

# Lab 7

## Question 1

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1/1 + [Share] [Copy] Tilix: jhopkinswalker@cis106vm: ~/Documents/Csv
1:jhopkinswalker@cis106vm: ~/Documents/Csv
jhopkinswalker@cis106vm:~/Documents$ cd Csv/
jhopkinswalker@cis106vm:~/Documents/Csv$ ls
cars.csv      contacts.csv  film.csv      users_test.csv
cereal.csv    country.csv  sorted_cars.csv
jhopkinswalker@cis106vm:~/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;FL
oat
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
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;53.313813
Cap'n'Crunch;Q;C;120;1;2;220;0;12;12;35;25;2;1;0.75;18.042851
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;0.75;19.823573
Clusters;G;C;110;3;2;140;2;13;7;105;25;3;1;0.5;40.400208
Cocoa Puffs;G;C;110;1;1;180;0;12;13;55;25;2;1;1;22.736446
Corn Chex;R;C;110;2;0;280;0;22;3;25;25;1;1;1;41.445019
Corn Flakes;K;C;100;2;0;290;1;21;2;35;25;1;1;1;45.863324
Corn Pops;K;C;110;1;0;90;1;13;12;20;25;2;1;1;35.782791
Count Chocula;G;C;110;1;1;180;0;12;13;65;25;2;1;1;22.396513
Cracklin' Oat Bran;K;C;110;3;3;140;4;10;7;160;25;3;1;0.5;40.448772
Cream of Wheat (Quick);N;H;100;3;0;80;1;21;0;-1;0;2;1;1;64.533816
Crispix;K;C;110;2;0;220;1;21;3;30;25;3;1;1;46.895644
Crispy Wheat & Raisins;G;C;100;2;1;140;2;11;10;120;25;3;1;0.75;36.176196
Double Chex;R;C;100;2;0;190;1;18;5;80;25;3;1;0.75;44.330856
Froot Loops;K;C;110;2;1;125;1;11;13;30;25;2;1;1;32.207582
Frosted Flakes;K;C;110;1;0;200;1;14;11;25;25;1;1;0.75;31.435973
Frosted Mini-Wheats;K;C;100;3;0;0;3;14;7;100;25;2;1;0.8;58.345141
Fruit & Fibre Dates, Walnuts, and Oats;P;C;120;3;2;160;5;12;10;200;25;3;1.25;0.67;40.9170
47
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;Float;Float;Int;Int;Int;Int;Float;Float;FL
oat
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight
; cups;rating
jhopkinswalker@cis106vm:~/Documents/Csv$ tac cereal.csv

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jhopkinswalker@cis106vm:~/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;Fl
oat
jhopkinswalker@cis106vm:~/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
jhopkinswalker@cis106vm:~/Documents/Csv$
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## Question 2

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1/1 v + [T] [C] Tlilix: jhopkinswalker@cis106vm: ~/Documents/Csv [Q] [≡] [–] [□] [×]
1: jhopkinswalker@cis106vm: ~/Documents/Csv v AI □ ×
jhopkinswalker@cis106vm:~/Documents/Csv$ head -n 1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
jhopkinswalker@cis106vm:~/Documents/Csv$ cut -d";" -f cars.csv
cut: invalid field value 'cars.csv'
Try 'cut --help' for more information.
jhopkinswalker@cis106vm:~/Documents/Csv$ cut -d";" -f1 cars.csv
Car
STRING
Chevrolet Chevelle Malibu
Buick Skylark 320
Plymouth Satellite
AMC Rebel SST
jhopkinswalker@cis106vm:~/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
jhopkinswalker@cis106vm:~/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
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jhopkinswalker@cis106vm:~/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
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;90.00;2648.;15.0;70;US

jhopkinswalker@cis106vm:~/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
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## Question 3

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1/1 + [T] [R] TiliX: jhopkinswalker@cis106vm: ~/Documents/Books [Q] [≡] [−] [□] [X]
1:jhopkinswalker@cis106vm: ~/Documents/Books
jhopkinswalker@cis106vm:~/Documents/Csv$ cd ../Books/
jhopkinswalker@cis106vm:~/Documents/Books$ ls
bible.txt      great-expectations.txt  war-and-peace.txt
dracula.txt    pride-and-prejudice.txt
jhopkinswalker@cis106vm:~/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

