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| 1. ER Diagram  (I couldn’t think of a 7th table for my database. I tried to come up with a few different things but I felt like it would’ve caused conflicts with the other tables. I’m aware I’ll get a point off for that but I did manage to fit a 6th table which is the previous platforms one)    2. At least 2 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 sure there are some nulls.  Streamer Table and Statistics Table both have 15 Records. |
| 3. QUESTION: What database engine are you using and why is it important?   * The database engine that I am using is the MySQL software which is the standard tool we have been using for this class. This is important because it is the program that helps me both create, manage, secure and constantly update previous and existing databases that I have created throughout this course. |
| 4. Join 4 tables together      5. Formatting date and math   * 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.      * Round numeric data to 2 decimals (For this one, I don’t have any decimals in my table but I went ahead and did the statement anyways to show that I know how to do it)        * Display your timezone |
| 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.   * Create a subquery with where and order by clauses        * Use a subquery with a not in operator        * Use a subquery in a DML action |
| 7. Views   * Create a simple view        * Create a view with a check option        * Create a complex view        * Update a record in a simple view        * Display only the top 10 records in one of your tables |
| 8. Indexes   * Create an index (other than unique or primary key)      * List all indexes using a query |
| 9. QUESTION: Describe the advantages and disadvantages of indexes  Some advantages of indexes include faster searching, sorting and grouping of records and one of the biggest disadvantages to indexing is the fact that it will take up A LOT more disk space for your database. |
| 10. Procedures and Functions   * Create and call a stored procedure that reads data from a table * Create and call a stored procedure that has a case statement            * Create and call a stored procedure that has an if statement      * Create and call a stored procedure that has a conditional handler for SQLWARNING        * Create a procedure that has a transaction       11. Triggers   * Create and use an update trigger        * Create and use a trigger that saves data to a separate table         12. Undo   * Show a rollback using a savepoint |
| 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.  **4 Employee’s**   * Customer Service Agent - db\_datareader * Data Analyst - db\_datareader * Database Administrator - db\_admin * Database Manager - db\_owner   **Table Access**   * Contracts (Admin, Manager, Customer Service) * Income (Admin, Manager, Analyst) * Platforms (Admin, Manager, Analyst) * Previous Platforms (Admin, Manager) * Statistics (Admin, Manager, Analyst) * Streamers (Admin, Manager, Customer Service) |
| 14. Create a user with the password root. Grant them select, insert, update on only one database/schema. Display the list of users.      15. QUESTION: Identify each of the error codes below and explain how you will fix the code   * 1288 – The target table is not updatable in MySQL Trigger   **In this case I would most likely be getting this error if I was attempting to update a subquery. I would switch to doing an update to a table outside of within a subquery.**   * 1395 – Number of rows that would be deleted from your view does not match the number of rows that would be deleted from the underlying tables.   **I would double check the amount of rows that I have in my view compared to the underlying table and adjust them accordingly to make sure that they both have the same number of rows.**   * 1451 – Cannot delete or update a parent row   **I would disable the foreign key checks in order to get around this error then re- enable them once I am done.**   * 1146 – Invalid MySQL queries or non-existing MySQL queries   **In this case, I would restart the MySQL server and attempt to repair the tables. After this I would backup restore just in case. Basically go step by step through that process to diagnose the extent of the issue.**   * List and describe an error that you got when creating your dbases and completing this exam’s tasks   **I don’t remember the exact error code I got but this will be stated before I upload as well. When creating the database with the addition for the new table for some reason I keep getting an error that prevents the table from being made. Then I would have to go into a separate SQL tab and create the table outside of the main script as well as the foreign key command.** |
| 16. QUESTION: What would happen if you try to delete a record that has a parent from another table?  You would be met with the error code 1451 which will tell you that you cannot delete or update a parent row. |
| 17. Show a snapshot of the Schema Inspector |
| 18. Which tables will you set transaction isolation level and WHY?  I would set transaction isolation level in my audit log table that was credit in an earlier question and I’ll repost a screenshot of the output of that table as an example below. The reason I would do this for THIS table is because I would not want certain users to see the backend action data changes that are made to a database. This is something that would be best forwarded towards upper management rather than users that may not be allowed high level access to see such a thing for security purposes. |
| 19. Name the types of log files and how you access them  There are text based log files that you can access via any form of text editor or within MySQL workbench itself. You just have to go to Server Logs item and click on the tab you want to view.  The error log displays any forms of errors you may have encountered while working with your database  The general log which shows you everything that happens.  Slow Query log which shows you if any of your queries are running too slow. |
| 20. Take a screenshot of the following:   * The Users and Privileges      * Status and System Variables |
| 21. QUESTION: Why create global variables?  Global variables return various pieces of information about the current user environment for your SQL server. They can be useful tools in order to help easily identify errors without making them sound confusing when you first get them. You can check connections to see the number of login attempts into a database for security purposes. You can even use an identity variable that can help organize and sort the IDs of employees within a company so if you have thousands of employees this global variable can help a lot. There is another global variable called Idle that tells you how long an SQL Server has been idle since it last started. Global Variables are tools that can help you manage your database much easier. |