CS 101 - Vocabulary Quiz

Fall 2020

Algorithm and Program Due : **Nov 22th, 2020**

**All work submitted must be your own.**

**Deliverables :** You only need to submit your solution. You must use functions to modularize your work. You should use exception handling where necessary as well. Dictionaries, sets, and lists will come in helpful here.

50 points off for programs that crash on expected input.

## Vocabulary Quiz

The goal of this assignment is for you to become more proficient with file I/O, using functions,

and learning to use the dictionary data structure effectively. Dictionaries are very useful data

structures when you can map something (e.g. an English word), to something else (e.g.

equivalent Spanish words). For this assignment, you will synthesize these concepts together by

creating an English-Spanish vocabulary program.

If you've ever taken a foreign language class, you may have studied for tests by creating flash

cards to memorize how a given word in a particular language translates into a different language.

For this project, you are to create a vocabulary quiz program that requests the name of a

vocabulary file in the current directory, quizzes the user on a subset of the words in the

vocabulary file. While the word lists that we are using are English to Spanish, the program could

easily be applied more generally to other languages, giving you a practical replacement to flash

cards!

## Program Outline

1. Check if there are any vocabulary files in the directory, which by convention are files that end in .txt. Print the list of files found. If there aren't files ending in .txt, display an error message and quit.

You can use the listdir() function to get the contents of a directory

import os

contents = os.listdir()

The variable contents is a list of all the items in the directory. You can then check to see if it ends in .txt to see if it is a text file. It should be case insensitive, so your program should identify words.txt, words.TXT, words.TxT, words.tXt, etc as files ending in .txt

1. Have the user select which vocabulary file he or she would like to use. Error check to make sure that they select a valid file (i.e., one of the files listed in step 1). They may also choose Q to exit the program
2. Store the contents of the vocabulary file into a dictionary data structure.
3. Prompt the user for the number of words he or she would like to be quizzed on. Error check to make sure the number is valid. It has to be greater than 0 and less than or equal to 10.
4. Quiz the user by using a randomly generated list of English words from the dictionary.
5. If the user misses guesses incorrectly, then output the correct words
6. If the user guesses correct, output that they were correct, if there was more than one correct answer, show them the other possible correct answers.
7. Show user final results of their quiz. How many right, how many wrong, etc.

## Sample Program

>>> ================================ RESTART ================================

>>>

Vocabulary Program

Choose a file with the proper number or press Q to quit

1. places.txt

2. verbs.txt

Q. Quit Program

===> e

You must choose one of the valid options Q,1,2

Vocabulary Program

Choose a file with the proper number or press Q to quit

1. places.txt

2. verbs.txt

Q. Quit Program

===> 4

You must choose one of the valid options Q,1,2

Vocabulary Program

Choose a file with the proper number or press Q to quit

1. places.txt

2. verbs.txt

Q. Quit Program

===> 2

How many words in your quiz? ==> jdk

You must enter an integer

How many words in your quiz? ==> 0

Number must be greater than zero and less than or equal to 10

How many words in your quiz? ==> 12

Number must be greater than zero and less than or equal to 10

How many words in your quiz? ==> 3

#1. Enter a valid spanish phrase for to run

==> correr

Correct. Good work

#2. Enter a valid spanish phrase for to be

==> estar

Correct. You could also have chosen ser

#3. Enter a valid spanish phrase for to arrive

==> arivo

Incorrect, valid choice(s) were llegar

You got 2 out of 3, which is 66.667%

Vocabulary Program

Choose a file with the proper number or press Q to quit

1. places.txt

2. verbs.txt

Q. Quit Program

===> 1

How many words in your quiz? ==> 3

#1. Enter a valid spanish phrase for school

==> college

Incorrect, valid choice(s) were el colegio,la escuela

#2. Enter a valid spanish phrase for park

==> el parque

Correct. Good work

#3. Enter a valid spanish phrase for airport

==> el aeropuerto

Correct. Good work

You got 2 out of 3, which is 66.667%

Vocabulary Program

Choose a file with the proper number or press Q to quit

1. places.txt

2. verbs.txt

Q. Quit Program

===> q

>>>

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