

CIS 345 Introduction to XML

Fall 2014

Instructor: Weimin He

Course Project

Due Time: 11:55pm Central Time on Monday, November 24th, 2014

1 Description

In this course project, you are required to design, implement, test, and demonstrate a solid application for XML data processing. You are required to use both **Java** and **C#** as the programming languages when you work on the project. The topics you can choose to work for the project are listed as follows:

- XML Search on top of XQEngine
 - Read the documentation of XQEngine
 - Run and understand the example programs of XQEngine
 - Build indexes to store XML data using XQEngine
 - Support search queries over the indexed XML data
 - You can define your own query format and query result based on your understanding of the functionalities of XQEngine
 - The data set should contain at least 100 XML documents
 - XQEngine is a full-text search engine for XML documents implemented in Java and it is available to download at <http://xqengine.sourceforge.net>
 - Create a Windows Forms application in Visual Studio 2013 to build a user-friendly GUI for the search engine you built on top of XQEngine
 - Leverage IKVM.NET to embed Java code into your Windows Forms application
 - IKVM.NET is an implementation of Java for Microsoft .NET Framework and it is available to download at <http://www.ikvm.net>
- XML Search on top of Apache Lucene
 - Read the documentation of Apache Lucene Core
 - Run and understand the example programs of Apache Lucene Core
 - Build indexes to store XML data using Apache Lucene
 - Support search queries over the indexed XML data
 - You can define your own query format and query result based on your understanding of the functionalities of Apache Lucene
 - The data set should contain at least 100 XML documents

- Apache Lucene is a high-performance, full-featured text search engine library written entirely in Java and it is available to download at <http://lucene.apache.org>
- Create a Windows Forms application in Visual Studio 2013 to build a user-friendly GUI for the search engine you built on top of Apache Lucene
- Leverage IKVM.NET to embed Java code into your Windows Forms application
- IKVM.NET is an implementation of Java for Microsoft .NET Framework and it is available to download at <http://www.ikvm.net>

Important Notes:

- You are required to form a team with another student to work on the course project and one team can have only two students. If you can not find a teammate, I will assign a teammate to you.
- For the same topic, the capacity is 6 teams. If 6 teams have already chosen the same topic, you have to choose a different topic. **You are supposed to send your team info and the chosen topic to me by email before 6:00pm on Wednesday, September 24, 2014.** I will assign the topics based on the order of the received emails. The team sending the email first will get the priority to choose the topic. However, you should think carefully before you choose the topic.

2 Submission Requirements

- Files to be Submitted
 - The folder that includes all your Java and C# programs
 - A file named **README.pdf** that includes the project description, system functionalities, and instructions on how to compile, run, and test your program
 - A file named **Presentation.pptx** that includes your project presentation slides
- Put your name and the name of your project teammate in the beginning of the source file that contains the main program and zip all your files back to **Project.zip** and submit the file **Project.zip** through D2L before the due time. Only one out of two team members should submit the project in D2L.
- **I do NOT accept email submissions.**

3 Grading

Grading Item	Scores
The program can be compiled without any error messages	10
The program can be run without any error messages	10
The program can achieve all the functionalities in the project description	30
The quality of project presentation(organization, clarity, and demonstration)	20
The overall project quality(functionality, code complexity, and code size)	10
The file README.pdf is written in an instructive manner	10
The peer evaluation from your teammate	10

4 Data Set Reference

You can choose any XML data set for your project. The following URL includes a data set generator for your reference:

- <http://www.generatedata.com>