**CMSY 171-281**

**Lab 0**

***20 Points***

**Specifications:**

This lab simulates a database to store animal types and animal type count. Parallel arrays (required) are used for data storage.

1. Create a dynamically allocated array of no more than 5 elements that will accept the types of up to five animals. Use array notation to reference and modify the animal type array data.
2. Create a dynamically allocated array of no more than 5 elements that will store the counts of up to five animal types. Use pointer notation to reference and modify the animal type counts array data.

Note: The animal type array and the animal type count array are **parallel arrays.**

1. Input the types(s) and counts of one to five animals. Input should cease at the fifth entry, or when the user enters the word none before five entries have been made. Use a programmer defined function for input. (5 points)

Note:

* The animal types should be able to accept one or more words for the animal type. Assume at least one animal will be entered.
* All variables should be initialized.
* All data must be validated.
* Data entry for animal counts is not allowed without a corresponding animal type.
* Your program should accept any version of the word none: Uppercase, lowercase, or mixed case. Convert the entry to lowercase before testing. You will need to include the cctype library for this. To accomplish this create a function called toLowerCase based on the following prototype:

**string toLowerCase(string)**

1. Display the following (5 points)
   1. Displays the list of animal types and counts. Each animal type must have a corresponding count. Use a programmer defined function to display the list.