

## PROGRAMMING ASSIGNMENT 4

Through this programming assignment, we are going to practice concepts of C++ class by learning how to implement constructors including copy constructor, destructor, member functions, operator overloading, friend functions, and nonmember functions.

You're given the following three files for a class named "Zoo":

- (1) `Zoo.h` is the header file for the class `Zoo`. It provides class declaration, including member variables and function prototypes.
- (2) `Zoo.cpp` is the implementation file for the class `Zoo`. Currently, very few functions in `Zoo.cpp` have been implemented. So your task is to fill out the code for the rest of the functions where it says "...implement code here..."

**Note that for this assignment, you're not allowed to change the design of the class `Zoo`.**

- (3) `main.cpp` is an example test/client program provided to you for testing the `Zoo` class you implemented. You may modify this file as you wish. Also, if you desire to test an individual function, you may need to comment out all the other irrelevant functions in both the header file and implementation file, as well as some code in the test file.

### Compilation example:

```
g++ -o out Zoo.cpp main.cpp
```

### Execution example:

```
./out
```

### Turn in instruction:

Submit your source file, i.e., `Zoo.cpp`, on CLEo, after you fully test it. Note that you don't need to turn in your binary code, or `Zoo.h`, or `main.cpp`.