OPIM 5272
University of Connecticut

Class Project
10% of Final Grade

The class project is designed to integrate the various business and technical concepts that you learn in the course. The project will consist of modeling a business process (a financial analysis system, a transaction process, a CRM system, etc.) that can benefit from proper data management. The business process should be drawn in Visio, as should the data model that will be the basis of the database that you will design to benefit the process. You will then create a database in Oracle.

Step 1: Study a business process that can benefit from proper data management. Prepare a three to four page report on the business process that you would like to study. The report should begin with a description of the business/company that you are studying, and explain why the process you are studying is a business process (i.e., discuss the interrelated tasks that together make the process, the triggering event, the specific result of the process, and the customer). You should also discuss the problems with the current process. Describe how the current business process might be improved - by reducing data redundancy, improving data integrity, changing the process followed, etc. State what types of information you want from the database - reports, visibility into processes, etc. This phase will identify the business needs of the database system that you will design. You should also include a swim-lane diagram depicting the as-is process.

Requirements: Must minimally have at least 5 actors and at least 10 steps in the process (unless you check with me one week before the deadline).

Step 2: Create a data model in Visio. State the entities and attributes of the database system that you propose to design, in the form of an ERD. The relationships between the entities should be clearly defined here. This is the conceptual database design. Based on this ERD, design a detailed list of tables that you need for the database. The attributes of the tables should be clearly identified and the primary keys, foreign keys, and attribute types should be specified.

Requirements: Your data model must be a connected ERD, containing at least 7 entities (unless you check with me one week before the deadline).

Step 3: Next you will implement the physical database, based on the previous steps. You must create the tables, provide proper relationships, and make additional modifications to enforce data integrity when users enter data in the database. The database should be based on the diagram that you draw in the previous step. You might have to iterate between steps 1, 2 and 3 before you get this phase properly implemented. If data is available, please add it to the database - otherwise make up viable data for the process that you are modeling. Save the SQL statements that you use to create the tables and insert information in the form of a script, that I can use to recreate your database and populate it with values.

Step 4: Now you create the queries that you want to use to generate information from this database using SQL. The database should generate at least 5 reports that will benefit the business process you are studying through the queries that you design, of which at least one should be a group/total type, at least one should be a multiple-table join query, and at least one should be a query which has an operator or statement that we did not cover in class. Save the query scripts so that I can run them to generate reports.