

# Lab 7 - Handling text files

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## Question 1

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1/1  +  [?] [?]  Tilix: jgc@cis106: ~/Documents/Csv  [Q] [≡] [–] [□] [×]
1:jgc@cis106: ~/Documents/Csv  [□] [×]
├── random-dog.json
├── recreational.json
└── New Document.txt

4 directories, 18 files
jgc@cis106:~/Documents$ cd Csv/
jgc@cis106:~/Documents/Csv$ ls
cars.csv  cereal.csv  contacts.csv  country.csv  film.csv  sorted_cars.csv
jgc@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;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
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
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1/1  +  [T] [C]  Tilix: jgc@cis106: ~/Documents/Csv  [Q] [≡] [−] [□] [×]
1:jgc@cis106: ~/Documents/Csv  [□] [×]
Count Chocula;G;C;110;1;1;180;0;12;13;65;25;2;1;1;22.396513
Corn Pops;K;C;110;1;0;90;1;13;12;20;25;2;1;1;35.782791
Corn Flakes;K;C;100;2;0;290;1;21;2;35;25;1;1;1;45.863324
Corn Chex;R;C;110;2;0;280;0;22;3;25;25;1;1;1;41.445019
Cocoa Puffs;G;C;110;1;1;180;0;12;13;55;25;2;1;1;22.736446
Clusters;G;C;110;3;2;140;2;13;7;105;25;3;1;0.5;40.400208
Cinnamon Toast Crunch;G;C;120;1;3;210;0;13;9;45;25;2;1;0.75;19.823573
Cheerios;G;C;110;6;2;290;2;17;1;105;25;1;1;1.25;50.764999
Cap'n Crunch;Q;C;120;1;2;220;0;12;12;35;25;2;1;0.75;18.042851
Bran Flakes;P;C;90;3;0;210;5;13;5;190;25;3;1;0.67;53.313813
Bran Chex;R;C;90;2;1;200;4;15;6;125;25;1;1;0.67;49.120253
Basic 4;G;C;130;3;2;210;2;18;8;100;25;3;1.33;0.75;37.038562
Apple Jacks;K;C;110;2;0;125;1;11;14;30;25;2;1;1;33.174094
Apple Cinnamon Cheerios;G;C;110;2;2;180;1.5;10.5;10;70;25;1;1;0.75;29.509541
Almond Delight;R;C;110;2;2;200;1;14;8;-1;25;3;1;0.75;34.384843
All-Bran with Extra Fiber;K;C;50;4;0;140;14;8;0;330;25;3;1;0.5;93.704912
All-Bran;K;C;70;4;1;260;9;7;5;320;25;3;1;0.33;59.425505
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;Float;Float;Int;Int;Int;Int;Float
;Float;Float
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;she
lf;weight;cups;rating
jgc@cis106:~/Documents/Csv$ tac cereal.csv █
jgc@cis106:~/Documents/Csv$ cat -nEv cereal.csv
    1  name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vita
mins;shelf;weight;cups;rating^M$
    2  String;Categorical;Categorical;Int;Int;Int;Int;Float;Float;Int;Int;Int;I
nt;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$

1/1  +  [T] [C]  Tilix: jgc@cis106: ~/Documents/Csv  [Q] [≡] [−] [□] [×]
1:jgc@cis106: ~/Documents/Csv  [□] [×]
jgc@cis106:~/Documents/Csv$ head -n 2 cereal.csv
name;mfr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;she
lf;weight;cups;rating
String;Categorical;Categorical;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float
;Float;Float
jgc@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
jgc@cis106:~/Documents/Csv$ █

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## Question 2

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1/1  +  TiliX: jgc@cis106: ~/Documents/Csv  Q  -  □  ×

