Questions for MySql Project : Customer Data Analysis

1. Top 5 Customers by Total Spending

- **Question:** Write a query to find the top 5 customers based on the total amount they spent (sum of total_price for all their orders). Display the customer_id, first_name, last_name, and their total spending.

2. Repeat Customers in the Last 6 Months

- **Question:** Identify customers who have made more than one purchase in the last 6 months. Display their customer_id, first_name, last_name, and the number of orders they placed in that period.

3. Product Performance: Total Sales for Each Product

- **Question:** For each product, calculate the total sales (i.e., total quantity sold * price) and display the product name, category, total sales, and total quantity sold. Sort the result by total sales in descending order.

4. Average Order Value per Customer

- **Question:** Write a query to calculate the average order value for each customer. Display the customer_id, first_name, last_name, and their average order value. Sort the result by the average order value in descending order.

5. Most Popular Product in Terms of Quantity Sold

- **Question:** Find the most popular product by quantity sold. Display the product_name, category, and the total quantity sold for the product with the highest sales.

6. Orders by Status: Percentage of Completed vs Pending Orders

- **Question:** Calculate the percentage of orders that are completed versus pending. Display the percentage of completed orders and pending orders as well as the total number of each.

7. Total Spending per Customer by State

- **Question:** Find the total spending per customer grouped by their state. Display the state, customer_id, first_name, last_name, and their total spending. Sort the result by total spending in descending order.

8. Find Customers Who Have Never Ordered

- **Question:** Write a query to find customers who have never placed an order. Display the customer_id, first_name, last_name, and email.

9. Products Not Sold in the Last 6 Months

- **Question:** Find all products that have not been sold in the last 6 months. Display the product_id, product_name, and category.

10. Customer Retention: Customers Who Placed Orders in Both the Last and Previous Year

- **Question:** Identify customers who placed orders in both the current year and the previous year. Display their customer_id, first_name, last_name, and the number of orders they placed in each year.

11. Revenue Breakdown by Product Category

- **Question:** Write a query to calculate the total revenue for each product category. Display the category and the total revenue (total_price * quantity) for each category. Sort the result by total revenue in descending order.

12. Customer Order History: How Many Orders Did Each Customer Make?

- **Question:** Find the number of orders each customer made. Display the customer_id, first_name, last_name, and the number of orders they placed.

13. Total Sales by Month for Each Product

- **Question:** Calculate the total sales for each product (quantity sold * price) by month. Display the product_name, category, order_date (month and year), and total sales for each product in each month.

14. Top 3 Products Based on Total Revenue

- **Question:** Identify the top 3 products based on total revenue (total_price * quantity). Display the product_name, category, and total revenue for each product.

15. Customers with the Highest Number of Different Products Ordered

- **Question:** Find the customers who ordered the highest number of distinct products. Display the customer_id, first_name, last_name, and the number of distinct products they ordered.