

Individual Challenge 4 – the reuse challenge

Part 1: Sentence Generator

You wrote a noun phrase generator `np()` as part of a team challenge. Your task is to continue writing this little grammar:

<code>np → det adj noun</code>	a noun phrase consists of a det followed by an adj followed by a noun
<code>VP → V NP</code>	a verb phrase consists of a verb followed by an NP
<code>S → NP VP</code>	a sentence consists of an NP followed by a VP.

Your `S` function should call the `np` and `vp` functions, etc. Your code should produce something like the following:

```
>>> s()
'the happy dog saw a silly poodle'
>>> s()
'a happy poodle likes a sad poodle'
>>> s()
'the sad poodle likes a silly cat'
>>> s()
'a sad dog likes a happy frog'
```

For full XP you should capitalize the first word of the sentence and end the sentence with a period.

```
>>> a = 'bush'
>>> a.capitalize()
'Bush'
>>> noun().capitalize()
'Poodle'
```

Part 2: Pig Latin Part 2

In the previous Individual Challenge you wrote a function `pig` that let a user enter an English word and converted that word to Pig-Latin. To review, Pig-Latin takes the first letter of a word, puts it at the end, and then appends 'ay'. The only exception is if the first letter is a vowel, in which case we keep it where it is and add 'hay' to the end of the word.

Hello → *ellohay* *image* → *imagehay*

so:

```
>>>pig('Hello')
ellohay
>>>pig('image')
imagehay
```

Now I would like you to write a function, `pigLatin`, that uses `pig` to create a Pig Latin version of a whole sentence. Here is an example of its use:

```
>>> pigLatin('the grumpy dog')
'hetay rumpygay ogday '
```

One function you might find useful is `split` which separates a string by the spaces in it, creating a list of strings:

```
>>> sentence = 'the grumpy dog saw the happy cat'
>>> sentence.split()
['the', 'grumpy', 'dog', 'saw', 'the', 'happy', 'cat']
>>>
```

You also might want to lowercase the sentence before splitting:

```
>>> sentence = 'The grUMpy Dog saw the HAPPY cat'
>>> sentence.lower()
'the grumpy dog saw the happy cat'
>>>
```

Submit

Email your answers to submit.o.bot@gmail.com (subject = individual project 4). The functions for both parts should be in one file which should be attached.