Problem Statement

The goal of this assignment is to get acquainted with the programming language Python. I have provided you with a partially complete Python program that reads in data about zoo animals and prompts the user with options to filter that data. You need to finish the program by adding the described filter functionality, i.e., getting dangerous animals, getting animals by species, and getting animals by zoo name.

Here is example output of a working solution:

(1) Quit
(2) Get dangerous animals
(3) Get animals by species
(4) Get animals by zoo name
Please select 1-4: 3
Please enter the name of the species: Lion
Simba the Lion
Mufasa the Lion

Design Requirements

I will leave much of the design up to you, however I have a few requirements. The first is that you must use Python’s filter function, and the second is that you must use closures to write your filter functions.

Python’s filter function takes a criterion function and a list. Here’s an example of how it works:

```python
def gt_five(x):
    return x > 5

l = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
filtered = filter(gt_five, l)
```
filtered holds the list [6, 7, 8, 9, 10].

For some parts of the program, you’re going to need to create criterion functions dynamically. Think about how closures can help you accomplish this goal.

What to hand in

(1) Email me (mtgray@loyola.edu) your solution attached as <your name>-zookeeper.py.