**Database Management System Project**

**Database Design Requirements for Section 1003**

**Final submission: May 26**

**Presentation: May 16-22 (week 14)**

This project is to build up a database for a real-world application. The application can be a student information system, a business information system, a movie ranking system, a player management system for online video games, etc. The topic is unlimited, so you choose anything you are interested. You are courage to use real data gathered from the real-world. You can also use a generator to create artificial data under some intuitive constraints. This is a group project in two students.

**Overall Requirements**

1. Your ER diagram should have at least 6 entities and 4 relationships.
2. On average, each table must have no less than 10,000 records. There are at least two tables consisting of more than 50,000 records.

(Note: Not all the records have to be real but they should be realistic. You may generate records using a program.)

1. Your system takes less than 1 second to insert a record to any table.
2. Your system takes less than 2 seconds to delete or search a record.
3. The logical design of the database must follow the normal forms.

**Documentation Requirements**

1. Briefly introduce the purpose of this project. You should define which real-life problem you are solving, address the difficulty of the problem, give the abstraction of the problem, and major goal of the project.
2. To design the database, you may need to make some assumptions for modeling. The reason is that a real-life problem usually does not provide enough information and is sometimes unsolvable. The assumptions have to be realistic.
3. Your report must include your final ER diagram and a brief description of each entity and relationship set.
4. You need to give all of the functional dependencies and schemas.
5. If your schemas are not in the normal forms, you need to decompose them and show the steps in detail.
6. You need to describe the primary keys and the foreign keys.
7. Workload of each team member.

**Grading**

* Report 40%
* Presentation 20%
* Implementation 40%
* Bonus 10% for interface

**Submission：**

* Database, exported from MySQL
* Report
* All document name must in the format DBMS\_Project\_TeamXX.extension