

Practice 1

```

dmatos45030@cis106vm:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
-----
dmatos45030@cis106vm:~$ tac /etc/passwd
vboxadd:x:997:1::/var/run/vboxadd:/bin/false
_flatpak:x:122:124:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
dmatos45030:x:1000:1000:dor:/home/dmatos45030:/bin/bash
nm-openvpn:x:121:122:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-initial-setup:x:110:65534:./run/gnome-initial-setup:/bin/false
dmatos45030@cis106vm:~$ cat -nE /etc/passwd
 1 root:x:0:0:root:/root:/bin/bash$
 2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin$
 3 bin:x:2:2:bin:/bin:/usr/sbin/nologin$
 4 sys:x:3:3:sys:/dev:/usr/sbin/nologin$
 5 sync:x:4:65534:sync:/bin:/bin/sync$
dmatos45030@cis106vm:~$ head -5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
dmatos45030@cis106vm:~$ tail -5 /etc/passwd
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false
nm-openvpn:x:121:122:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
dmatos45030:x:1000:1000:dor:/home/dmatos45030:/bin/bash
_flatpak:x:122:124:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
vboxadd:x:997:1::/var/run/vboxadd:/bin/false
dmatos45030@cis106vm:~$ tail -1 /etc/passwd
vboxadd:x:997:1::/var/run/vboxadd:/bin/false
dmatos45030@cis106vm:~$ head -1 /etc/passwd
root:x:0:0:root:/root:/bin/bash

```

836

837 Most people start at our website which has the main PG search
 838 facility: www.gutenberg.org.

839

840 This website includes information about Project Gutenberg™,
 841 including how to make donations to the Project Gutenberg Literar
 842 Archive Foundation, how to help produce our new eBooks, and how
 843 subscribe to our email newsletter to hear about new eBooks.

844

845

```

tos45030@cis106vm:~$ cat -n ~/Documents/Books/dracula.txt

```

Practice 2

```
1/1 v + [ ] [ ]
Tili: dmatos45030@cis106vm: ~

1: dmatos45030@cis106vm: ~
dmatos45030@cis106vm:~$ cut -d":" -f1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
_apt
nobody
systemd-network
systemd-timesync

4: dmatos45030@cis106vm: ~
dmatos45030@cis106vm:~$ cut -d":" -f1,4 --output-delimiter=" calories = " ~/Documents/Csv/cereal.csv
name;mfrr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cu
ps;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;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

2: dmatos45030@cis106vm: ~
dmatos45030@cis106vm:~$ cut -d":" -f1,6,7 --output-delimiter=" >" etc/passwd
cut: etc/passwd: No such file or directory
dmatos45030@cis106vm:~$ cut -d":" -f1,6,7 --output-delimiter=" >" /etc/passwd
root >/root >/bin/bash
daemon >/usr/sbin >/usr/sbin/nologin
bin >/bin >/usr/sbin/nologin
sys >/dev >/usr/sbin/nologin
sync >/bin >/bin/sync
games >/usr/games >/usr/sbin/nologin
man >/var/cache/man >/usr/sbin/nologin
lp >/var/spool/lpd >/usr/sbin/nologin
mail >/var/mail >/usr/sbin/nologin
news >/var/spool/news >/usr/sbin/nologin
uucp >/var/spool/uucp >/usr/sbin/nologin
proxy >/bin >/usr/sbin/nologin
www-data >/var/www >/usr/sbin/nologin
backup >/var/backups >/usr/sbin/nologin
list >/var/list >/usr/sbin/nologin
irc >/run/ircd >/usr/sbin/nologin
_apt >/nonexistent >/usr/sbin/nologin
nobody >/nonexistent >/usr/sbin/nologin

3: dmatos45030@cis106vm: ~
dmatos45030@cis106vm:~$ cut -d":" -f1 ~/Documents/Csv/cereal.csv
name;mfrr;type;calories;protein;fat;sodium;fiber;carbo;sugars;potass;vitamins;shelf;weight;cu
ps;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;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
```