1: jgc@cis106: ~/Documents/Csv  □  ×

jgc@cis106:~/Documents/Csv$ head -n 1 cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
jgc@cis106:~/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
Pontiac Catalina
jgc@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
Ford Galaxie 500;8
Chevrolet Impala;8
Plymouth Fury iii;8
Dodge Rampage = 4
Ford Ranger = 4
Chevy S-10 = 4
jgc@cis106:~/Documents/Csv$ cut -d";" -f1,3 cars.csv --output-delimiter=" = "
jgc@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
Strawberry Fruit Wheats;N;C;90;2;0;15;3;15;5;90;25;2;1;1;59.363993
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;rating
String;Categorical;Categorical;Int;Int;Int;Int;Int;Float;Float;Int;Int;Int;Int;Float;Float;Float
jgc@cis106:~/Documents/Csv$ sort -t";" -k4 cereal.csv

```

## Question 3

```
jgc@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, Bolkonski
Austrian Council of War at which Suvórov crowed like a cock in reply to
```

```
jgc@cis106:~/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.
```

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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
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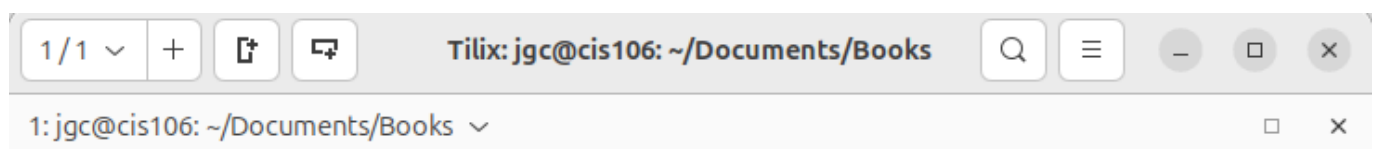
```
jgc@cis106:~/Documents/Books$ grep -ic "War" war-and-peace.txt
1255
```

```
jgc@cis106:~/Documents/Books$ grep -iwc "War" war-and-peace.txt
293
```



```
jgc@cis106:~/Documents/Books$ grep -n "^peace" war-and-peace.txt
5542:peace. The old man was beside himself: moved the chair on which he w
as
20046:peace.”
26471:peace.” But however much they left her in peace she could not now b
e
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 b
y
35057:peace nor war, neither an advance nor a defensive camp at the Driss
a
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 d
reams
58824:peace, he said: There can be no peace, for such is the people’s wil
l. He
59768:peaceful refuge where he could recover himself, rest, and think ove
r
jgc@cis106:~/Documents/Books$ █
```

```
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 o
f
65622:The struggle between the old views and the new was long and stubborn
ly
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
jgc@cis106:~/Documents/Books$ grep -n "^The" war-and-peace.txt █
```



```
jgc@cis106:~/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--fai
rly 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 pro
bable. 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
```

```
1/1  +  [T] [C]  Tilix: jgc@cis106: ~/Documents/Books  [Q] [≡] [–] [□] [×]
1:jgc@cis106: ~/Documents/Books  AI □ ×
jgc@cis106:~/Documents/Books$ grep -n "^l...d" ./
grep: ./: Is a directory
jgc@cis106:~/Documents/Books$ grep -nR "^l...d" ./
./pride-and-prejudice.txt:1724:liked a red coat myself very well--and, in
deed, so I do still at my
./pride-and-prejudice.txt:9478:lived. Not like the wild young men now-a-d
ays, who think of nothing but
./pride-and-prejudice.txt:10020:loved her, but for loving her still well
enough to forgive all the
./pride-and-prejudice.txt:13952:liked him but Jane; and even feared that
with the others it was a
./war-and-peace.txt:5254:liked to. He looked inquiringly at his monitress
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
```

```
1:jgc@cis106: ~/Documents/Books  AI □ ×
jgc@cis106:~/Documents/Books$ grep -wniR "^d[aeiou]..." ./
./pride-and-prejudice.txt:424:Darcy; nearly all of them would have palpi
ated and fluttered at the
./pride-and-prejudice.txt:1026:dance."
./pride-and-prejudice.txt:1040:Darcy, looking at the eldest Miss Bennet.
./pride-and-prejudice.txt:1114:dear, to have given him one of your set-d
wns. I quite detest the man."
```

```
1/1  +  [T] [C]  Tilix: jgc@cis106: ~/Documents/Books  [Q] [≡] [–] [□] [×]
1:jgc@cis106: ~/Documents/Books  □ ×
jgc@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
jgc@cis106:~/Documents/Books$ █
```