Project Description
MSCI 346 – Database Systems

The goal of the course project is to design a Web application of your choice using the MySQL database and the PHP scripting language. You will apply the concepts you learned in this course, and the final deliverables should reflect your understanding of these concepts. You will choose an application domain, design a database and populate it with real or realistic data, and design a Web interface for updating the database and displaying the results of queries. Login instructions to the database/Web server is posted on UWLearn.

You may work in teams of up to three. The project consists of the following deliverables:

- Database design (7%)
- Final report and system implementation (13%)
- Demonstration of the functioning system (3%)
- Peer review (2%)

You will be graded on correctness, realism and creativity, so please have an interesting application, do not oversimplify the requirements, and choose realistic queries.

Database design [7 marks]
An electronic copy of your system design report will be due in the UWLearn dropbox on Thursday, June 22, by 3:00pm. Please include the following information in your report:

1. Names and student ID of all team members
2. A clear description of your application
3. Requirements analysis, including a clear and detailed description of the data that you will store (entities, keys, attributes, relationships, constraints, etc.)
4. A corresponding ER-diagram
5. CREATE TABLE statements corresponding to your tables

Final project report [13 marks]:
An electronic copy of your final report will be due in the LEARN dropbox on Thursday, July 20, by 3:00pm. Please include the following sections in your report:

1. A description of your data. If you use real data, please describe the source; if you generate synthetic data, please include the code you used to generate the data and justify why your generation method is realistic.
2. A sample of a few rows from each of your tables
3. Four REALISTIC and NON-TRIVIAL queries that are supported by your system. At least one query must join at least two tables; at least one query must include aggregation, GROUP BY and HAVING; at least one query must be nested (with EXISTS, IN, etc.). Some or all of your queries need to be parametrized, i.e., the WHERE condition may include strings or numbers entered by the user.
4. Screen shots of your interfaces.
5. Your php code (in separate files). Please make sure you have at least one script for inserting/modifying/deleting data, and that you have scripts for your four queries (including any parameters that need to be entered by the user and the formatting of the output). Please include clear comments in your code.

Demonstration of the working system [3 marks]:

You will demonstrate your system in the last week of classes (July 17-21). The presentation schedule will be posted on the course website before the last week. Your presentation must include the following:

1. A brief overview of your tables and data
2. A demonstration of the data update and query features of your system

Peer Review [2 marks]:

Since you are working in teams, each team member will provide a mark for the other team members based on their performance and contribution to the project.