Department of Computer Science and Software Engineering
COMP 6231 - SUMMER 2017
DISTRIBUTED SYSTEM DESIGN
ASSIGNMENT 3

Issued: 13th July 2017 Due Date: 24th July 2017

Note: *The assignments must be done individually or in a group of 2 (max) and submitted electronically.*

Web Service Implementation of the Distributed Class Management System

In this assignment, you are going to implement the Distributed Class Management System (DCMS) from Assignment 2 as a web service. Specifically, design the service from Assignment 2 (using the same functions and exceptions) by doing the following:

- Extract the Java client-server implementation by removing the CORBA specific code from your Assignment 2.
- Properly annotate your Java implementation to adapt it as a web service.
- Build the end point files using the `wsgen` command before publishing the service.
- Import the wsdl files using the `wsimport` command.

Your server design should maximize the concurrency in the application. In other words, use proper synchronization that allows multiple managers to *createTRecord/createSRecord/ getRecordCounts/editRecord/transferRecord* for the same or different records at the same time.

Marking Scheme

[40%] *Design Documentation*: Describe the techniques you use and your architecture, including the data structure and how you separate the client and server code. Design proper and sufficient testing scenarios and explain what you want to test Describe the most important / difficult part in this assignment. You can use UML and text description, but limit the document to a reasonable number of pages (maximum 10).

[60%] *DEMO in Lab*: You have to register for a 10 minutes demo. Registration for a demo will be done though moodle. You cannot demo without registering, and your assignment will not be marked without a demo. Your demo should focus on the following.

- [10%] Demo that service is published in the server side and a client should download and generate necessary files.
- [30%] *Correctness of code*: Demo your designed testing scenarios to illustrate the correctness of your design. If your testing scenarios do not cover all possible issues, you'll lose part of mark up to 30%.
- [20%] *Questions*: You need to answer some simple questions (like what we've discussed during lab tutorials) during the demo.

Submission:

Submit the document and code electronically on the moodle by midnight on the due date; print the documentation and bring it to your DEMO.

Questions

If you are having difficulties understanding sections of this assignment, feel free to email/contact any of the TA's. It is strongly recommended that you attend the tutorial sessions, as various aspects of the assignment will be covered.