**MSBA 504 Final Project**

**Assigned September 29th Due 10/13 before class**

Objective

Create a database for a pet business client, report on work done, suggest potential reports and further enhancements. Bring together of your learnings from class to deliver report and presentation.

Final Project Point Breakdown

|  |  |
| --- | --- |
| Description | Total |
| Technical Diagram | 50 |
| SQL Code | 50 |
| Presentation | 50 |
| Report | 60 |
| Including recommendation re: A, B, C version of project | 40 |
| Total | 250 |

**Conceptual Model & Logical Design**

**ERD and data dictionary entries**

Create an ERD illustrating the entities/relationships needed to support your database design with accompanying data definitions. If the ERD is too large for one page, you can break it into multiple diagrams using entity clusters for each sub- diagram. Use any graphical style you prefer (Gliffy, Lucidchart, Visio, etc.) but be consistent. Make sure to follow all rules of ERD diagramming. Include all entities, label relationships if there are multiple relationships between 2 entities, include all attributes and constraints where necessary and identify primary and foreign keys.

Data definitions should be in the form of a table, briefly defining each attribute of each entity, for example:

|  |  |  |
| --- | --- | --- |
| Entity | Attribute | Definition |
| STUDENT | StudentID | XX-digit number uniquely identifying the student, assigned by USD, not based on SSN or other ID, PK |
| STUDENT | FirstName | (required) |
| STUDENT | MI | Middle initial (optional) |
| STUDENT | LastName | (required) |
| STUDENT | AcctBalance | Outstanding balance owed to the university for tuition, fees, etc. New registrants start at $0.00. |
| STUDENT | etc… |  |

1. Relationships between those entities are drawn with min/max cardinalities and constraints where required.

2. Data definitions for all non-obvious attributes (no need to define “first name” etc.)

**Functional dependency diagrams and the database schema.**

Normalize all tables, showing dependency diagrams for all tables in your that need to be normalized and create your database schema. Do not split your tables too far. Make certain that your database schema has all primary and foreign keys identified and include any dependency diagrams of your tables.

**Constructing Tables and Creating Queries**  Build the tables for your project database in Microsoft SQL Server (your team’s database) using your revised database schema. Create your tables and enough sample data so that you can test out some basic queries and make sure they work. Provide the SQL statements (CREATE TABLE and INSERT) that will be used to re-create the database from scratch (use Notepad, .txt). Then conduct/create at least nine queries (hint use sample output from your client description page) and add those SELECT statements to your Notepad file. Use any tables you wish to test your design.

**Final Report & Presentation**

Your final project report is a DETAILED account of your work in developing your client’s database system. The report serves as written documentation of your project achievement. Prepare the report as if your client is going to read it and make certain to proof the report before submission.

Complete documentation of the project in Word/GoogleDoc in this order

(Points will be deducted for any missing information/charts/documents):

• Project title page with project name (can be the client’s name), team name & team number

• Detailed table of contents (all diagrams must be referenced here) - including page numbers - label each section appropriately

• Executive summary

• Team member introductions, roles, and contributions

• Client introduction

• Current situation and requirements definition

• Initial and modified ERDs of proposed database system

• Logical relational schema (show normalization of tables if completed)

• Screen capture of all tables (with data) of your relational design implemented in SQL

• Screen capture of your queries/results, etc.

• Technical issues, quirks of the system, major challenges

• Lessons learned

• Appendices (labelled):

A) All SQL scripts (SOUCE CODE), i.e., queries/results, triggers, view,

procedures, database

B) Screenshots of your handout/presentation (4 slides per page maximum). The client will look at these if unable to run your presentation

C) Add in any additional data used or explanations needed

A printed copy of this report is NOT required; therefore, do not economize on the number of pages to present

your project. Your report must be presented professionally.

• Table of contents page numbers must match the location of the information in the report

• All report pages will be numbered

• Headers will not be on a page by themselves

• Each major section starts on a new page

• Follow rules of writing a professional report that you would do in a work setting

Three Scenarios

A) Expand store count

B) Sell to major pet chain

C) Build out more ecommerce

* Presentation – 15 – 20 minutes
  + Includes
    - Executive Summary
    - Agenda
    - Team members and contributions
    - Situational Overview
    - Project Overview
    - Database overview
    - Data visualization/Reporting
    - Key lessons for client
    - Bring in context of different scenarios ( A, B, C)
    - Suggested next steps
  + Everyone must play a role in presentation