

## lab 7

## Question 1

```
apjames@cis106: ~/Documents/Csv
apjames@cis106:~/Documents/Csv$ cd Csv/
apjames@cis106:~/Documents/Csv$ ls
cars.csv  cereal.csv  contacts.csv  country.csv  film.csv
apjames@cis106:~/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;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

nt;Int;Int;Int;Int;Float;Float;Float
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars
;potass;vitamins;shelf;weight;cups;rating
apjames@cis106:~/Documents/Csv$ tac cereal.csv
```

```

apjames@cis106:~/Documents/Csv$ cat -nEv cereal.csv
      1  name;mfr;type;calories;protein;fat;sodium;fiber;carb
; 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;68.4
02973^M$
      4  100% Natural Bran;Q;C;120;3;5;15;2;8;8;135;0;3;1;1;3
8.983679^M$
      5  All-Bran;K;C;70;4;1;260;9;7;5;320;25;3;1;0.33;59.425
505^M$
      6  All-Bran with Extra Fiber;K;C;50;4;0;140;14;8;0;330;
apjames@cis106:~/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;I
nt;Int;Int;Int;Int;Float;Float;Float
apjames@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
apjames@cis106:~/Documents/Csv$

```

## Question 2

---

```

apjames@cis106:~/Documents/Csv$ cut -d',' -f1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleratio
n;Model;Origin
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;DOUBLE;INT;CAT
Chevrolet Chevelle Malibu;18.0;8;307.0;130.0;3504.;12.0;70;U
S
Buick Skylark 320;15.0;8;350.0;165.0;3693.;11.5;70;US
Plymouth Satellite;18.0;8;318.0;150.0;3436.;11.0;70;US
AMC Rebel SST;16.0;8;304.0;150.0;3433.;12.0;70;US
Ford Torino;17.0;8;302.0;140.0;3449.;10.5;70;US
apjames@cis106:~/Documents/Csv$ cut -d',' -f1,3 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleratio
n;Model;Origin
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;DOUBLE;INT;CAT
Chevrolet Chevelle Malibu;18.0;8;307.0;130.0;3504.;12.0;70;U
S
Buick Skylark 320;15.0;8;350.0;165.0;3693.;11.5;70;US
Plymouth Satellite;18.0;8;318.0;150.0;3436.;11.0;70;US
AMC Rebel SST;16.0;8;304.0;150.0;3433.;12.0;70;US

```

```
Volkswagen Pickup;44.0;4;97.00;52.00;2130.;24.6;82;Europe
Dodge Rampage;32.0;4;135.0;84.00;2295.;11.6;82;US
Ford Ranger;28.0;4;120.0;79.00;2625.;18.6;82;US
Chevy S-10;31.0;4;119.0;82.00;2720.;19.4;82;US
apjames@cis106:~/Documents/Csv$ cut -d',' -f1,3 cars.csv --
output-delimiter=" " = "
```

```
Volvo 144e;19.0;4;121.0;112.0;2888.;13.3;73;Europe
Volvo 145e (sw);18.0;4;121.0;112.0;2933.;14.5;72;Europe
Volvo 244DL;22.0;4;121.0;98.00;2945.;14.5;75;Europe
Volvo 245;20.0;4;130.0;102.0;3150.;15.7;76;Europe
Volvo 264gl;17.0;6;163.0;125.0;3140.;13.6;78;Europe
Volvo Diesel;30.7;6;145.0;76.00;3160.;19.6;81;Europe
apjames@cis106:~/Documents/Csv$ sort cars.csv
```

```
Nutri-grain Wheat;K;C;90;3;0;170;3;18;2;90;25;3;1;1;59.64283
7
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;rating
String;Categorical;Categorical;Int;Int;Int;Int;Float;Float;I
nt;Int;Int;Int;Int;Float;Float;Float
apjames@cis106:~/Documents/Csv$ sort -t";" -k4 cereal.csv
```

