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1  /* C Program by Dave Russillo. Made for CS1310. Translates English sentences into Pig Latin.
2
3  *
4  *
5  *
6  *
7  *
8  *
9  *
10 *
11 */
12 #include <stdio.h>
13 #include <string.h>
14
15
16
17 int check_if_vowel(char letter) { // checks if parameter is a vowel or not
18     if(letter == 'a' || letter == 'e' || letter == 'i' || letter == 'o' || letter == 'u' ||
19        letter == 'A' || letter == 'E' || letter == 'I' || letter == 'O' || letter == 'U') {
20         return 1;
21     } else {
22         return 0;
23     }
24 }
25
26
27
28 int check_if_all_consonants(char *word) { // 0 false, 1 true
29     for(; *word != '\0'; word++) { // iterate through word's characters
30         if(check_if_vowel(*word)) {
31             return 0;
32         }
33     }
34     return 1;
35 }
36
37
38
39 void translate(char *word) { // translates to pig latin
40     int i; // used for iteration
41     int first_vowel_reached = 0; // 0 false, 1 true
42     char temp[strlen(word) - 1]; /* temporary string used for initial consonants;
43                                  1 shorter than word because worst case vowel will be in index len - 1 */
44     temp[0] = '\0'; // initialize to empty string with \0
45
46     if(check_if_vowel(word[0]) || check_if_all_consonants(word)) {
47         printf("%sway ", word);
48     } else {
49         for(i = 0; i < strlen(word); i++) {
50             if(check_if_vowel(word[i])) {
51                 first_vowel_reached = 1;
52             }
53             if(first_vowel_reached) {
54                 printf("%c", word[i]);
55             } else {
56                 temp[strlen(temp)] = word[i];
57                 temp[strlen(temp) + 1] = '\0';
58             }
59         }
60         printf("%say ", temp);
61     }
62 }
63
64

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65
66 int main(void) {
67     char sentence[81]; // input sentence
68     char sentence_copy[81]; // copy of sentence, because strtok messes with it and causes errors
69     char *current;
70     int i;
71
72     printf("This program takes in a sentence from the user and outputs its Pig Latin translation. \n"
73           "In pig latin, if the word starts with a vowel, or if it doesn't have a vowel at all, \n"
74           "it stays the same with only 'way' appended at the end. Otherwise, the word will start \n"
75           "with every letter from the first vowel to the end of the word, with then the initial \n"
76           "consonants appended, followed by 'ay'. \n"
77           "Accepts sentences of max 80 characters per line, no punctuation. Loops until user inputs STOP as sentence. \n\n");
78     while(strcmp(sentence, "stop") != 0 && strcmp(sentence, "Stop") != 0 && strcmp(sentence, "STOP") != 0) {
79         printf("Input sentence here: \n");
80         gets(sentence);
81         if(strcmp(sentence, "stop") == 0 || strcmp(sentence, "Stop") == 0 || strcmp(sentence, "STOP") == 0) {
82             printf("Shutting down... \n");
83         } else {
84             printf("\nYou entered: \n%s \n\nTranslation: \n", sentence);
85             strcpy(sentence_copy, sentence); // work with copy and keep original intact
86             current = strtok(sentence_copy, " ");
87             while(current != NULL) { // for each word
88                 translate(current);
89                 current = strtok(NULL, " "); // get next word
90             }
91             printf("\n\n");
92         }
93     }
94
95     return 0;
96 }

```

This program takes in a sentence from the user and outputs its Pig Latin translation.  
 In pig latin, if the word starts with a vowel, or if it doesn't have a vowel at all,  
 it stays the same with only 'way' appended at the end. Otherwise, the word will start  
 with every letter from the first vowel to the end of the word, with then the initial  
 consonants appended, followed by 'ay'.  
 Accepts sentences of max 80 characters per line, no punctuation. Loops until user inputs STOP as sentence.

Input sentence here:  
 Another one bites the dust

You entered:  
 Another one bites the dust

Translation:  
 Anotherway oneway itesbay ethay ustday

You entered:  
 This line is a test of my pig latin translator

Translation:  
 isThay inelay isway away esttay ofway myway igpay atinlay anslatortray

Input sentence here:  
 I love computers and programming

You entered:  
 I love computers and programming

Translation:  
 Iway ovelay omputerscay andway ogramingpray

Input sentence here:  
 stop input after this line and Pqrstuvwxyz

You entered:  
 stop input after this line and Pqrstuvwxyz

Translation:  
 opstay inputway afterway isthay inelay andway uvwxyzPqrstay

Input sentence here:  
 stop  
 Shutting down...