

CPSC 3660 – Introduction to Database Systems

Spring 2020

Group Project

This project will provide hands-on experience with the design of a web-based database application.

Project Guidelines

1. Choose your group members. The class will form groups of 2 or 3 members. Groups of 4 are also permitted, provided the members can come up with a project idea that has enough work for that many people. All students who are unable to find groups will be formed into groups by the course instructor.
2. Choose your group's application, which should be of reasonable size proportional to the size of your team. Possible problems include car-rental, pharmacy, airline reservation, real estate, video rental, residence services, etc. (Note: you may not choose a course registration system, or anything that may resemble one, for your project – this is my running example for the term) More information will be provided on appropriate project sizes in lecture when you receive this project outline.
3. Put together a project proposal. Your proposal should include (in as much detail as possible) the following:
 - The data that the application will be managing,
 - The operations/functions that the application will be supporting.
4. Design a web-based database application for the chosen application. Based on your proposal, your group will proceed through the following stages:
 - Design of an entity-relationship diagram (ERD) for your database,
 - Mapping your ERD to a relational database, and implementing the relations in a relational database,
 - Design and implementation of all proposed functions via web pages.
5. Interim submissions:
 - The entity-relationship design,
 - The relational database design, and
 - Functioning insert, delete, update, and query web pages (one of each).
6. Finally, demonstrate your group's project to the instructor. Before your group's demo day and time, a copy of the source code and a document containing the create statements for the project's database relations (a .sql script will work) will need to be submitted to the instructor.

Database and Web Access

For this project, your group will be **required** to use MySQL and PHP, which are installed on vconroy.cs.uleth.ca. Individuals will receive a MySQL account after course accounts have been created. One of the individual accounts will need to be used for the course project.

Note that vconroy.cs.uleth.ca will not be accessed directly from off-campus without the use of VPN software.

Evaluation

(Note: Failure to: 1) submit a proposal or 2) attend your project demonstration at the end of term will result in an overall project mark of 0.)

1. Proposal – 10%
2. Documentation: 50%,
 - Entity-relationship design – 20%
 - Relational model – 10%
 - Subset of working project pages (Insert, Delete, Update, Query) – 20%
3. Successfully completed and running application (demo): 40%,
 - All proposed components working in project – 25%
 - Use of integrity constraints and handling of integrity constraint violations) – 10%
 - Design of web pages – 5%

Project Deadlines

- Submission of group members – Friday January 17th (by email to the instructor – one email, cc'ed to all group members)
- Proposal – Friday January 31st
- Entity-relationship diagram – Friday February 14th
- Relational model – Friday February 28th
- Functioning insert, delete, update, and query pages (one of each) – Friday March 13th
- Demos – Weeks of March 23rd and March 30th
 - Demo Signup will be available prior to this time.
 - The code and database create statements must be submitted **before** your demo or else your group will not be allowed to demo.