBox:~/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
```

```
ig@ig-VirtualBox:~/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;90.00;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
```

```
ig@ig-VirtualBox:~/Documents/Csv$ head -1 cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cups;rating
ig@ig-VirtualBox:~/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;46.658844
```

Q3

```
ig@ig-VirtualBox:~/Documents/Csv$ cd ../Books/
ig@ig-VirtualBox:~/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
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 the
That same night, having taken leave of the Minister of War, Bolkónski
Austrian Council of War at which Suvórov crowed like a cock in reply to
Warmed by the spring sunshine he sat in the calèche looking at the new
Minister of War, Count Arakchéev.
"He is Minister of War, a man trusted by the Emperor, and I need not
of War needlessly deviating."
War's anteroom).
which would take them to the Warsaw highroad, and from there they would
the good of that? War is my profession, but his business is to reign
the Minister of War and went to join the army in Moldavia. While in
of War; Count Bennigsen, the senior general in rank; the Grand Duke
without knowing why. War is not courtesy but the most horrible thing in
The Council of War began to assemble at two in the afternoon in the
than that. We took Vienna, Berlin, Madrid, Naples, Rome, Warsaw, all
"The path to Warsaw, perhaps," Prince Hippolyte remarked loudly and
had first wanted to effect a diversion in Greece and then in Warsaw but
ig@ig-VirtualBox:~/Documents/Books$
```

```
ig@ig-VirtualBox:~/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
wars," he said.
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1: ig@ig-VirtualBox: ~/Documents/Books ▾  
ig@ig-VirtualBox:~/Documents/Books$ grep -ic "war" war-and-peace.txt  
1255  
ig@ig-VirtualBox:~/Documents/Books$
```

```
1: ig@ig-VirtualBox: ~/Documents/Books ▾  
ig@ig-VirtualBox:~/Documents/Books$ grep -iwc "war" war-and-peace.txt  
293  
ig@ig-VirtualBox:~/Documents/Books$
```

```
1: ig@ig-VirtualBox: ~/Documents/Books ▾  
ig@ig-VirtualBox:~/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  
ig@ig-VirtualBox:~/Documents/Books$
```

```
1: ig@ig-VirtualBox: ~/Documents/Books ▾  
ig@ig-VirtualBox:~/Documents/Books$ grep -nw "^The" 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 Bolkónskaya 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
```



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1: ig@ig-VirtualBox: ~/Documents/Books
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ig@ig-VirtualBox:~/Documents/Books$ grep -Rwi "love" ./
./pride-and-prejudice.txt:by allowance" and "loving with personal love." This distinction applies
./pride-and-prejudice.txt:proper thing to love them. And in the sect--fairly large and yet
./pride-and-prejudice.txt:aversion to actual love. I do not know whether the all-grasping hand of
./pride-and-prejudice.txt:his falling in love at all is not extremely probable. Here again I
./pride-and-prejudice.txt:injured in disposition, and thoroughly in love. As for his being in
./pride-and-prejudice.txt:love, Elizabeth has given as just an exposition of the causes of that
./pride-and-prejudice.txt:ladies with whom it might be a pleasure to fall in love; there are at
./pride-and-prejudice.txt:Grant. I should have been most in love with Beatrix and Argemone; I
./pride-and-prejudice.txt:"So much love and eloquence" 156
./pride-and-prejudice.txt:_may_ fall in love with one of them, and therefore you must visit him as
./pride-and-prejudice.txt:for your sakes we would do anything. Lydia, my love, though you _are_
./pride-and-prejudice.txt:dancing was a certain step towards falling in love; and very lively
./pride-and-prejudice.txt:way to be very much in love; but she considered with pleasure that it
./pride-and-prejudice.txt:very few of us who have heart enough to be really in love without
./pride-and-prejudice.txt:in love as much as she chooses."
./pride-and-prejudice.txt:imagination is very rapid; it jumps from admiration to love, from love
./pride-and-prejudice.txt:Jane, make haste and tell us; make haste, my love."
./pride-and-prejudice.txt:brother Gardiner's in town so much in love with her, that my
./pride-and-prejudice.txt:discovered the efficacy of poetry in driving away love!"
./pride-and-prejudice.txt:"I have been used to consider poetry as the _food_ of love," said Darcy.
./pride-and-prejudice.txt:"Of a fine, stout, healthy love it may. Everything nourishes what is
./pride-and-prejudice.txt:be a great loss to _me_ to have many such acquaintance. I dearly love a
./pride-and-prejudice.txt:to-day. Lydia, my love, ring the bell. I must speak to Hill this
./pride-and-prejudice.txt:shall choose to attribute it to your wish of increasing my love by
./pride-and-prejudice.txt:successful love; for Mrs. Bennet, having dawdled about in the vestibule
```

```
ig@ig-VirtualBox:~/Documents/Books
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```
ig@ig-VirtualBox:~/Documents/Books$ grep -nR "^l...d" ./
./pride-and-prejudice.txt:1720:liked a red coat myself very well--and, indeed, so I do still at my
./pride-and-prejudice.txt:9474:lived. Not like the wild young men now-a-days, who think of nothing but
./pride-and-prejudice.txt:10016:loved her, but for loving her still well enough to forgive all the
./pride-and-prejudice.txt:13948:liked him but Jane; and even feared that with the others it was a
./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 him more than I can say, and that my latest and
./dracula.txt:15427:loved her, that they did dare much for her sake."
./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:21272:lived for glory--And after all what is glory? The same love of others
```

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1: ig@ig-VirtualBox: ~/Documents/Books
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```
ig@ig-VirtualBox:~/Documents/Books$ grep -wniR "^d[aeiou]..." ./
./pride-and-prejudice.txt:420:Darcy; nearly all of them would have palpitated and fluttered at the
./pride-and-prejudice.txt:1022:dance."
./pride-and-prejudice.txt:1036:Darcy, looking at the eldest Miss Bennet.
./pride-and-prejudice.txt:1110:dear, to have given him one of your set-downs. I quite detest the man."
./pride-and-prejudice.txt:1399:dark. There is so much of gratitude or vanity in almost every
./pride-and-prejudice.txt:1851:dirty weather, and by herself, was almost incredible to Mrs. Hurst and
./pride-and-prejudice.txt:2321:Darcy only smiled; and the general pause which ensued made Elizabeth
./pride-and-prejudice.txt:2547:Darcy had much better finish his letter."
./pride-and-prejudice.txt:2584:dare."
./pride-and-prejudice.txt:2690:door. He then sat down by her, and talked scarcely to anyone else.
./pride-and-prejudice.txt:2696:Darcy did not wish for cards, and Mr. Hurst soon found even his open
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1: ig@ig-VirtualBox: ~/Documents/Books
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```
ig@ig-VirtualBox:~/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
ig@ig-VirtualBox:~/Documents/Books$
```