Java Lab 9

In this lab, you will practice with encapsulation – or the lack thereof.

Create a project named Lab9. Right click on the src icon and create a new Package named DataPackage. Download Lab9Main.java and copy it into src; download Data.java, DataSnooper.java, and ContainedClass and copy them all into DataPackage. Compile and run the program. Take a look at class DataSnooper.

The comments in DataSnooper and in the other classes tell which problem below is involved. For example, Problem 1 refers to how the members inside the Data class are accessed inside print( ) statements. As you do each problem below, ask yourself, what's wrong? Where is encapsulation being broken? Then fix what you think is wrong.

1. Add fixes to Data and DataSnooper for the part labeled Problem 1 to enforce encapsulation.

2. Add fixes to those classes for Problem 2.

3. Add fixes for Problem 3.

4. Add fixes for Problem 4.

5. Add fixes for Problem 5. Note that this also involves ContainedClass.

6. Change Data.setContainedClass( ) to do a deep copy: create a new ContainedClass, copy the parameter's data into it, then set Data's field.

Deliverable: Zip up all your .java files and upload the zip file to Canvas.