

Assignment

This program is able to read in a text file and output the frequency of each word in the file. The 'experts' will use this data to analyze and compare the writing of Shakespeare to modern day poets and playwrights.

The input files are likely to have punctuation at the end of some words. Those punctuation marks should be discarded so that the following two inputs would be considered equivalent: **hello** and **hello,**. In addition, I have ignored quotes, such that **'hello'** and **hello** are equivalent. The following punctuation at the end of a word have been deleted:

- !
- .
- ,
- ?
- ;
- :
- -
- |

And the following punctuation AROUND words have been deleted:

- '

Return Values, Errors and Error Handling

My program checks to see that a single filename is specified on the command line. If it is not, the program prints out the following error to STDERR:

```
Usage:
```

```
main filename
```

'main' is the name of the executable as determined *dynamically*. Thus, if the name of the executable was changed to 'count', the help would be:

```
Usage:
```

```
count filename
```

If the file specified by the user cannot be opened, the program prints the following error message to STDERR:

```
count: nofile: No such file
```

Again, 'count' is the name of the executable determined dynamically, and 'nofile' is the name of the file the user specified. The program has an exit code of '2' in this scenario.

If the program successfully runs, it sets the exit code to '0'.

Input File

Given a file with the following data (lorem.txt):

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed ante tortor, sollicitudin a laoreet sed, convallis sed mi. In volutpat sollicitudin felis, quis pharetra nibh aliquet id. Fusce vel sapien non nisi blandit sollicitudin nec sed dolor. Mauris commodo, eros et tincidunt imperdiet, leo metus dapibus justo, vel placerat urna risus sed nibh. Duis sed metus sit amet mauris tempor lacinia. Duis eu dolor ipsum, ac tincidunt quam. Pellentesque vestibulum vehicula congue. Pellentesque commodo orci id ante gravida et auctor ligula volutpat. Cras mattis felis sit amet mi gravida tempor vulputate tellus venenatis. Proin tempus urna sed lacus ullamcorper malesuada. Pellentesque ac ligula diam. Pellentesque eu est lorem. Donec arcu nunc, fringilla sit amet vulputate vitae, feugiat at tellus. Nam tincidunt dictum magna ac adipiscing.

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My program prints the following to STDOUT when run as **main lorem.txt**:

Cras: 2
Donec: 1
Duis: 4
Fusce: 1
In: 1
Lorem: 2
Maecenas: 2
Mauris: 1
Morbi: 1
Nam: 2
Nunc: 1
Pellentesque: 7
Phasellus: 2
Proin: 1
Sed: 1
Ut: 1
Vivamus: 1
a: 2

ac: 4
accumsan: 1
adipiscing: 2
aliquet: 1
amet: 5
ante: 2
arcu: 1
at: 3
auctor: 2
blandit: 3
commodo: 2
congue: 1
consectetur: 3
convallis: 2
dapibus: 1
diam: 4
dictum: 1
dolor: 5
dui: 1
eget: 3
elementum: 1
elit: 2
erat: 1
eros: 1
est: 2
et: 3
eu: 4
facilisis: 1
faucibus: 3
felis: 3
fermentum: 1
feugiat: 1
fringilla: 2
gravida: 3
id: 2
imperdiet: 3
in: 4
ipsum: 4
justo: 3
lacinia: 1
lacus: 3
laoreet: 2
leo: 3
libero: 1
ligula: 2
lorem: 1
magna: 2
malesuada: 3
massa: 2
mattis: 2
mauris: 1
metus: 2
mi: 2
molestie: 1
nec: 3
neque: 2
nibh: 2

nisi: 1
non: 4
nunc: 4
odio: 1
orci: 1
ornare: 4
pellentesque: 2
pharetra: 2
placerat: 4
porta: 1
purus: 2
quam: 1
quis: 4
risus: 2
rutrum: 2
sagittis: 1
sapien: 2
sed: 8
sem: 1
sit: 5
sollicitudin: 4
suscipit: 1
tellus: 3
tempor: 2
tempus: 1
tincidunt: 3
tortor: 3
tristique: 2
turpis: 1
ullamcorper: 1
ultrices: 1
urna: 3
vehicula: 1
vel: 3
velit: 1
venenatis: 1
vestibulum: 2
vitae: 1
viverra: 1
volutpat: 2
vulputate: 2