



IS 410/610 Course Project

This project is due by 11:59pm on Wednesday, December 4.

Total Grade = 200 points

Your assignment is to develop a database design to solve a real-life data management problem. It can be any problem in your work environment or for another organization, for example, a bookstore (think of how Amazon uses databases), a course management system (think of how UMBC manages courses), a bank (think of how your bank works), and an online auction site (think of how Ebay works). You will develop a database to solve this problem. You will use Oracle DBMS throughout the project.

You need to start thinking about the problem early in the semester. Try to answer the following questions:

- Who will use this database for what purpose? Remember there may be different types of users and different purposes. E.g., customers and your boss.
- What operations the database needs to provide to support such purpose? Imagine yourself is the customer to use the database.
- What data needs to be stored in database to support such operations?
- What assumptions you are making when you design the database, are they reasonable?

You **cannot** use the examples used in the textbook.

The question that everyone asks is "how big does the project have to be?" A project that is too small will probably not provide you with an adequate opportunity to display your skills. On the other hand, you do not want to choose too large of a project. It may be possible to find a portion of a large project that could be appropriate.

Database Requirements

- ✓ At a minimum you need to design three or four significant tables. You will undoubtedly need additional lookup tables. etc., but they do not count as "significant".
- ✓ Each table should have a certain amount of data (at least 5 rows).
- ✓ You need to write 8 or more SQL select queries (at least 4 contain joins, 2 use group by, select * from does not count) and 2 or more update queries.

Project Deliverables

You will submit both of the deliverable files in Blackboard under CONTENT then SEMESTER PROJECT then SEMESTER PROJECT SUBMISSION.

1. *Lastname_Firstname*.SQL file with all SQL commands. **(20 Points)**
2. PowerPoint file with the following sections:
 - **Business Document (20 Points):** Submit a short written business document to include the following:
 - ✓ **Business Situation:** Includes who will use it, what operations will be supported, what data needs to be stored, and what assumptions you have made.
 - ✓ **Project Schedule:** Includes a timeline showing each phase of your project with its tasks and time duration, for the entire effort. This deliverable will be graded based on whether the above items are included and whether the schedule is reasonable (e.g., enough time is left for testing SQL queries and prepare presentation).
 - **EER Diagram (40 Points):** Create an EER diagram for your project database.
 - **Relational SQL Schema (40 Points):** Create a relational SQL schema based on your EER diagram.
 - **SQL Commands (80 Points):** Include screen shots of the following SQL commands specific to your application:
 - ✓ Creation of Tables
 - ✓ Input of Table Data
 - ✓ 8 Select Statements
 - 2 Queries with Group By
 - 4 Join Queries
 - 2 Select Statements
 - ✓ 2 Update Statements