

CS 8 Lab: pa06

November 19, 2014

1 Overview

This week we will use Python input to play a 20 questions-like game. This pdf has suggested steps for completing the assignment.

2 Getting Set Up

Pull up the assignment description from <http://cs.ucsb.edu/~koc/cs8/hwexpa/pa06.html> and read through it. The following url has a chart of all the animal features you need to know: <http://em.ilie.im/image/142D1G2b0z3K>

Open up a new python file called `pa06.py` (use past handouts for help if needed). As the first three lines, type in comments containing your full name, lab section time, UCSB UMail email address, and perm number:

```
# Your name, Lab time
# Your UCSB email address
# Your perm number
```

In `pa06.py`, you **do not write any functions**. It will just contain regular python code, line after line. You will use `if/else` statements to figure out which animal is being talked about. I would first logic through the questions before worrying about your code. You can type it up in comments so it's easier to write the code later. Use indentation to keep track of your questions. Start with something like this (you'll have to fill this in more):

```
#ask if animal has more than two legs
#if yes, it could be lion, tiger, zebra, horse, goat or bee
    #ask if animal has stripes
        #if yes, it could be tiger, zebra or bee
            #...ask more questions here
        #if no, it could be lion, horse, goat
            #...ask more questions here
#if no, it could be human, snake, narwhal
    #...ask more questions here
```

For each of the `if/else` paths above, you should either be able to decide on a specific animal, or say something like "No match found." Save your file.

3 Write your code

Use these comments to guide you when you're writing your code. Use `if/else` statements to check the answers.

You have to use the `input()` function so you know what the user types as their answer. Let's consider this line of code, for example:

```
twolegs = input("Does it have more than 2 legs? ")
```

This line of code does two things. It will print `Does it have more than 2 legs?` to the output window, and the user can type yes or no as a response. It then saves the user response as a string to the variable called `twolegs`. If the user said yes, for instance, it now stores the string yes. It's like doing the following code:

```
twolegs = "yes"
```

Note that there is a space character after the question mark in my above input function example. This makes it so that when the user starts typing their answer, there will be a space between the question mark and the user response. You should do this in your code.

Use these string variables in your if statements to check and see if they are equal to `"yes"`. Once you find the correct animal, use a print statement to output the animal. If there is no matching animal, output something like "No match found." You should output the match (or lack of a match) as soon as you know. Also, ask the questions in the order that they are presented in the assignment description (you may not have to ask all of them since you output once you know the result).

4 Testing

Follow the steps in either (not necessarily both) sections 4.1 or 4.2 below, depending on your testing environment.

4.1 Running on the command line

If you're on a computer without IDLE or just want to run this on the command line, open up a Terminal window and navigate into the directory where you saved your `pa06.py` file. Type `python3 pa06.py` to run your program. It should start asking you questions after you do this. Type yes or no and then press enter to answer them. You'll have to type `python3 pa06.py` each time you want to re-start the questioning. Double check that your program outputs the correct animals (or no result found) for the correct yes/no answers. Here's what my outputs look like: <http://www.cs.ucsb.edu/~emilie/output.txt>

4.2 Running in IDLE

If you're on a computer with IDLE, go to `Run`→`Run Module` where you have your file. The IDLE prompt window (the window with the `>>>`) should restart. In this window, it should start asking you questions. Type yes or no and then press enter to answer them. You'll have to go to `Run`→`Run Module` each time you want to restart the questioning. Double check that your program outputs the correct animals (or no result found) for the correct yes/no answers. Here's what my outputs look like: <http://www.cs.ucsb.edu/~emilie/output.txt>

5 Turnin

Ready to submit? Make sure you move your file over to CSIL first. Then, in a Terminal, navigate the the directory containing your file. To turn in, type the following command:

```
turnin pa06@cs8 pa06.py
```

and follow the on-screen directions. Remember, I will grade the last submission turned in before the deadline if you turn in multiple versions. **The deadline for this project is Friday, November 21st, 2014 at 11pm. We will not be accepting late submissions, so make sure you give yourself enough time to complete and turn in your project.**