COLLEGE OF ENGINEERING AND APPLIED SCIENCES
DEPARTMENT OF COMPUTER SCIENCE

ICSI201 Introduction to Computer Science

Lab 08   Created by Qi Wang

Goals:

- Define a natural ordering of dogs using *Comparable interface*

Notice that students are expected to start the lab as soon as the description is available, seek feedback during the lab and submit all required documents on time.

Work will be rejected with no credit if

- The work is late.
- The work is not submitted properly (Blurry, wrong files, not in required format, crashed files, etc.).
- The work is a copy or partial copy of others' work (such as work from another person or the Internet).

Labs are contiguous study of the lecture or used as stepping-stones for the projects. Skipping lab activities would impact the learning significantly.

Submissions (100 points):

- A UML diagram (a Violet Class Diagram)
- Dog.java
- Driver.java

Instructions:

For this lab, you will define a natural ordering of dogs and sort a list of dogs into ascending order.
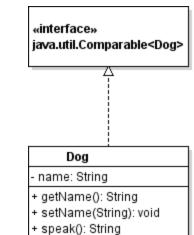
- In the *Dog* design and the *Dog* source file, make the *Dog* class implement *Comparable<T>* interface. *T*, a generic type, should be replaced by *Dog* type. And then, complete the following method to define a natural ordering of dogs.

  ```java
  public int compareTo(Dog other) {…}
  ```

- Complete the following in *main* of the driver program.

  ```java
  //Create a list of dogs and store them in an array list.
  //Print this list of dogs.
  //Sort the list using the static sort method in class Collections.
  // - Collections is in java.util package.
  // - Collections.sort(a reference to a list of dogs);
  //Print this list of dogs again.
  ```

- Submit the design and the source files on time.