Practice 3

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1/1 v + [ ] [ ]
Tili: dmatos45030@cis106vm: ~/Documents/Csv

1: dmatos45030@cis106vm: ~
dmatos45030@cis106vm:~$ sort ~/Documents/Csv/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,23.0,4,151.0,8,3035. ,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
AMC Matador,15.5,8,304.0,120.0,3962. ,13.9,76;US
AMC Matador,16.0,6,258.0,110.0,3632. ,18.0,74;US
AMC Matador,18.0,6,232.0,100.0,3288. ,15.5,71;US
AMC Matador (sw),14.0,8,304.0,150.0,4257. ,15.5,74;US
AMC Matador (sw),15.0,8,304.0,150.0,3892. ,12.5,72;US
AMC Pacer,19.0,6,232.0,90.00,3211. ,17.0,75;US
AMC Pacer d/L,17.5,6,258.0,95.00,3193. ,17.8,76;US
AMC Rebel SST,16.0,8,304.0,150.0,3433. ,12.0,70;US
AMC Rebel SST (sw),0,8,360.0,175.0,3850. ,11.0,70;US
AMC Spirit DL,27.4,4,121.0,80.00,2670. ,15.0,79;US
Audt 100LS,20.0,4,114.0,91.00,2582. ,14.0,73;Europe
Audt 100LS,23.0,4,115.0,95.00,2694. ,15.0,75;Europe
Audt 100 LS,24.0,4,107.0,90.00,2430. ,14.5,70;Europe
Audt 4000,34.3,4,97.00,78.00,2188. ,15.8,80;Europe
Audt 5000,20.3,5,131.0,103.0,2830. ,15.9,78;Europe
Audt 5000s (diesel),36.4,5,121.0,67.00,2950. ,19.9,80;Europe
Audt Fox,29.0,4,98.00,83.00,2219. ,16.5,74;Europe
BMW 2002,26.0,4,121.0,113.0,2234. ,12.5,70;Europe
BMW 320i,21.5,4,121.0,110.0,2600. ,12.8,77;Europe
Buick Century,17.0,6,231.0,110.0,3907. ,21.0,75;US
Buick Century,22.4,6,231.0,110.0,3415. ,15.8,81;US
Buick Century 350,13.0,8,350.0,175.0,4100. ,13.0,73;US
Buick Century Limited,25.0,6,181.0,110.0,2945. ,16.4,82;US
Buick Century Luxus (sw),13.0,8,350.0,150.0,4699. ,14.5,74;US

2: dmatos45030@cis106vm: ~/Documents/Csv
dmatos45030@cis106vm:~$ cd ~/Documents/Csv/ && sort -o sorted_cars.csv cars.csv
dmatos45030@cis106vm:~/Documents/Csv$ wc -l sorted_cars.csv
408 sorted_cars.csv
dmatos45030@cis106vm:~/Documents/Csv$ wc -m sorted_cars.csv
22663 sorted_cars.csv
dmatos45030@cis106vm:~/Documents/Csv$ cat sorted_cars.csv | tr ';' ' '
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,23.0,4,151.0,8,3035. ,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
AMC Matador,15.5,8,304.0,120.0,3962. ,13.9,76,US
AMC Matador,16.0,6,258.0,110.0,3632. ,18.0,74,US
AMC Matador,18.0,6,232.0,100.0,3288. ,15.5,71,US
AMC Matador (sw),14.0,8,304.0,150.0,4257. ,15.5,74,US
AMC Matador (sw),15.0,8,304.0,150.0,3892. ,12.5,72,US
AMC Pacer,19.0,6,232.0,90.00,3211. ,17.0,75,US
AMC Pacer d/L,17.5,6,258.0,95.00,3193. ,17.8,76,US
AMC Rebel SST,16.0,8,304.0,150.0,3433. ,12.0,70,US
AMC Rebel SST (sw),0,8,360.0,175.0,3850. ,11.0,70,US
AMC Spirit DL,27.4,4,121.0,80.00,2670. ,15.0,79,US
Audt 100LS,20.0,4,114.0,91.00,2582. ,14.0,73,Europe
Audt 100LS,23.0,4,115.0,95.00,2694. ,15.0,75,Europe
Audt 100 LS,24.0,4,107.0,90.00,2430. ,14.5,70,Europe
Audt 4000,34.3,4,97.00,78.00,2188. ,15.8,80,Europe
Audt 5000,20.3,5,131.0,103.0,2830. ,15.9,78,Europe
Audt 5000s (diesel),36.4,5,121.0,67.00,2950. ,19.9,80,Europe
Audt Fox,29.0,4,98.00,83.00,2219. ,16.5,74,Europe
BMW 2002,26.0,4,121.0,113.0,2234. ,12.5,70,Europe
BMW 320i,21.5,4,121.0,110.0,2600. ,12.8,77,Europe
```

Practice 4

1/1 + [[

Tilix: dmatos45030@cis106vm: ~/Documents/Books

Q [- + x

1: dmatos45030@cis106vm: ~/Documents/Books

2: dmatos45030@cis106vm: ~/Documents/Books

3: dmatos45030@cis106vm: ~/Documents/Books

4: dmatos45030@cis106vm: ~/Documents/Books

