CIS 2268 - Final Database Product

(100 points)

Continue working on midterm database

The project will be evaluated based on:

1. Creativity of the database
2. Amount of the course material applied to the project
3. Complexity of relationships and constraints among objects
4. Complexity of queries over the data
5. Completeness of testing of DB.
6. Revised midterm database

Submit the following

1. Revised ERD
2. **Screenshots of your statements and output. Labeled each task with the task number – points will be deducted, if you do not this**
3. SQL script
4. A text file of your SQL script

|  |  |  |  |
| --- | --- | --- | --- |
| item | Tasks | Min pts | Max pts |
| 1 | ER Diagram  At least 7 tables **all linked**  Each table must be linked in the ERD and within the code |  | 2 |
| 2. | At least 2 of the tables must have a minimum of 15 records  A date datatype must be in one of the tables  In one of your numeric columns make there are some nulls |  | 2 |
| 3. | QUESTION: What database engine are you using and why is it important |  | 2 |
| 4. | Joins   1. Join 4 tables together |  | 3 |
| 5 | Formatting date and math   1. Use your date column, either calculate the number of days from the date to today or if you have 2 date columns, subtract 1 date from another 2. Round numeric data to 2 decimals 3. Display your date data. Format the date to the day name, month name, date, and 4-digit year 4. Display your time zone |  | 8 |
| 6 | Subqueries and merge statements: Write a query for each of the tasks below. In other words, do not combine two tasks in the same query   1. Create a subquery that calculates the average of the numeric column with nulls and then if the row has a null, replace the null with the average number 2. Create a subquery with where and order by clauses 3. Create a subquery with a extract data from one table and use it to limit data from another table (for examples look at Chapter 7’s lecture notes, page 1 the vendor ID example) 4. Use a subquery with a *not in* operator 5. Use a subquery in a DML action 6. Create a query with a CTE (with statement) |  | 18 |
| 7 | Views   1. Create a simple view 2. Create a view with a check option 3. Create a complex view 4. Update a record in a simple view 5. Display only the to 10 records in one of your tables |  | 5 |
| 8 | Indexes   1. Create an index (other than unique or primary key) 2. List all indexes using a query |  | 4 |
| 9 | QUESTION: Describe the advantages and disadvantages of indexes |  | 1 |
| 10 | Procedures and functions   1. Create and call a stored procedure that reads data from a table 2. Create and call a stored procedure that has a case statement 3. Create and call a stored procedure that has an if statement 4. Create and call a stored procedure that has a conditional handler for SQLWARNING 5. Create a procedure that has a transaction 6. Create and use a stored function |  | 18 |
| 11 | Triggers   1. Create and use an update trigger 2. Create and use a trigger that saves data to a separate table |  | 6 |
| 12 | Undo   1. Show a rollback using a savepoint |  | 2 |
| 13 | Write a security plan for your database. Assume you have at least 4 employees. List all the tables and who will have access. Make use of the 4 privilege levels   1. What users would you create? 2. What roles would you create? 3. What privileges would you grant? |  | 6 |
| 14 | Create a user with the password root  Grant them select, insert, update on only one database/schema  Display the list of users |  | 4 |
| 15 | QUESTION: Identify each of the error codes below and explain how you will fix code   1. 1288 2. 1395 3. 1451 4. 1146 5. List and describe an error that you got when creating your dbases and completing this exam’s tasks |  | 5 |
| 16 | QUESTION: What would happen if you try to delete a record that has a parent from another table? |  | 2 |
| 17 | Show a snapshot of the Schema Inspector |  | 2 |
| 18 | Which tables will you set transaction isolation level and WHY |  | 2 |
| 19 | Name the types of log files and how you access them |  | 2 |
| 20 | Take a screenshot of the following  The Users and Privileges  Status and System Variables |  | 2 |
| 21 | Why create global variables |  | 2 |
| 22 | Submitted   1. Revised ERD 2. **Screenshots, labeled with task number. Points will be deducted from each task if you do not label your answers and provide screenshots.** 3. Some of the tasks require a written answer. 4. SQL script 5. A text file of your SQL script |  |  |