

# Lab 7

## Question 1

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federico-silva@federico-silva-VMware-Virtual-Platform:~/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;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
100% Natural Bran;Q;C;120;3;5;15;2;8;8;135;0;3;1;1;33.983679
100% Bran;N;C;70;4;1;130;10;5;6;280;25;3;1;0.33;68.402973
String;Categorical;Categorical;Int;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cups;rating
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ cat cereal.csv
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```
federico-silva@federico-silva-VMware-Virtual-Platform:~/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;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$
```

```
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ head -n 2 cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cu
String;Categorical;Categorical;Int;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$
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```
federico-silva@federico-silva-VMware-Virtual-Platform:~/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
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$
```

## Question 2

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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ head -n 1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ cut -d";" -f cars.csv
cut: invalid field value 'cars.csv'
Try 'cut --help' for more information.
federico-silva@federico-silva-VMware-Virtual-Platform:~/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

federico-silva@federico-silva-VMware-Virtual-Platform:~/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
Datsun 310 GX = 4
Buick Century Limited = 6
Oldsmobile Cutlass Ciera (diesel) = 6
Chrysler Lebaron Medallion = 4
Ford Grenada l = 6
Toyota Celica GT = 4
Dodge Charger 2.2 = 4
Chevrolet Camaro = 4
Ford Mustang GL = 4
Volkswagen Pickup = 4
Dodge Rampage = 4
Ford Ranger = 4
Chevy S-10 = 4
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ cut -d";" -f1,3 cars.csv --output-delimiter=" = "

federico-silva@federico-silva-VMware-Virtual-Platform:~/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
Bran Chex;R;C;90;2;1;200;4;15;6;125;25;1;1;0.67;49.120253
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
Nutri-grain Wheat;K;C;90;3;0;170;3;18;2;90;25;3;1;1;59.642837
Bran Flakes;P;C;90;3;0;210;5;13;5;190;25;3;1;0.67;53.313813
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cups;ratir
String;Categorical;Categorical;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ sort -t";" -k4 cereal.csv

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## Question 3

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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Csv$ cd ../Books/
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep "War" war-and-peace
grep: war-and-peace: No such file or directory
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ ls
bible.txt dracula.txt great-expectations.txt pride-and-prejudice.txt war-and-peace.txt
federico-silva@federico-silva-VMware-Virtual-Platform:~/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
federico-silva@federico-silva-VMware-Virtual-Platform:~/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 towards 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 towards the
Prince Andrew, who had evidently wished to tone down the awkwardness of
his kindly, simple, and modest expression. Anna Pávlovna turned toward

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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -i -c "war" war-and-peace.txt
1255
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ █

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armies had suffered in the former war from Austerlitz to Wagram. But
of natural forces; they anticipate war between their sovereigns; the
During the national war he was inactive because he was not needed. But
as soon as the necessity for a general European war presented itself he
The goal is reached. After the final war of 1815 Alexander possesses all
latest war news, and when the ten minutes required by propriety had
directed forces. In describing a war or the subjugation of a people, a
Napoleon ordered an army to be raised and go to war. We are so
as for instance in a war or a revolution, and so without assuming an
When, for instance, we say that Napoleon ordered armies to go to war,
is it that millions of men commit collective crimes—make war, commit
same applies to historical events. Why war and revolution occur we do
The Austro-Prussian war appears to us undoubtedly the result of the
*** END OF THE PROJECT GUTENBERG EBOOK WAR AND PEACE ***
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -iw "war" war-and-peace.txt█

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```
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -n "^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
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$
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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -n "^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
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.
1295:There was a general movement as the princess, smiling and talking
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
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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -iw "love" *.txt
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 therefore my husband will 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.
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.
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federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -onw '\b[a-zA-Z]{3}\d\b' *.txt
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```
bible.txt:109:lived
bible.txt:111:lived
bible.txt:112:lived
bible.txt:113:lived
bible.txt:115:lived
bible.txt:116:lived
bible.txt:118:lived
bible.txt:119:lived
bible.txt:121:lived
bible.txt:122:lived
bible.txt:124:lived
```

```
any
particular
paper
start
at
has
main
search
facility
information
about
make
donations
Literary
Archive
Foundation
and
email
hear
about
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -oiE '\b\w*a\w*\b' dracula.txt
federico-silva@federico-silva-VMware-Virtual-Platform:~/Documents/Books$ grep -o '\bd[aeiou][a-zA-Z]\{2\}d\b' *.txt
bible.txt:doted
bible.txt:doted
bible.txt:doted
bible.txt:doted
bible.txt:doted
bible.txt:doted
bible.txt:dined
dracula.txt:dined
dracula.txt:dined
```