ASSIGNMENT #3

Due: Sunday, July 18th by midnight 11:59 PM

Important Note

- The work is realized **individually OR with a teammate of two students maximum**.
- For each team must submit **ONE and ONLY ONE solution** by the due date the assignment, including your ID and name, using the Website submission as mentioned in the course outline, **without** all the expectation of originality forms.
- Your program should be compiled, executed and return the expected results; otherwise a mark 0 (zero) will be assigned.

Web Service Implementation of the Distributed Class Management System (DCMS)

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 structures and how you separate the client and server code.
  - Design proper and sufficient test scenarios and explain what you want to test.
  - Describe the most important/difficult part in this assignment.
  - You **MUST** use UML and text description, but limit the document to o a reasonable number of pages (maximum 10).
- [**60%**] ***The correctness of code:*** your designed test scenarios to illustrate the correctness of your design. If your test scenarios do not cover all possible issues, you will lose part of marks up to 50%.

EDUCATIONAL GUIDELINES

- If you are having difficulties understanding sections of this assignment, feel free to email the Teaching Assistants It is strongly recommended that you attend the Lab sessions which will cover various aspects of the assignment.

DETAIL OF MARKS

Comments for all assignment #3 (100 pts.)	Max
Tasks (100 pts.)	
The use of managerID prefix	5
The use of RecordID	5
remoteCenterServer	5
Hash map	5
The use of createTRecord, createSRecord, getRecordCounts, editRecord, and transferRecord	5
Write the Java remote interface definition	5
Maximizes concurrency and use proper synchronization	10
Developing application in Web Service using Java remote interface.	10
Test your application by running multiple managers with the 3 servers	10
Programming Part	**60**
Describe the techniques you use and your architecture, including the data structures and how you separate the client and server code	10
Design proper and sufficient test scenarios and explain what you want to test	10
Describe the most important/difficult part in this assignment	10
The use of UML notation and text description	10
Documentation Part	**40**
TOTAL	**100**