**Spring 2016 CS151**

**Programming Assignment 3**

**Chapter 5 Exercises**

**Due: Saturday, April 9 11:59 pm**

**[Important]** Please delete all package statements from the source file. Do not zip your work space. That means when I unzip the file, I should be able to see the directories 5.2, 5.4, 5.8, 5.12, and mvc which immediately contains .java files without subdirectories. Since the violation of this guideline will greatly degrade the efficiency of grading procedure, I decided to enforce it by stipulating a penalty (-3 points) on the case of violation.

Screenshots of questions: [page 1](http://cs.sjsu.edu/~kim/cs151/contents/homework/hw3/hw3_p1.jpg)[page2](http://cs.sjsu.edu/~kim/cs151/contents/homework/hw3/hw3_p2.jpg).

Create a directory named as the question number and save the required solutions in the directory. For example, create a directory named 5.2 and save **required files** in the directory. Do the same for the rest of questions.

* 5.2: ObserverTester.java and all required classes to run the program. Make sure to follow the Observer pattern. Note: The solution of 5.1 is available at the book publisher's web site.
* 5.4: SliderTester.java and all required classes to run the program.
* 5.8: MailSystemTester.java and all required classes to run the program. Use two telephone handsets as 5.6 described and add scroll bars to the text areas of the telephone frame. Note: The solution of 5.7 is available at the book publisher's web site and you may use it.
* 5.12: DecoratorTester java and all required classes including EncryptingWriter and DecryptingReader. Test your classes in the DecoratorTester.
* mvc: Write MVCTester.java. When the program starts, the initial screen displays a button labeled "add", a blank text area, and a text field. A user places a line in the text field and clicks on the add button. Then, the text area displays the line. Each time the user enters a new line in a text field and clicks on the add button, the text area is updated displaying previously entered lines and the new line. The following picture shows the snapshot of the program output right after two lines are added. [snapshot](http://cs.sjsu.edu/~kim/cs151/contents/homework/hw3/mvc.gif) To get a credit, the following requirements have to be satisfied.
  1. The program follows the MVC model.
  2. Listeners are implemented in an anonymous class.
  3. Model is a separate class from the client (test) program.
  4. Indication of which part of your program serves as model, controller or view.

Think of the responsibilities of model, view and controller. I will see if the responsibilities are appropriately placed.

Submission: Zip the directories that contain your solutions into hw3.zip and submit it.