Databases 4. SQL Assessment 2024.

Instructions

- Use the SQL files on Moodle to create your schema and populate with sample data.
- Read the schema to familiarise yourself with the tables in the Database.
- 1 single Word Document to be uploaded.
- Document must contain:
  - A copy of the SQL used to answer each question (copy & paste)
  - A screenshot (snip tool) of your code window and results
- Any SQL listed without a screenshot will receive zero marks
- Please number your answers 1 – 15

Write single SQL queries (unless additional are specified) to answer the follow questions:

1. Count the number of different category_ids on the product table. [5 marks]

2. List the full names of the customers who's last_name is at least 6 letters long. [5 marks]

3. List the names of the databases on the DB Server. [5 marks]

4. List the total list price for all the products, along with the average price and average discount percent, highest and lowest prices. Use the alias 'Total List Price', 'Average List Price', 'Average Discount Percent', 'H', 'L' [5 marks]

5. List the product_code and product_name for products with Cymbals as part of the description. [5 marks]

6. List the first_name, last_name and email_address for all customers where the letter "a" is the 3rd letter of their first_name. [5 marks]

7. Write a SELECT statement that returns the all the product_code, product_name and list_price where the price is greater than 500 and less than 2000. Sort the results in ascending order by list_price. [5 marks]

8. Write a query to return the category_name, product_name and list_price of all products. Sort the result set by category_name in descending order, and then by product_name in ascending order. [5 marks]

9. Create a View called vwPriceAndDiscount to show the product_name, list_price, discount_percent, discount_amount and discounted price for each product.
Use the View to display the results in descending order by product name, and give the fields more readable names in the output. [10 marks]

10. Write a query to show product name, the total list_price and the total discount amount for each product ordered.
The results should show a summary of results in descending order by product name and also have user friendly field names. [5 marks]

11. Write a query to show all customers email_address and also the number of orders they have, if any. [5 marks]

12. Add a new category called 'Kazoos' and then describe the table structure. [5 marks]

13. Update the new category_name to 'Misc' and display the results. [5 marks]

14. Write a Stored Procedure to update the discount_percent to 99 for a specified product_id, which will be passed in as a parameter, and display the results of the updated table.
Note: The skeleton code is included in ***Appendix A***.
Upload the code and show the SP being called to display the results [15 marks]

15. Write a Function to return the discounted price of any item using the product_id as an input parameter. The price should be returned as a decimal.
Upload the code for the Function, the function call and results
Note: The skeleton code is included in ***Appendix B***. [15 marks]

[END]

Appendix A
Question 13 – Stored Procedure

```
DELIMITER //

CREATE PROCEDURE spUpdateDiscountPercent
        (
            /* Your Code Here */
        )
        BEGIN
        START TRANSACTION;
            /* Your Code Here */
            COMMIT;
    END //
```

Question 14 – Function

```
DELIMITER //

CREATE FUNCTION fnGetDiscountedPrice
(
/* Your Code Here */)
RETURNS /* Your Code Here */
BEGIN
    DECLARE /* Your Code Here */
    /* Your Code Here */
END //
```