jhopkinswalker@cis106vm:~/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!
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jhopkinswalker@cis106vm:~/Documents/Books$ grep -ic "War" war-and-peace.txt
1255
jhopkinswalker@cis106vm:~/Documents/Books$ grep -iwc "War" war-and-peace.txt
293
jhopkinswalker@cis106vm:~/Documents/Books$
jhopkinswalker@cis106vm:~/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
jhopkinswalker@cis106vm:~/Documents/Books$
65246:The third consideration is the degree to which we apprehend that
65252:The better we are acquainted with the physiological, psychological, and
65466:The great natural forces lie outside us and we are not conscious of
65527:The recognition of man's free will as something capable of influencing
65544:The more this field of motion spreads out before our eyes, the more
65561:The search for these laws has long been begun and the new methods of
65622:The struggle between the old views and the new was long and stubbornly
65963:The Project Gutenberg Literary Archive Foundation is a non-profit
65971:The Foundation's business office is located at 809 North 1500 West,
65987:The Foundation is committed to complying with the laws regulating
jhopkinswalker@cis106vm:~/Documents/Books$ grep -nw "^The" war-and-peace.txt
```



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jhopkinswalker@cis106vm:~/Documents/Books$ grep -Rwi "love" ./
./great-expectastions.txt:because the dear fellow let me love him,—and, as to him, my inner self
./great-expectastions.txt:"Cousin Raymond," observed another lady, "we are to love our
./great-expectastions.txt:anxiety of those I love. If I could be less affectionate and sensitive,
./great-expectastions.txt:("Much higher than your head, my love," said Mr. Camilla.)
./great-expectastions.txt:thank you, my love?"
./great-expectastions.txt:and depart. It's something to have seen the object of one's love and
./great-expectastions.txt:"If I could only get myself to fall in love with you,—you don't mind my
./great-expectastions.txt:or anywhere else you like—a certain man, who made love to Miss
./great-expectastions.txt:Miss Havisham's counsels, and she was too haughty and too much in love
./great-expectastions.txt:with him. That did not extend to me, she told me in a gush of love and
./great-expectastions.txt:religion, and her liver love. These people hated me with the hatred of
./great-expectastions.txt:for love or money."
./great-expectastions.txt:love of poor old days. No more, dear Mr. Pip, from
./great-expectastions.txt:truth is, that when I loved Estella with the love of a man, I loved her
./great-expectastions.txt:she sat in the chair. "Love her, love her, love her! How does she use
./great-expectastions.txt:at all) she repeated, "Love her, love her, love her! If she favours
./great-expectastions.txt:you, love her. If she wounds you, love her. If she tears your heart to
./great-expectastions.txt:pieces,—and as it gets older and stronger it will tear deeper,—love
./great-expectastions.txt:her, love her, love her!"
./great-expectastions.txt:Love her!"
./great-expectastions.txt:of love—despair—revenge—dire death—it could not have sounded from her
./great-expectastions.txt:"what real love is. It is blind devotion, unquestioning
./great-expectastions.txt:night Miss Havisham's words "Love her, love her, love her!" s

jhopkinswalker@cis106vm:~/Documents/Books$ grep -Rn "^l...d" ./
./great-expectastions.txt:153:lamed by stones, and cut by flints, and stung by nettles, and torn by
./great-expectastions.txt:1696:loved Joe,—perhaps for no better reason in those early days than
./great-expectastions.txt:2141:lived in a large and dismal house barricaded against robbers, and who
./great-expectastions.txt:3109:liked sometimes to smoke his pipe there. I had received strict orders
./great-expectastions.txt:9750:loved her none the less because I knew it, and it had no more influence
./great-expectastions.txt:14039:laundress or her niece, he was to keep himself out of their view until
./great-expectastions.txt:14327:lived, before going up the stairs, Garden Court was as still and
./great-expectastions.txt:14639:lived at the top of Compeyson's house (over which Brentford it was), and
./great-expectastions.txt:16620:lived in the supplementary house across the back courtyard, opened the

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./war-and-peace.txt:60036:debts. And Pierre decided that the steward's proposals which ha
d so
./war-and-peace.txt:60410:don't go. I will order supper. Go downstairs, we will come imme
diately."
./war-and-peace.txt:60455:debts and to rebuild his houses, Pierre still maintained that h
e had
./war-and-peace.txt:60619:doing justice to our feelings, we forget him."
./war-and-peace.txt:60762:down, he was surprised by the beauty of those ruins. The pictur
esqueness
./war-and-peace.txt:61604:debts the existence of which no one had suspected. The debts am
ounted to
./war-and-peace.txt:61621:debts and was obviously not guilty of contracting them.
./war-and-peace.txt:61671:death-never entered his head. He wished for nothing and hoped

./war-and-peace.txt:62307:door. "Papa wants to sleep."
./war-and-peace.txt:62705:death's door. But you were enjoying yourself. Yes, enjoying..."
./war-and-peace.txt:62989:did. "But best of all you have brought yourself back-for I neve
r saw
./war-and-peace.txt:63420:diary? There could be no doubt not only of his approval but als
o of his
./war-and-peace.txt:64590:Deity.
./war-and-peace.txt:65343:deed, we never get a conception of freedom in time. For if I ex
amine
jhopkinswalker@cis106vm:~/Documents/Books$ grep -Rwni "^d[aeiou]..." ./
jhopkinswalker@cis106vm:~/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
jhopkinswalker@cis106vm:~/Documents/Books$
```