SQL and XML – Team Project

COP 4710 – Data Modeling

Spring Semester

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# i2. Assignment Description

The purpose of this assignment is to implement a temporal database for an SQL and XML software package with the name TSQLx. The TSQLx package will allow a user to add XML data similar to SQL data to a relational database with a temporal component for query purposes. TSQLx will be implemented using Java on the UNF Osprey system. The software package will use a simple command line menu with commands for each task, such as creating a database, loading a database, creating a table, converting XML files for insertion purposes, insertion into a table, deletion from a table, selection from a table and dropping a table.

Our team must work closely to design and implement the following components: the database design, command structures, the parser, programming, software presentation and documentation. The design data structures need to support a relational catalog and tables with attributes. The software must be written with a modular structure and the syntax for the commands should use a parse to provide appropriate messages for errors.

# i3. Class Presentation Outline

1. Introduction
2. Introduction of our team
3. Project requirements

1. Description of our Implementation

a. Overall approach

b. Data structures used

c. Parser details

1. Demonstration of our TSQLx implementation

a. System level commands

I. Create database

II. Drop database

III. Save database

IV. Load database

V. Commit

b. Data Definition Language (Including date and time) Commands

I. Create table

II. Drop table

c. Data Manipulation Language (Including date and time) Commands

i. Insert into

II. Convert XML

III. Input

IV. Delete from where

V. Select \* from

VI. tSelect \* from

VII. Select [\* | ( field [,field]...)] FROM table [WHERE condition];

VIII. tSelect [\* | ( field [,field]...)] FROM table [WHERE condition];

1. Conclusion

a. Summary

b. Questions and Answers

# i4a. Team Responsibilities

1. TSQLx engine development
   1. Design

Kevin - Contributor

Kai - Contributor

Nathan - Contributor

Marco – Contributor

Eric – Contributor

Fahad – Contributor

1. TSQLx engine implementation
   1. DDL Grammar

Kai – Lead

Eric - Lead

Kevin - Contributor

* 1. DML + XML insert Grammar

Kevin - Lead

Fahad – Contributor

* 1. Parser

Kevin -Contributor

Eric -Contributor

Fahad – Contributor

* 1. Framework Code

Marco – Lead

Nathan – Contributor

1. Documentation

Nathan - Lead

Fahad - Contributor

Marco – Contributor

# i4b. Team meetings

3/25 (3:30 P.M.) – *Exchange of team contact information*

Members in attendance – Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Contact information

*3/27* (2:45 P.M.) *– Meeting after class*

Members in attendance – Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Team member schedules and future meeting times

*3/30* (1:00 P.M.) *– Meeting before class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Questions the team has for the professor for our upcoming meeting

*3/30 (*1:30 P.M.) *– Discussion with professor*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Websites aren’t allowed, Osprey must be used, Parser must be used, Professor to provide more XML examples

*3/30* (3:00 P.M.) *– Meeting after class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Discussed requirements further, prioritized deliverables, assigned tasks

4/3 (3:00 P.M.) – *Meeting after class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Discussed progress on deliverables, switched focus to remaining deliverables

4/5 (3:00 P.M.) – *Meeting after class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Discussed progress on deliverables and had a working session to work through road bumps

4/10 (3:00 P.M.) – *Meeting after class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Discussed progress toward deliverables and made a plan to finalize deliverables

4/12 (3:00 P.M.) – *Meeting after class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Finalized deliverables

4/16 (12:00 P.M.) – *Presentation Preparation*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Demonstrated all working features of the TSQLx package and prepared for the team presentation

4/17 (12:30 P.M.) – *Meeting before class*

Members in attendance - Nathan, Kevin, Eric, Kai, Fahad, Marco

Topics discussed: Final preparation for the presentation and last minute practice