

Assignment 3

Send your answers by email to pitoura@cs.uoi.gr and a hard copy no later than Monday 26/4
In groups of 2.

1. Compute the (average) latency for the register and search operations of your “Song-Database”: (a) when the server and client are located in the same machine and (b) when the server and client are located in different machines. Explain. (Read sec 6.5 and 6.5.1 of Coulouris et al).

2. In this exercise, you will extend your “Song-Database”. Those of you who used RMI must now use RPC and vice versa.

(a) First, implement a method:

subscribe: with two parameters (similar with search) where the first parameter is the type of the search key (that is: song, composer, lyrics, singer or keyword) and the second is the value of the search key. With this method the client asks to be notified when a new song with matching values is added.

Second, modify procedure *register* so that when a new song - for which client have subscribed - is added, then the server notifies these interested clients.

(b) Read sec 5.4 from Coulouris et al. Suggest extensions of your implementation of (a) above and explain how they improve your system.

3. Problems 15, 25 & 26 from the textbook.