MATLAB Programming NCTU Spring 2017 LAB#7 2017/4/14

For this lab, you will try some string processing in MATLAB, as well as a bit of file processing. You should write a function that takes a path to a text file as its only input. The function should find the individual English words in the string, and determine the unique English words and count the time of occurrence for each unique word. There are two output arguments: One is a cell array of strings containing the unique words, and the other is a vector containing their times of occurrence.

For this lab, you can use any string processing function provided by MATLAB.

A text file is provided with this lab. It contains the following English tongue-twister:

```
She sells seashells by the seashore.
The shells she sells are surely seashells.
So if she sells shells on the seashore,
I am sure she sells seashore shells.
```

The unique words you find should be case-insensitive, that is, '`She`' and '`she`' are the same word. Punctuations (標點符號) should be excluded.

You function header should look like

```
[word, count] = mylab7(fn)
```

Here `fn` is the path to the file.

The output `word` should be like

```
'she', 'sells', 'seashells', 'by', …
```

The output `count` should be like

```
4 4 2 1 …
```

The ordering of the words can be different from the example here.

Finally, if you call the function without an output argument, let the function print out the words and their counts. Let the output be like the following ():

```
she          4
sells        4
seashells    2
by           1
the          3
seashore     3
shells       3
are          1
surely       1
so           1
if           1
on           1
i            1
am           1
sure         1
```