CIS 180 L - Intro to Python - Fall 2006
Homework Assignment #4

Due: THURSDAY, October 12th, beginning of class

Purpose: To practice with Python lists

Note: as long as you meet the specifications below, you may add additional embellishments as you wish.

How to turn this in: copy the file **hw4.py** that you create to cs-server, and then submit it using ~st10/180pysubmit.

1.   Create a plain-text file named **hw4.py**. Start this file with comments containing at least your name and the last-modified date for this file.

      Recall **keep_letters**, from lecture? (It is also posted on the public course web page, along with this handout.) Paste this function definition into **hw4.py**.

      However, **keep_letters** expects to work on a single "word" – it strips out blanks, too! (Try it!)

      Write a function **strip_punct** that takes a string as an argument, expected to be a statement of some kind. It should return a string that has had all non-alphabetic-letters removed (but not the white space in between), as follows:

      *   split its string argument (based on white space) into a list of "words",

      *   call **keep_letters** for each of the words in that resulting list, building a new modified list of "words" without punctuation, and

      *   join the result together (with a blank in-between each word), and return the resulting string.

      For example,
```
>>> hw4.strip_punct("I am here for an ARGUMENT, Sir!")
'I am here for an ARGUMENT Sir'
```

2.   Remember functions **starts_with_vowel** and **pig_latin**, from HW #3? (You can grab them from the course Moodle site, under "Some solutions", hw3.py, for HW #3, if yours is not handy...)

      Copy a version of these – mine or yours – into **hw4.py**, and then follow it with a new function **pig_list**; it expects a string as its argument, and it returns a list of the words in that string expressed as pig-latin. That is, it should:

      *   break the string passed to it into a list of words based on white space,

      *   and call pig_latin for each of those words in that list, building and returning a new list of pig-latin words.

      For example,

```
>>> hw4.pig_list("i am here for an argument sir")
['i-ay', 'am-ay', 'ere-hay', 'or-fay', 'an-ay', 'argument-ay', 'ir-say']
```

3.   Hmm; but maybe it would be nicer to have a function that takes a string in the form of a sentence, and returns a <u>string</u> (instead of a list) with the pig-latin words.

Write a function **pig_string**, that expects a string as its argument, and returns a string as follows:

*   it should convert the passed string into all-lowercase (hint: what string method will return an all-lowercase version of the calling string?)

*   then it should call **strip_punct** from #1 on the resulting string to strip out any non-letter characters from that string (except for white space);

*   then it should call **pig_list** on the string resulting from **strip_punct** to result in a list of pig-latinized words, and finally

*   it should join that list into a string (with blanks in between), and return the resulting string.

For example,
```
>>> hw4.pig_string("I am here for an argument, Sir!!!")
'i-ay am-ay ere-hay or-fay an-ay argument-ay ir-say'
```

And, when you are done, submit hw4.py using ~st10/180pysubmit on cs-server.