

**Concordia University  
Department of Computer Science  
and Software Engineering**

**Comparative Study of Programming Languages  
COMP 6411 --- Winter 2014**

**Programming assignment #2**

<b>Deadline:</b> Wednesday February 26 <sup>th</sup> , 2014
<b>Evaluation:</b> 10% of final mark
<b>Late submission:</b> not accepted

**Problem statement**

Select two different programming languages with which you can access an externally-defined database component. For each language, develop a program in this language that allows the user to read/write data stored in a database. In order to have a meaningful comparison, both of your programs should read/write from/to the same database. In order to have a varying scale of measurements, the program should allow the user to select, for example, (1) the number of records and (2) the size of the records to be fetched/written from/to the database. Both programs should measure the time taken for the read/write operations to take effect. The goal is to come up with measurements that will highlight the read/write performances of each solution in different situations. You have to design your experiments in order to demonstrate the performance of each language in different situations, highlight the differences by showing the results in tabular and graph forms, and then discuss the reasons explaining the differences between the results.

**Relationship with term paper**

In the term paper, your team will have to compare the database connectivity capacities of six selected languages. It is thus advised that you consult with your team so that different languages' database connectivity capacities are collectively explored by the team.

## Assignment submission requirements and procedure

You have to submit your assignment before midnight on the due date using the ENCS Electronic Assignment Submission system under the category “*programming assignment 2*”. Late assignments are not accepted. The file submitted must be a **.zip** file containing:

- a simple document describing the languages, and database connectivity solutions used
- all your code (i.e. two programs including a database)
- instructions on how to compile and execute all your programs

You are also responsible to give proper compilation and execution instructions to the marker in a README file. If the marker cannot compile and execute your programs, you might have to meet with him for a demonstration.

## Evaluation Criteria

Description of the languages, database, and database connectivity solutions used	10 pts
Implementation and testing leading to highlight the differences in read/write performance	15 pts
Presentation and interpretation of the results	20 pts
Implementation in two <u>different</u> languages using the <u>same</u> database	5 pts
<b>Total</b>	<b>50 pts</b>