Homework 1

PS 398 - Computational Frameworks for Social Science

This homework is meant to get you comfortable using git and writing tests on your own machine.

1 Create a Github Account

If you do not have a github account then you will need to create one. Github is a free service and can be accessed via the web at http://www.github.com. During this process, you will need to setup ssh keys on the machine that you plan to access github from. While github has great documentation for getting started, setting up ssh is a somewhat arcane step. *Do not get stuck here.* If you find yourself getting hung up ask one of your classmates or me for help.

2 Fork my project

As we discussed in class "Forking" a project on github allows you to copy over the project and all of its associated changesets. By forking my project you will then have your own copy and any changes that you submit will not be committed to my repository.

You can find all of my public repositories at: http://www.github.com/joshcutler

Find the project named "PS398-HW1" and fork it.

3 Clone your forked project to your local machine

After you have forked the HW1 project go to github page for your forked copy. Using the designated url (it will be at the top and look like "git@github.com:joshcutler/PS398-HW1.git") "clone" the repository to your local machine. There are many ways to do this, but from the command line you would do the following:

git clone git@github.com:joshcutler/PS398-HW1.git

Note that this presumes that you have properly setup your ssh keys and will create a HW1 folder wherever your command prompt was open to.

4 Run the code

From the HW1 directory on your machine, open up a python console. Import the HW1 package and try running a few of the commands. The commands in HW1 are as follows:

- shout(str) - Takes a string as an argument and returns a shouted version of that string (all caps with an exclamation point)
- reverse(str) - Takes a string and reverses all of the characters in the string
- reversewords(str) - Takes a string and reverses the word order in each sentence
- reversewordletters(str) - Takes a string and reverses the letters in each word
- piglatin(str) - Takes a string and converts it to pig latin

So, for example after importing the library try the command:

```
import HW1
HW1.shout("Hey there")
```

and see if it returns "HEY THERE!"

5 Write some tests

Given the method definitions above write some unit test for this module. Your unit tests should check for validity and robustness. Some of the method implementations may be bug free, others may not (and some may have unintentional bugs!). After writing your tests say which of the methods have bugs and what they are (providing a breaking unit test is enough).

BONUS: Fix some of the bugs!

6 Check in your changes

Commit your changes, including any bug fixes you did. Push your changes to github so that we can talk about them in class. Keep in mind the best practices that we talked about in class.