MODULE 9

Count the total number of occurrences vowels

Until now, you have been working on searching for unigram, bigram and trigram in the text. Now we will see how to read a sentence from the user and count the total number of occurrences of all vowels in that statement (vowels are a,e,i,o,u,A,E,I,O,U).

Problem

Write a program to read a sentence from the user and count the total number of occurrences of all vowels (case sensitive) in that statement.

Attacking the Problem

To count the number of occurrences of all vowels in the given statement, we need to maintain 10 variables. Whenever we found the vowel in the statement we will increase the corresponding variable. To make it easy we will assign integers numbers to all the vowels and take an array of size 10. So that whenever we found a vowel we will increase the count in corresponding index.

Sample Problem

In this program you will learn how to count vowels 'a' and 'e' in a String. Here one sentence will be assigned of your own choice and then you will get the number of vowels from that String.

```
>>> Sentence = "This turns out to be a very powerful technique for a problem"
>>> a = [0,0]
>>> for i in sentence:
        if i == 'a':
                a[0] = a[0]+1
        elif i == 'e':
                a[1] = a[1]+1
>>> print "No. of occurrences of a and e:\n", "a:",a[0],"\n"."e:",a[1]
```

Output: this will produce:

```
No. of occurrences of a and e:
a: 1
e: 8
```

The "for i in sentence" goes through the file one line at a time very quickly, and you simply add up all the times the char occurs in each line. This takes care of any memory problems you might have with large files, but does take longer.

Exercise Problems

1. Write a program to read a sentence from the user and count the total number of occurrences of all vowels (case sensitive) in that statement.

   The test cases for this program are

   i) "hello world", ii) “a e i o u ", iii) “A E I O U", and iv) " tO bE, Or not to bE: thAt is thE quEstiOn".

2. Write a program to open an existed file and count the total number of occurrences of all vowels (case sensitive) in that file.