Names: Day 10– Processing strings

CS100 – Sep 9, 2022

Using the code below as a starting point. Complete the following tasks and upload the two programs via blackboard.

1. Create a program named vowels1.c that tallies the number of vowels in a string provided by the user. The program should use a **while** loop **without** using **strlen** to iterate over the letters in the string. You will need to increment the index **currentLetter**
2. Create a program named vowels2.c that tallies the number of vowels in a string provided by the user. The program should use a **for** loop and **strlen** to iterate over the letters in the string. You will need to increment the index **currentLetter (**identical code from vowels1.c)

\*\* If you run into issues, consider adding the following debug print statements

* Print out word after it is read in to make sure it includes the string you expect
* Print out the value of the index to verify it is being incremented appropriately
* Print out the letter that is being processed to verify that each letter is processed

#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[100];

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

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

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

scanf("%s", word);

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

//**TODO**: Write 2 variations

//loop through each letter using:

// 1) while loop without using strlen

// 2) for loop using strlen

{

//**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++;

}

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;

}