CS 548 Lab #3 Due 3/9/14

The purpose of this lab is to practice using JUnit and AOP.

1. Convert your Lab #2 to an STS project. Build a Spring Template Project.

2. Add JUnit tests for your **Order**, **OrderItem**, and **TaxService** classes. Add at least two exceptions to the 3 classes (what could go wrong?) and include test s verifying that the two exceptions are thrown.

3. Add AOP advice to your Lab #2.

   a. Use the **5 advice types** (**before**, **after**, **after returning**, **after throwing**, and **around**). Try a variety of interesting pointcuts (i.e., ones built from compound expressions). Put your aspects in a separate package.
   b. Print out the context information (method name, method argument, return value, exception name) where applicable
   c. Use a **Logger** to report information, rather than using regular print statements. Using a Logger allows you to easily turn on or off messages (as we have done with Spring in the log4j.xml file)
   d. Use at least two Aspect classes (in other words, don't put everything in one Aspect class)

Hand in an STS Project – export the project in the same way you did for Eclipse.
Include a short write-up describing:
   1. The exceptions you have used – the class name for the exception and under what circumstances it would be triggered
   2. The AOP Aspects you have created along with the different types of advice you used. Explicitly state in which class/method the different types of advice are found.
   3. Explain the pointcuts that you have chosen – explain when they would be triggered.

Make sure your explanations are clear – that will be part of the grade. It is important to be able to explain your work to others. Someone looking at your write-up should be able to understand very quickly what you have done.