```
dmatos45030@cis106vm:~/Documents/Books$ grep -in "love" pride-and-prejudice.txt
71:by allowance" and "loving with personal love." This distinction applies
75:to their best work than in the case of those others who are loved "by
77:proper thing to love then. And in the sect--fairly large and yet
125:All the minor passages--the loves of Jane and Bingley, the advent of Mr.
138:aversion to actual love. I do not know whether the all-grasping hand of
368:his falling in love at all is not extremely probable. Here again I
380:injured in disposition, and thoroughly in love. As for his being in
381:love, Elizabeth has given as just an exposition of the causes of that
433:anybody who can read between lines will not find the lovers'
442:ladies with whom it might be a pleasure to fall in love; there are at
446:Grant. I should have been most in love with Beatrix and Argenone; I
547:"So much love and eloquence" 156
728:_may_ fall in love with one of them, and therefore you must visit him as
893:persuade you at last. I was sure you loved your girls too well to
905:for your sakes we would do anything. Lydia, my love, though you _are_
944:dancing was a certain step towards falling in love; and very lively
1387:way to be very much in love; but she considered with pleasure that it
1402:very few of us who have heart enough to be really in love without
1422:in love as much as she chooses."
1629:imagination is very rapid; it jumps from admiration to love, from love
```

```
dmatos45030@cis106vm:~/Documents/Books$ grep -ic "love" pride-and-prejudice.txt
131
dmatos45030@cis106vm:~/Documents/Books$ grep -ivc "love" pride-and-prejudice.txt
dmatos45030@cis106vm:~/Documents/Books$
```

```
dmatos45030@cis106vm:~/Documents/Books$ grep -io "love" love.txt | wc -l
grep: love.txt: No such file or directory
0
dmatos45030@cis106vm:~/Documents/Books$ grep -i "^dracula" dracula.txt
DRACULA
Dracula, jumping to his feet, said:--
Dracula, as it may help me to understand. To-night he may talk of
Dracula was speaking, there was that in his eyes and in his bearing
Dracula." I suspected him, and determined to test his sincerity.
dmatos45030@cis106vm:~/Documents/Books$
```

```
dmatos45030@cis106vm:~/Documents/Books$ grep -Ec "bash|zsh|fish" /etc/passwd
grep: bash|zsh|fish: No such file or directory
/etc/passwd:0
dmatos45030@cis106vm:~/Documents/Books$ grep -Ec "bash|zsh|fish" /etc/passwd
2
dmatos45030@cis106vm:~/Documents/Books$ grep -Ecv "bash|zsh|fish" /etc/passwd
dmatos45030@cis106vm:~/Documents/Books$
```