

Computing Homework 22/10/13 Part 4:

Vowel Finder

Objective

Write a program in C that inputs a string, and shows how many times a vowel is found in the string, then shows a percentage value for how many times a vowel is found.

How to do it

I will complete the objective by:

- First reading in the string.
- Then, using a for loop, go through and count all of the occurrences of every vowel.
- Then, it shall print the occurrences, then it will calculate a percentage value, and print that.

How to test it

I will test this program 3 times, with these strings:

- hello world
- HaPpYblRThDaY(happybirthday with alternating upper-and-lower-case letters)
- merry CHRISTMAS

The output for these strings should be:

| | hello world | HaPpYblRThDaY | merry CHRISTMAS |
|--------|-------------|---------------|-----------------|
| A | 0 | 2 | 1 |
| E | 1 | 0 | 1 |
| I | 0 | 1 | 1 |
| O | 2 | 0 | 0 |
| U | 0 | 0 | 0 |
| Other | 7 | 10 | 11 |
| A% | 0% | 14% | 7% |
| E% | 10% | 0% | 7% |
| I% | 0% | 7% | 7% |
| O% | 20% | 0% | 0% |
| U% | 0% | 0% | 0% |
| Other% | 70% | 79% | 79% |

(Please note that the outputs might not be entirely accurate)

If the program outputs these results, I will conclude that I have completed the objective.

Test results

After testing my program, I got these results:

```
Welcome to the vowel finder v1.0!
Please input a string to analyse.
String: hello world
Number of a(s):0
Number of e(s):1
Number of i(s):0
Number of o(s):2
Number of u(s):0
Number of other letter(s):7
a 0%
e 10%
i 0%
o 20%
u 0%
other 70%
Please input a string to analyse.
String: HaPpYbIrThDaY
Number of a(s):2
Number of e(s):0
Number of i(s):1
Number of o(s):0
Number of u(s):0
Number of other letter(s):10
a 14%
e 0%
i 7%
o 0%
u 0%
other 79%
Please input a string to analyse.
String: merry CHRISTMAS
Number of a(s):1
Number of e(s):1
Number of i(s):1
Number of o(s):0
Number of u(s):0
Number of other letter(s):11
a 7%
e 7%
i 7%
o 0%
u 0%
other 79%
```

As you can see, it is the same as the required results.
I can therefore conclude that I have completed the objective.