

CS 112 Lab Assignment

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Lab: Pig Latin Translator

Overview

This lab will familiarize you with the String class and String functions available in Python. You will be asked the user for a word and convert it into Pig Latin. Pig Latin is a generally used by children for fun (http://en.wikipedia.org/wiki/Pig_Latin) .

In this lab you will use the following rules to convert the user's words into Pig Latin (there are other rules people use, but the rules here are how you'll be graded 😊)

- If the word begins with a consonant -- such as "string," "Latin" -- divide the word at the first vowel, swapping the front and back halves and append "ay" to the word -- "ingstray," "atinLay."
- If the word begins with a vowel -- such as "am", "are", "i" -- append "yay" to the word -- "amyay," "areyay," "iyay."
- If the word has no vowels (other than 'y') -- such as "my," "thy" -- append "yay" to it -- "myyay," "thyyay."

Assignment

You will write a Python program to:

1. Ask the user for a word
2. Convert the word to Pig Latin using the rules above
3. Display the word to the user

Requirements

1. You should have at least the following functions:
 - a. findFirstVowel --- this function returns the location of the first vowel in the word
 - b. translateWord(inputString) -- this function translates the word and returns the translation to the caller. For example, this should work:

```
tempStr = translateWord('Latin')  
print tempStr # This would print 'atinLay'
```
 - c. translate(inputWords) -- this function accepts multiple words (separated by spaces) and will return the entire translated phrase. For example:

```
tempPhrase = translate('My class is cool')
print tempPhrase # This should print: Myyay assclay isyay oolcay'
```

Helpful hints. You will need to use String functions to make this work.

- split will help you split up the phrase into individual words
- find will help you find the first vowel. You may need to issue the find command many times and look for the lowest vowel index that is not -1.
- slicing and concatenation will be needed to translate the word once you know the location of the vowel.
- What should you return if there are no vowels? Maybe some type of flag. A flag is a value that cannot exist, so you know if it gets returned it “means” something. For example, if you return -1 from findFirstVowel, clearly -1 is not a valid answer for “where is the first vowel”, so you can say that -1 means “no vowels”. Could you use -99 or -102173 instead? SURE! What does the built-in function “find” do?
- You do not have to worry about punctuation. It is okay to translate “don’t” to “on'tday”. In a larger project we would fix this, but in lab we do not have to.

Sample Output

```
Input a phrase to translate ->Johnny draws artwork better
than me or my mom
```

```
Your phrase in Pig Latin is: ohnnyJay awsdray artworkyay
etterbay anthay emay oryay myyay ommay
>>>
```

NOTE: Make sure you can detect vowels regardless of capitalization:

```
>>>
Input a phrase to translate ->Artists Are Interesting
Your phrase in Pig Latin is: Artistsyay Areyay
Interestinyay
>>>
```

What to turn in:

1. Python source code
2. The output of your program when the user types in:
 - a. The rain in Spain falls mainly in the plain.
 - b. Alley cats run by my blue house.