

|  |
| --- |
| **COMP 2120 – Computer Programming II**  Seminar #7 |

## Due Date: Tuesday November 6, 2012.

**The purpose of this assignment is to practice using interfaces, specifically the built-in Comparable and Iterable interfaces, and well as a user created Animal interface.**

**Problem**

1. Create an interface called Animal that contains 2 methods called sound and movement.
2. Create 3 classes that implement the Animal interface, Hawk, Elephant and Snake. Hawks shriek and fly; elephants trumpet and walk; snakes hiss and slither.
3. The 3 classes described in #2 should also implement the Comparable interface. (that is they implement 2 interfaces) Hawks are compared by wing span, elephants by weight, and snakes by how long they are. (so you will need instance variables in each class to accomplish this part)
4. Create an application that thoroughly tests the 3 classes described in #2. Your application should demonstrate that both interfaces have been successfully implemented. (Since the compareTo method returns 3 values, you’ll need to test that all 3 messages can be generated)
5. Lastly create a Zoo class file that implements the Iterable interface. It has an Animal array instance variable with at least 2 animals of each type (hawks, elephants and snakes) (create this in the constructor) and implements the methods from the Iterable interface (hasNext, next, and remove). Your driver program should show that the methods are implemented properly.

**Assignment Submission:**

Submit a print-out of each class described above and the driver programs that test each of the classes and interfaces.

**Assignment Submission:**

Submit a print-out of each file you create and the output.