Semester Project Phase 3

Due: Wednesday, November 14th, 2024

Total: 30 Points

Project Overview

The Semester project consists of four deliverables reflective of the implementation of a real-world database. Each of these deliverables will build upon each other to create a comprehensive database system that includes a requirements document, a design document, a schema implementation script, and finally a graphical user interface with simple CRUD Operations.

Since each project phase will depend upon each other, as it is in the real world, you will need to do each in the order specified below. The weight of each phase is as follows:

Phase	Description	Due Date	Points
1	Project Scope and Requirements Document	Oct 3rdth	20
2	Entity Relationship Diagram and Schema Specifications	Oct 17th	20
3	Database Creation and Seed Scripts	Nov 14h	30
4	Java GUI Application	Dec 12th	30
	Total		100

The due dates are subject to change depending on the progress of the class. However, once it is determined, there are no exceptions for late work. See the class policy of late for details. You are expected to submit each phase on its due date to receive full credit for that phase. There is no make-up work for each phase. Since the later phases of the project depends upon the earlier phases, it is in your best interest to complete the phases by the expected date. Every student is expected to work on this project independently and every project is expected to be unique in terms of the organization you choose to use, as well as the design you choose to implement for it. The project will close with a presentation of your GUI implementation on the due date of the last phase, Dec 8th.

Phase 3

In this part of the project you are required to implement your database on MySQL. Your script must target the database that was created in phase 2. Your implementation should include the following:

Criteria	Description	Points
1	Create all the tables that you specified in your relational schema. Make sure to include primary keys and foreign keys.	5
2	Populate all tables with data of your choice. Make sure that each table includes at least 5 rows.	5
3	Design and explain **at least five** query scenarios that may be useful on your database. Write SQL queries to answer each query. Write a comment with each query to explain the purpose of the query.	5
4	Design and explain **two triggers** that may be useful in maintaining your database consistency. Implement the triggers using SQL. Write a comment with each trigger to explain the purpose of the trigger.	5
5	Create a function that can be used to calculate data and create a view for your users using the function. Write a comment with each	5

	comment and view to explain the purpose of the function and the view.	
6	Create a multi statement stored procedure that takes in parameters and outputs a data table. An ideal case of this would be a summarization of your data for a particular business problem, such as a sales forecast, or a score summary. Write a comment for the stored procedure to explain the purpose of the stored procedure.	5
	Total	30

Submission

One '.sql' script that include the following (in order):

a. SQL statements to create the tables.
b. SQL statements to populate tables with data.
c. SQL statements to create the triggers.
d. SQL statements for your query scenarios.
e. SQL statements to create the function and view.
f. SQL statements to create the stored procedure.

Make sure that your script runs to completion without giving any error. Scripts that give compilation errors will get a ZERO grade.

Submit your Phase 3 project as a sql document for the above scripts in D2L under the Project Phase 3 Group assignment. Please note that the submission is time stamped, so submissions after the due date and time will be counted as late and penalties will be applied respectively. Only one person needs to submit the project.

Assessment

All points will be assessed based on the criteria mentioned above. You can earn a total of 30 points. Make sure you provide adequate comments for each of your scripts as the explanation is also part of the points you can earn for each section.

Learning Outcomes

This phase is designed to introduce the student to the third phase in database design and implementation. This is the implementation phase in which the student will create a database, seed it with business and test data and create queries based on their phase one analysis. It also teaches the student to create other SQL constructs like the Functions, Views, Triggers and Stored procedures which are often used in the real world.

Disclaimer

Please review the syllabus on academic integrity and the submission policy. I will follow both strictly, so please adhere to the policy for each assignment and project.