

Lab 7

Question 1

#1

1 / 1 + [share] [copy]

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv

```
richard@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;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
```

#2

1 / 1 + [share] [copy]

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv

```
richard@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
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
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
```

#3

1 / 1 + [share] [copy]

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv

```
richard@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;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$
```

#4

1 / 1 + [share] [copy]

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv

```
richard@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
richard@cis106:~/Documents/Csv$
```

#5

```
richard@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
richard@cis106:~/Documents/Csv$
```

Question 2

#1

1 / 1 + [share] [copy] Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv ▾

```
richard@cis106:~/Documents/Csv$ head -n 1 cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cups;rating
richard@cis106:~/Documents/Csv$ cut -d";" -f1 cars.csv
Car
STRING
Chevrolet Chevelle Malibu
Buick Skylark 320
Plymouth Satellite
```

#2

1 / 1 + [share] [copy] Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv ▾

```
richard@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
```

#3

1 / 1 + [share] [copy] Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv ▾

```
richard@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
```

#4

1 / 1 + ↻ 🔍

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv ▾

```
richard@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;90.00;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
AMC Hornet;18.0;6;199.0;97.00;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;90.00;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
AMC Matador;15.0;6;258.0;110.0;3730.;19.0;75;US
```

#5

1 / 1 + ↻ 🔍

Tilix: richard@cis106: ~/Documents/Csv

1: richard@cis106: ~/Documents/Csv ▾

```
richard@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;46.658844
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;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
```

Question 3

#1

```

1/1 + [ ] [ ]
Tilix: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books

richard@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
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
richard@cis106:~/Documents/Books$ █

```

#2

```

1: richard@cis106: ~/Documents/Books

richard@cis106:~/Documents/Books$ grep "War" -i 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.

```

#3 & 4

```

1/1 + [ ] [ ]
Tilix: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books

richard@cis106:~/Documents/Books$ grep "War" -ic war-and-peace.txt
1255
richard@cis106:~/Documents/Books$ grep "War" -iwc war-and-peace.txt
293
richard@cis106:~/Documents/Books$ █

```

#5

```
richard@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
richard@cis106:~/Documents/Books$
```

#6

```
richard@cis106:~/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
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
```

#7

```
1/1  +  [icon]  [icon]  Tmux: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books  v

richard@cis106:~/Documents/Books$ grep -Rwl "love" ./
./great-expectations.txt:because the dear fellow let me love him,—and, as to him, my inner self
./great-expectations.txt:"Cousin Raymond," observed another lady, "we are to love our
./great-expectations.txt:anxiety of those I love. If I could be less affectionate and sensitive,
./great-expectations.txt:"Much higher than your head, my love," said Mr. Camilla.)
./great-expectations.txt:thank you, my love?"
./great-expectations.txt:and depart. It's something to have seen the object of one's love and
./great-expectations.txt:"If I could only get myself to fall in love with you,—you don't mind my
./great-expectations.txt:or anywhere else you like—a certain man, who made love to Miss
./great-expectations.txt:Miss Havisham's counsels, and she was too haughty and too much in love
./great-expectations.txt:with him. That did not extend to me, she told me in a gush of love and
./great-expectations.txt:religion, and her liver love. These people hated me with the hatred of
./great-expectations.txt:for love or money"
```

#8

```
1/1  +  [icon]  [icon]  Tmux: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books  v

richard@cis106:~/Documents/Books$ grep -nR "\l...d" ./
./great-expectations.txt:153:lamed by stones, and cut by flints, and stung by nettles, and torn by
./great-expectations.txt:1696:loved Joe,—perhaps for no better reason in those early days than
./great-expectations.txt:2141:lived in a large and dismal house barricaded against robbers, and who
./great-expectations.txt:3109:liked sometimes to smoke his pipe there. I had received strict orders
./great-expectations.txt:9750:loved her none the less because I knew it, and it had no more influence
./great-expectations.txt:14039:laundress or her niece, he was to keep himself out of their view until
./great-expectations.txt:14327:lived, before going up the stairs, Garden Court was as still and
./great-expectations.txt:14639:lived at the top of Compeyson's house (over nigh Brentford it was), and
./great-expectations.txt:16620:lived in the supplementary house across the back courtyard, opened the
./great-expectations.txt:16969:liked about informing the rest. This I did next day, through Herbert,
./great-expectations.txt:17777:lay directly in my way, and had been worked that day, as I saw by the
./pride-and-prejudice.txt:1748:liked a red coat myself very well—and, indeed, so I do still at my
```

#9


```
1 / 1 + [copy] [paste]
Tilix: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books
richard@cis106:~/Documents/Books$ grep -R "^d[aeiou]..." ./
./great-expectations.txt:do you say?"
./great-expectations.txt:diminishing slice, to enter upon our usual friendly competition; but he
./great-expectations.txt:didn't seem to enjoy. He turned it about in his mouth much longer than
./great-expectations.txt:dead."
./great-expectations.txt:down the river on a strong spring-tide, to the Hulks; a ghostly pirate
./great-expectations.txt:down, for it made him stumble,—and then he ran into the mist, stumbling
./great-expectations.txt:day,—But this man"; he had said all the rest, as if he had forgotten my
./great-expectations.txt:dirt itself. Cleanliness is next to Godliness, and some people do the
./great-expectations.txt:delivered over to her, to be dealt with according to the outraged
./great-expectations.txt:done. Under the weight of my wicked secret, I pondered whether the
./great-expectations.txt:dusk, my orders are. That'll do."
./great-expectations.txt:dusk. Anybody here seen anything of any such game?"
```

#10

```
1 / 1 + [copy] [paste]
Tilix: richard@cis106: ~/Documents/Books

1: richard@cis106: ~/Documents/Books
richard@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
richard@cis106:~/Documents/Books$
```