Project 2—Multithread Programming (in Java)
(**Due date: 10/16/2008/Thursday**)

Your name:	Date:

1. (40 points)Write a Java thread program that creates at least 3 threads: 1) one for the summation function shown in the textbook, 2) second one for subtraction (you may need to define any specific number of operands, and 3) the third one for multiplication.
   - The sample code (Figure 4.11 on page 164 of the textbook) is a good source to an easy start-up (I have inserted this Figure in our lecture slides for Chapter 4, slide number 25, on the course website).
   - For each thread, information needs to be displayed for the thread status (i.e., using standard output) for the starting/end of the thread (for example, "thread one—for the summation—starts …").

2. (60 points) Complete the Matrix Multiplication Project as described in the textbook (pages 178—181).
   - You need first read through the text for this project. Pay attention to those parts for Java programming. They (together with the Figure 4.11) provide enough know-how to writing a Java program for this project.
   - You need to create M x N threads (refer to the text for M, N).
   - Java GUI is not required. Standard input/output are enough.
   - The output (on a command line/terminal) should be formatted like a matrix shown in the following (a 3x3 matrix) (using "\t" , and spaces in the standard output):
     7 8 99
     64 88 12
     70 13 77

3. (**Only for bonus, 30 points**) Redo the Matrix Multiplication Project in Ubuntu (on the VMware player) in C/C++ and Pthread.

==========How To Submit—Read Carefully, Pease!!==========

1. Create a directory "**project2_YourLastName**" (you must use this format for the directory name for this project; **Use Your Last Name. For example, if your** last name is Smith, you should create directory with the name of "project2_Smith"
2. Create "**project21src**" and "**project22src**" subdirectories under "project2_YourLastName" directory.
3. When having finished your project, copy the source files (*.java) to these two subdirectories, that is, Matrix Multiplication Project's .java files to "project22src" dir, another one's to "project21src" dir.
4. If you used any Java IDE for the project, you can (although not required) create different directories (under "**project2_YourLastName**" dir) and copy the package to that directory. (Please **DO NOT** copy such package to "**project21src**" or "**project22src**" subdirectories!!).
5. A "readme" file is required for the project write-up that tells how to compile in which IDE (not required if not having used any IDE but a simple command line), result screenshots (one for each), … keep this readme simple!
   a. This "readme" must reside in the "**project2_YourLastName**" dir in the format of .txt, .pdf, or .doc/docx.
6. Compress the "**project2_YourLastName**" dir and its contents into a zipped/rar-ed file with same name.
7. Submit the compressed file to the instructor by email.