Names: Day 12– Count vowels in sentence

CS100 – Sep 14, 2022

Update an existing program to count the vowels in a sentence (multiple words delimited by space) using a nested loops. Testing will use the method of redirecting input from a file rather than input data by typing at the keyboard.

Tasks:

1. Start with a copy of the day10 program that uses the for loop to process each word (should be vowel2.c). Name it day12-sentence.c
2. Update the initial printf and scanf to prompt for a sentence up to 100 words (update the definition of word) and scanf to scan in one word
3. Add an outer loop to read each word in a loop until there are no more words. This outer loop will consist of a while statement that terminates when end of file is reached. There will be an additional set of braces that will enclose the existing for loop.
4. Before returning to check the outer loop condition, add a scanf to get the next word from the input
5. Begin testing by using the day12a.dat and the day12b.dat. Create an additional 2 data files for testing.
6. Turn in day12-sentence and the two data files.

Hints:

* An example of reading in multiple words, is in zybooks section 2.14
* If you run into issues processing the words sequentially, consider adding a debug print statements to print out each word after it is read in to make sure it includes the string you expect

#include <stdio.h>

#include <string.h>

int main(void)

{

int num\_a=0;

int num\_e=0;

int num\_i=0;

int num\_o=0;

int num\_u=0;

char **word[101];**

int currentLetter=0; //variable that points to each letter in order

//by taking values from 0 to strlen()-1

printf("**Enter a sentence (up to 100 characters):\**n");

scanf("%s", word);

//**DEBUG**: print out word to make sure it is the string that you entered

//**TODO**: Write outer **while** loop to loop through each word until

// there are no more words

**{ // <- added beginning brace**

//**TODO**: Use previous **for** loop to

// loop through the letters of each word

{

//**DEBUG**: print out the index currentLetter

//**DEBUG**: print out letter being processed

// word[currentLetter]

if (word[currentLetter]=='a')

num\_a++;

else if (word[currentLetter]=='e')

num\_e++;

else if (word[currentLetter]=='i')

num\_i++;

else if (word[currentLetter]=='o')

num\_o++;

else if (word[currentLetter]=='u')

num\_u++;

}//end of inner loop

**}//end of outer loop <= added beginning brace**

printf("The vowel a occurred %d times\n", num\_a);

printf("The vowel e occurred %d times\n", num\_e);

printf("The vowel i occurred %d times\n", num\_i);

printf("The vowel o occurred %d times\n", num\_o);

printf("The vowel u occurred %d times\n", num\_u);

return 0;

}