## Question 3

---

```
apjames@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
d bowing
corridor to the cabinet where the Minister of War was at work. The
narrowed disdainfully, he entered the room of the Minister of
f War with
interested the Minister of War less than any of the other matters
he was
```

```
with the self-destruction toward which—ever dissecting and dissecting
*** END OF THE PROJECT GUTENBERG EBOOK WAR AND PEACE ***
1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the
"Right
LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE
HOSE
OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING
BUT NOT
LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY
PURPOSE.
warranties or the exclusion or limitation of certain types of
```

```
apjames@cis106:~/Documents/Books$ grep -i "War" war-and-peace.txt
```

```
apjames@cis106:~/Documents/Books$ grep -1c "War" war-and-peace.txt
29
```

```
apjames@cis106:~/Documents/Books$ grep -1cw "War" war-and-peace.txt
24
```

```
apjames@cis106: ~/Documents/Books
44769-her frontiers immutable; all future wars purely defens
ive, all
--
51592-herself incompetent, but in the depths of her soul she
felt at peace—a
51593:peace arising from consciousness of having stifled tho
se personal dreams
51594-and hopes that had been on the point of awakening with
in her and were
--
58823-Moscow is not the loss of Russia. In reply to Lauristo
n's proposal of
58824:peace, he said: There can be no peace, for such is the
people's will. He
58825-alone during the retreat of the French said that all o
ur maneuvers are
--
59767-possible from places where people were killing one ano
ther, to some
59768:peaceful refuge where he could recover himself, rest,
and think over
59769-all the strange new facts he had learned; but on reach
ing Orël he
apjames@cis106:~/Documents/Books$ grep -in "^peace" war-and-
peace.txt
```

```
65527:The recognition of man's free will as something capabl
e of influencing
65544:The more this field of motion spreads out before our e
yes, 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 lon
g and stubbornly
65963:The Project Gutenberg Literary Archive Foundation is a
non-profit
65971:The Foundation's business office is located at 809 Nor
th 1500 West,
65987:The Foundation is committed to complying with the laws
regulating
apjames@cis106:~/Documents/Books$ grep -nw "^The" war-and-pe
ace.txt
```



```
./war-and-peace.txt:that she understood, and this seemed to
make her love for him still
./war-and-peace.txt:this life to love her husband, her childre
ten, little Nicholas, and all
./war-and-peace.txt:What I say is: 'Join hands, you who lo
the right, and let there be but
./war-and-peace.txt:"I love you awfully!" Natásha suddenly
aid. "Awfully, awfully!"
./war-and-peace.txt:"No, it's not that. I never leave off
ving you. And one couldn't love
./war-and-peace.txt:existed, and when little Nicholas perce
ved him he grew faint with love:
./war-and-peace.txt:will act as they did. I will do better
Everyone shall know me, love me,
./war-and-peace.txt:of Christian men professing the law of
love of their fellows slew one
./war-and-peace.txt:executions resulting from the preaching
of love.
apjames@cis106:~/Documents/Books$ grep -Rwi "love" ./
```

```
./war-and-peace.txt:51658:lived appeared on the surface. All
her inward labor, her dissatisfaction
./war-and-peace.txt:51971:loved no one but Prince Andrew and
had never ceased to love him. She
./war-and-peace.txt:52917:loved for the first and only time
in her life and felt that she was
./war-and-peace.txt:55272:lured one to itself. Pierre glance
d up at the sky and the twinkling
./war-and-peace.txt:62242:lay down on the sofa.
./war-and-peace.txt:62346:loved for their beauty. But do I l
ove my wife? I don't love her, but...
./war-and-peace.txt:62817:loved Natásha and when dying had l
eft her to his friend. But the father
apjames@cis106:~/Documents/Books$ grep -nR "^l...d" ./
```

```
./war-and-peace.txt:62307:door. "Papa wants to sleep."  
./war-and-peace.txt:62705:death's door. But you were enjoyin  
g yourself. Yes, enjoying..."  
./war-and-peace.txt:62989:did. "But best of all you have bro  
ught yourself back—for I never saw  
./war-and-peace.txt:63420:diary? There could be no doubt not  
only of his approval but also of his  
./war-and-peace.txt:65343:deed, we never get a conception of  
freedom in time. For if I examine  
apjames@cis106:~/Documents/Books$ grep -wnR "^d[aeiou]..." .  
/
```

```
apjames@cis106:~/Documents/Books$ grep -iE "a{2}" dracula.tx  
t  
help me deck the room with my garlic, which is all the way f  
rom Haarlem,  
Haarlem. To-night Dr. Van Helsing is going away, as he has t  
o be for a
```