Project 7— Java Multithreading Programming --**60 points**

(**Due date: 12/19/2011/Monday Midnight at Moodle**)

Your name:	Date:

In Chapter 6, we have presented a semaphore-based solution (with part of the pseudo code) to the Producer-Consumer problem using a bounded buffer. We also introduced several Java code samples for dealing with this problem, by using Java's Thread synchronization features (the sample code is available from the course website). Now you are asked to do investigation on Java Concurrency Mechanism and write a short paper—instruction manual—to tell people how to write Java Multithreading Program such that *people who have completed CSC260 course and who have **no** knowledge and programming experience on Multithreading programming will be able to start on working on Java Concurrency Programming project*. You must take into consideration of the following requirements:

- Your paper must be **at least two pages long** (letter size*) **excluding sample code***;
- You are encouraged to use any resources (textbook, the Internet…) for the writing of the paper, but you must write ***in your own words*** (paraphrasing is OK);
- ***Extensive sample Java coding*** (inserted in the text or attached at the end of the text as in figures) should be used to clarify your understanding of Java Concurrency mechanism. In fact, the sample code will give the reader very good examples on how to write Java multithreading code;
- Your writing must clearly explain the following Java classes/methods/interfaces/keywords:
  - **runnable**
  - **Thread**
  - **ExeutorService**
  - **synchronized**
  - **wait/notify/notifyAll**
  - **Lock**
  - **Condition**
  - **ReentrantLock**
  - **(**and some other Java Multithreading related items which have not introduced in CSC201J/CSC202J/CSC260**)**

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- Submit your paper in PDF or DOCX format at Moodle by the deadline.
- Hint: there are 2 presentation slides files on the course website and Deitel's Java How to Program provide excellent examples for your reference.

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