**CSCE 2004 – Programming Foundations I**

**Programming Project Report**

Name: TBA

Date: TBA

The main objectives of this project were more concepts of creating classes, handle the files in different type and working with arrays of user defined data types. In the given main file, the readFile and writeFile methods were already implemented. These function read and write the data that currently available in the AnimalDB object that was passed to the above functions.

In this assignment two classes were implemented. The classes are Animal and AnimalDB classes. In here the class definitions were implemented in the header files. Both classes were implemented according to the OOP concepts. Each classes attributes were declared as private. To ensure the unwanted modification. Then implemented the standard getters and setters for each class to ensure the encapsulation. In here every type of constructors were used. There were default constructors, setter constructors, and copy constructor. In the AnimalDB copy constructor was implemented using a loop. Because AnimalDb class consists of two arrays. They are manipulating address based. Therefore, can not be just assign to new array. To do that create new array from the stack and copy the value in the old arrays to that objects. This is only done when there are pointers. For normal variables we can use simple assigning. In the AnimalDB class’s arrays are not primitive data type arrays. They are user defined data type of arrays. The type of the arrays is Animal data type. Animal is a class that represents an entity of the sales item.

The current program is working according to the given description. The implemented classes and its method are smoothly communicated with the given methods of the main.cpp file. When the start the program, it shows the menu and get the user input. According to the the given valid input the relevant method of the AnimalDB class will be called. When one iteration is completed then again user is prompted the menu again using the relevant function. This will continue until user enter the exit (exit option) of the program.