Assignment A2 CS100J Spring 2008 Due 14 February, IN CLASS

This assignment asks you to draw a few objects (manila folders). The purpose is to ensure that you know how to draw them. It shouldn't take more than 15 minutes to do this assignment. Please hand it in at the BEGINNING of lecture on Thursday, 14 February.

Remember: Any class that does not extend another class automatically extends class `Object`, which is in package java.lang. So, writing `public class Whatever {...}` has exactly the same effect as `public class Whatever extends Object {...}`. Class `Object` has two important functions: `equals(Object)` and `toString()`.

Draw an object of each of the following 4 classes *Include the partition for class `Object`*. When finished, you should have drawn four objects. Do not draw any file drawers or static components. When done, read the notes in the next column, carefully.

```
public class Ex {
   public static final int ZERO= 0;

   private int h;
   public Ex(int ph) {
      h= ph;
   }

   public int getH() {
      return h;
   }

   public String toString() { ... }

   public static int what(int x) {
... }
}

public class Sub extends Ex {
   private int k;

   public Sub(int pk) {
      k= pk;
   }

   public String toString() { ... }
}

public class SubSub1 extends Sub {
   public SubSub1() {
      super(5);
   }

   public int hPlus1() {
      return getH()+1;
   }

   public String toString() { ... }
}
```

```
public class SubSub2 extends Sub {
   private int p;
}
```

Notes One semester, when we gave this homework, some students did so miserably that we gave them another chance to learn. So that you don't have this problem —we won't be giving second chances—, here are notes that we gave out to the students who did things wrong. After completing this assignment, read through these notes and see whether you made the same mistakes. If so, correct them.

Note 1. You did not follow directions at all. We do not see, separately, an instance of Ex, an instance of Sub, an instance of SubSub1, etc. You may have put them all together in one picture, but that is not what we asked for and it shows no understanding of drawing objects. –20 points.

Note 2. In a folder like one for SubSub1, you placed all the components together in one place. You did not put those for Object on top, then those for Ex, then those for Sub next, and finally those for SubSub1 at the bottom. –50 points.

Note 3. You did not draw field p of Subsub2 as a variable —either with a line after it or a box after it. –5 points.

Note 4. You left off the part for superclass Ex and/or Sub in your diagrams. You did not follow directions. –20 points.

Note 5. You did not draw variables correctly. They should be drawn with the name of the variable followed either by an underline with the value on it or by a box with the value in it. –5 points.

Note 6. Method what and field Zero in class Ex are static. Therefore, they should not be drawn in each folder of class Ex —they belong separately in the file drawer for Ex. –5 points.

Note 7. In drawing a folder for SubSub2, you put in it a place for SubSub1 components. That is not correct. SubSub2 extends Sub, not SubSub1. –15 points.