CSC 455- Spring 2015

Relational Database Project

Design and implement a database application using a relational database management system of your choice that clearly demonstrates your grasp of database concepts encountered in this class. You are free to use any relational database product, and any supporting technology, provided the platform you use allows you to demonstrate the fully functional project in class. The basic idea is to write an application that uses the DBMS for data storage, retrieval etc. However, an application user need not have any knowledge of the DBMS and ideally should not be aware of the presence of the DBMS.

- *You may choose one of the projects provided as examples.* In this case you are expected to implement all the functionality described in the project outline.
- *You may propose your own project.* If you propose your own project, it is your responsibility to convince me that the scope of your proposal is comparable to that of the projects in the handout. The scope refers to both the richness and the amount of information being managed and the queries implemented. The project you propose must allow you the opportunity to demonstrate your grasp of database concepts.

In order to facilitate the project, the following procedures and deadlines have been established.

- All project documentation should be prepared on a computer. Adopt some uniform, professional format for your submissions, and use the same format for all submissions. Write well and use a spell checker on your submissions.
- Each submission must be accompanied by a cover sheet showing team member names and a peer evaluation matrix where each team member evaluates the contribution of every other team member to that project component, like this.

	Joe	Mike	Mary
Joe	X	9	10
Mike	9	X	10
Mary	9	9	X

  Scoring will be on a 10 point scale, with 10 being the maximum. If a student has an average peer evaluation score of 9, and I assign a score of 90 to a particular project component, the student in question will receive a score of 81 for that project component.
- When required, upload your submission to Blackboard. Only one submission per team, please.
- Poorly presented material will not be accepted.

1. **Thursday, January 29. Email names of team members to me.**
   - Project team member names due. *Two or three students in each team.* All exceptions to this team size rule will be at the discretion of the instructor.

2. **Tuesday, February 10. Upload to Blackboard.** This is worth 10% of your project grade.

   - Name and brief description of your project.
   - **Specification of functional requirements.** Operations to be supported. Think about the kinds of queries that are likely for your application. Think about ways in which data will be inserted, retrieved, or modified.
   - **User interface specification.** For instance, if menu-based, menu and submenu options.

3. **Thursday, February 26. Upload to Blackboard.** This is worth 10% of your project grade.

   - **Schema diagram** (similar to Figure 2.8 in your textbook) for your database showing the tables that you will create. For each table list:
     - all attributes and their types
     - primary key and foreign key, if any
   - In addition, specify
     - not null specifications, if any
     - any other integrity constraints you plan to incorporate

4. **Tuesday, March 24**. This is worth 10% of your project grade.

   - Preliminary demonstration of the *back-end of your project*. Tables, queries etc. This is not a classroom presentation, merely an informal demonstration for me.

5. **Thursday, April 9.** This is worth 10% of your project grade.

   - Preliminary demonstration of the *front-end of your project*, including the ability to communicate with the back-end. This is not a classroom presentation, merely an informal demonstration for me.

6. **April 21, 23.**

   (a) Demonstrate final version of project in class. You should plan on having about 15 minutes for your demonstration. During this presentation you will demonstrate your fully-functional implementation and also be prepared to **answer questions about any aspect of your project**.

   (b) You will also upload to Blackboard (as a zip file) all code for your project and the E-R diagram and any normalization performed on your design.