Assignment 4

Send your answers to pitoura@cs.uoi.gr no later than Thursday 6/5
Groups of 2

1. The purpose of this assignment is to extend your "Song-database" to support threads using:

  POSIX pthreads (for the RPC implementation)
  Java Threads (for the Java RMI implementation)

(a) Provide a description (no implementation required) of at least one design of a multi-threaded server and a multithreaded client for this application for both POSIX and Java threads. Assume that song descriptions are stored in one or more file at the server-side. Motivate the use of threads by explaining how they improve performance.

(b) Implement a multi-threaded server and client using either POSIX or Java threads. Prepare a short presentation of the model and your application to be presented in class. Include performance results to compare the single and the multi-threaded implementation.

2. Problems 6 and 12, chapter 4, from the Tanenbaum and van Steen book.