CPSC 304 W2 2019

Project Information

Project Description

Students in teams of 4 are required to select an application that would benefit from a database and build a database application from start to finish.

Philosophy

Building a full database application from scratch allows you to control the process; instead of having the pieces decided for you, you must make all of the decisions by yourself. Part of this process is that you will see how design decisions made at the beginning will affect your final project. We'll have some practice of some of the skills that you'll need in tutorial, but this will allow you to get some more in-depth practice and a feel for what it's like when you make all of the decisions for an application.

Expectations of Group Members

Each group member must contribute meaningfully to the project. Each group member will be expected to participate in the demo, be thoroughly familiar with the application, and be able to answer questions from the TA.

Group members will be asked to submit individual reports about their contributions to the group, and how they view the contributions of their teammates. In many cases, group members will share the same project grade; however, the instructor and TAs will be able to change the grade for each participant based on a student's contributions. For example, students who tend to be unavailable to their team, or who contribute little to the project, cannot expect to receive a good grade, even if the rest of the group gets a good grade.

Many groups tend to be fine, but if some member(s) of your group aren't carrying their fair share of the workload, contact your project group's TA. The TA will try to get all members back on track. Don't wait until late in the project to address these problems!

Goals

- Deciding on an application are for which database systems would be required
- Modelling the domain of the application, and defining the application functionalities
- Designing and implementing the schema
- Populating the database (this should not be the main focus of the project)
- Writing the code needed to embed the database system in an application that has a
- Graphical User Interface (GUI).

Focus on the database aspects and the design of the schemas, as opposed to spending extensive time on sample data and the GUI.

You can use JDBC, PHP, or another platform to connect your implementation to a relational database management system. Background and setup information can be found at the end of this document.

Avoid the examples provided in the textbook, course notes, or lectures. Don’t use any examples that you’ve worked with before. It can’t be something from another course, the Internet, your

co-op term, your friend's work from a previous offering of the course, etc. It must be your team's original work. Please be aware of the plagiarism rules for this course. Don't let your teammates down by copying work. We've had some plagiarism cases (and angry teammates) in the past.

Schedule

There are a number of intermediate deadlines that you must meet in order to ensure a successful project. For every due date below, the deadline is 11:59 pm. **My Advice:** Please read the instructions carefully to make sure that you don't miss anything. **Start early**; don't wait for the few days before the deadline to get started. The **cover page** to be turned in with all the milestones. The template of cover page is available on Piazza. The project has **seven** milestones:

Milestone	Weightage	Due date
Group Submission		
Milestone 1a – Group Formation	0%	Jan 10
Milestone 1b – Project proposals	10%	Jan 17
Milestone 2 – ERD and Schema	10%	Jan 31
Milestone 3- FD and Normalization		Feb 19
Milestone 4 – Formal Specification	10%	Feb 28
Milestone 5a – Complete Project	20%	Mar 28
Milestone 5b - Individual report/survey	05%	Mar 28
Milestone 6 – Demos	45%	Mar 29- April 4

Talking to the TAs vs. submitting to the directories

As mentioned in class, it is recommended that you go over your milestone with the TA in tutorial who is assigned to look at projects, and the TA can give you feedback or answer your questions. You may also talk to the TA who would be marking your project during their office hours. It is recommended to talk to the same TA throughout the term, but it is not required. Your project TA will periodically communicate with you about the project, using the Piazza small group forums (private to you and the instructional staff (TAs and instructors)). Other groups won't see your Piazza group communications.

Background Information

Project Platforms

You may use any legal platform that you like, as long as:

- The final application uses a relational database to manage the data.
- You don't use an automated system to generate the code and SQL (we want you to write these on your own).
- All other requirements are met. Ask, if in doubt.

We are providing support for Oracle from the CS machines, along with either JDBC or PHP/web. Please note that if you choose to implement with anything other than the provided and recommended infrastructure (e.g., running PHP on your own server), you may be asked to submit additional information or additional checkpoints. Furthermore, no support for anything other than the recommended software will be provided. **Note that problems with non-supported platforms will NOT be accepted as an excuse for late project submission; use them at your own risk!** That said, we've had quite a few good projects delivered on non-supported platforms.

You can decide on the platform later, but as a preview (and you'll get more information in upcoming tutorials):

Oracle

Connecting to Oracle through the command line:

- https://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/SQLPlus/SQLPlus.html
- You can download a free, legal, limited version of Oracle: http://www.oracle.com/technology/software/products/database/xe/index.html
- General Oracle https://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/OracleReference/ortut0.html
- Oracle Date Functions: http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/OracleReference/OracleDateFunctions.pdf
- Other Resources http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/Help/links.html

JDBC

- Connecting to Oracle from Eclipse
- http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/JDBC/OracleFromEclipse.htm

MYSQL

- Installation for Windows http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/MySQL/mysql_install_win7_student_guide.pdf
- Installation for Mac http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/MySQL/mysql_install_macosx_student_guide.pdf

Troubleshooting

- http://www.ugrad.cs.ubc.ca/~cs304/2018W2/tutorials/Help/troubleshooting.html

Other

- UBC CS Department – Sharing Files http://www.cs.ubc.ca/support/file-shares-undergrads
- UBC CVS Version Control http://www.cs.ubc.ca/support/version-control-cvs