

Spring 2015 CS151

Programming Assignment 3

Chapter 5 Exercises

Due: Tuesday, April 7 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](#) [page2](#).

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 answer.txt 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](#) 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.
