COP 4710/5716 **Educational XML Team Project** **Fall 2016**
130 Points (Project) + 30 Points (Presentation)

Due at the beginning of class (12:15 pm) on Tuesday, November 29.

As a database system designer, you will be working in a team to design and implement an educational XML software package for students in future database and data modeling classes. The package will be used to help students learn XML in addition to gaining more experience with database and SQL. The XML generated automatically from SQL should provide a simple, practical learning method about how relational data can be converted to XML.

The original SQL to XML converter was designed using Java and had limited capability to access the Oracle database. XML information and samples of different SQL queries with converted results have been posted to the Lecture Notes in Blackboard.

The team should consider Oracle as the primary database and work on the SQL data manipulation command. The command should start with a simple select statement, join, and compression. Complex queries may be included depending on the design decisions of the team. Each SQL command should be parsed, checked for correct syntax, and provide appropriate message(s) on errors. The team should consider the four XML definitions and utilize the syntax of the queries similar to those that have been provided in the class notes.

The instructor is open for team ideas and any new definitions that will fit into the project.

Software Utilization
The team needs to use Java or C for the interface and database connection for a stand alone design. Oracle should be the primary database. The preferred system for software development is Unix (osprey). Turnin information will be provided.

a. Documentation
a.1. Definition and explanation for XML and SQL conversion with any addition to the existing notes
a.2. Description about the design of the parser and software with any necessary diagrams and example files to present the details of the ideas for the team strategy
a.3. Any information and diagrams for physical development of the software and interface
a.4. Sample of the software
a.5. How to use (or install) the software and set the link to Oracle
a.6. How to utilize the sample software
a.7. Manual about software utilization for student user
a.8. Any new features that have been added to the design and/or implementation with new headings using appropriate titles (example - multiple database access with the same screen menu or window. This type of screen menu or window may require an initial setting of one or more connections to the database and then during the conversion, a menu would be used to select the particular option for the XML generation from the database.)
a.9. Presentation files

Electronic Files for Documentation and Software
Two major zip files of Documentation and Software need to be submitted to the group account on Blackboard.

b. Documentation
This file should include the documentation areas **a.1** to **a.9** mentioned above. A team may submit the files without zipping if all these documents could be put together as a large single Word document using sequenced

numbers of a.1, a.2, a.3, ... with proper titles. Otherwise, the separate Word or various types of files need to be numbered a.1, a.2, a.3, ... and put together in the zip file.

c. Software and Files (zip file)

The software file should be submitted to osprey in shar format and submitted as a zip file to group account on Blackboard. The software zip file should include the source files and all the files related to the software.

c.1. Any documentation regarding setup (or installation) and step by step instruction how to use and run the software. (If the software requires installation, step by step instruction needs to be provided.)

c.2. Any documentation for a future developer

c.3. All source code (and install files)

c.4. Auto installation (if available)

c.5. Any other document (if needed)

Presentation

The projects will be presented on Tuesday, November 29 and Thursday, December 1. Each team will have 20 minutes for the presentation and questions/answers. Allow 15 minutes for the presentation and 5 minutes for questions/answers. Each team should determine the member participation to best professionally present the team's SQL to XML conversion ideas. The instructor and members of the class will evaluate each team's design and implementation of the SQL conversion to XML. The computer and projector in class be available for the presentations. Teams need to make sure the class computer will work correctly with their presentation materials. The class computer may be checked during the week of November 21-23 prior to the presentations. The team should provide the instructor with all the necessary instructions for testing the software after the presentation for grading.

Confidential Evaluation (10 points)

A confidential evaluation by each team member should be submitted to the instructor. The details of this evaluation will remain confidential between the evaluator and the instructor. The evaluation form must be correctly submitted electronically to your personal group account on **Blackboard by Thursday, December 1 at 11:59 pm. (before midnight).** To receive the 10 points for the confidential evaluation, the form must be submitted prior to the deadline and the form must be complete including the additional comment area in part 3. The form will be provided as a Word document in the Project Folder on Blackboard.