Problem-Based Intro. to Computer Science (2010-1)
Pig Latin   Week 4   Homework

1   Problem

Introduction to Pig Latin

Pig Latin is a manner of speaking and writing that obscures English words in a way such that they sound more like Latin words. A Pig Latin word is derived from an English word by moving the first consonant cluster to the end of the word and adding the sound 'ay;' if there is no initial consonant cluster, the sound 'ay' is simply appended to the word. For example, "Now is the time" becomes "ow-Nay is-ay e-thay ime-tay."

Task and Examples

You will write Python code to display a file (that contains one word per line) in a simple dialect of Pig Latin.

Suppose the file `some.txt` contains the following.

```
Here
are
the
words
```

Then we have the following interaction.

```
>>> fileNameToPigLatin('some.txt')
ere-Hay
are-ay
e-thay
ords-way
```

Details

You will define the following functions[1].

- `isVowel`, which is a function that takes a single character string, and returns a Boolean that indicates whether or not the character is a vowel. It should work for both uppercase and lowercase letters. For this homework, we understand a vowel to be either 'a,' 'e,' 'i,' 'o,' or 'u.'

- `wordToPigLatin`, which is a function that takes a string, and returns a string that is the Pig Latin form of the input. The empty string is returned unmodified. For a non-empty string, each consonant[2] preceding the first vowel is moved to the end, after a dash, and 'ay'

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1. You may *not* use sophisticated Python features such as regular expressions. If you are not sure if a particular Python feature is allowed, consult your instructor.
2. A *consonant* is any letter that is not a vowel. A vowel is what has already been defined for the function `isVowel`.

is appended. If a non-empty string has no vowels, simply append a dash and 'ay'.[3] You may find it convenient to write a function `nonEmptyWordToPigLatin`.

- `fileToPigLatin`, which is a function that takes a file (that contains one word per line), and displays the Pig Latin form of the file using the function `wordToPigLatin`.
- `fileNameToPigLatin`, which is a function that takes a string (that is the name of a file), and displays the Pig Latin form of the file.

Submission

You need to submit a file `pigLatin.py`, containing the code detailed above.

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3. This specification can't handle all words correctly. You are welcome to write a more sophisticated conversion function; however, the function names specified here must refer to functions with the behavior specified here.