**Assignment 1**

**Task 1: Database Design**

**1. Create the database named "TechShop"**

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**2. Define the schema for the Customers, Products, Orders, OrderDetails and Inventory tables based on the provided schema.**

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**3. Create an ERD (Entity Relationship Diagram) for the database.**

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**4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.**

**Primary Key and Foreign Key constraints:**

* Primary keys and foreign keys are already defined in the table creation statements.

**5. Insert at least 10 sample records into each of the following tables.**

**a. Customers**

**b. Products**

**c. Orders**

**d. OrderDetails**

**e. Inventory**

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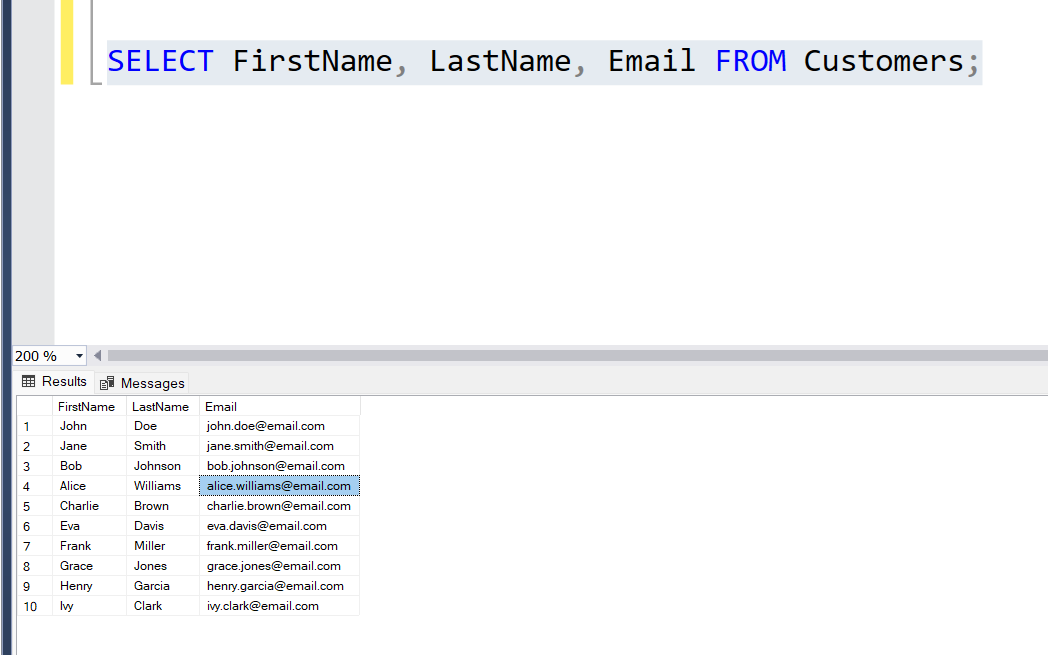
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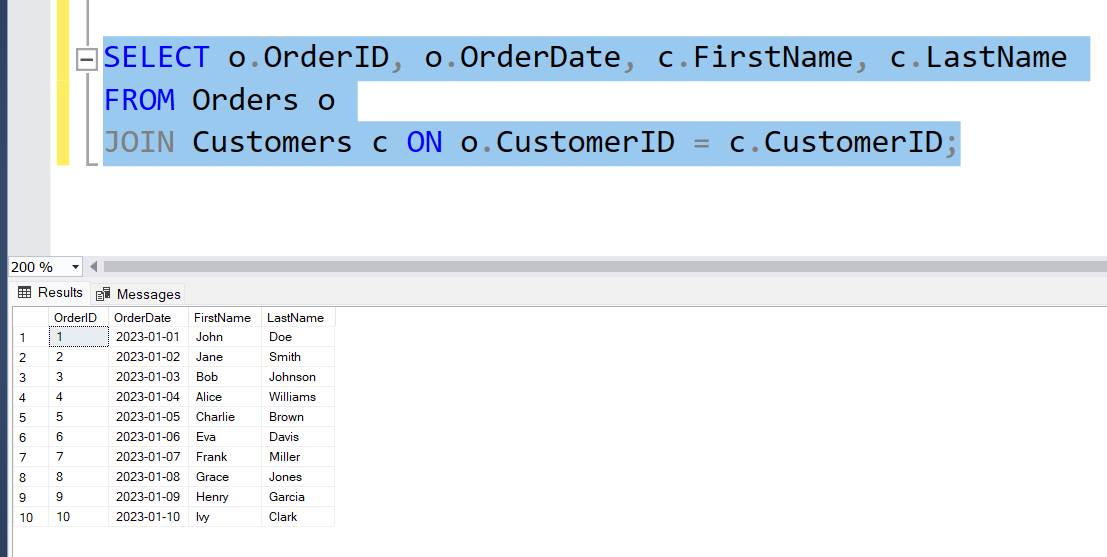
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**Tasks 2: Select, Where, Between, AND LIKE:**

**1. Write an SQL query to retrieve the names and emails of all customers.**

**2. Write an SQL query to list all orders with their order dates and corresponding customer names.**

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**7. Write an SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table. Allow users to input the customer ID and new contact information.**

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**9. Write an SQL query to delete all orders and their associated order details for a specific customer from the "Orders" and "OrderDetails" tables. Allow users to input the customer ID as a parameter.**

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**10. Write an SQL query to insert a new electronic gadget product into the "Products" table, including product name, category, price, and any other relevant details.**

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**Task 3. Aggregate functions, Having, Order By, Group by and Joins:**

**1. Write an SQL query to retrieve a list of all orders along with customer information (e.g.,customer name) for each order.**

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**2. Write an SQL query to find the total revenue generated by each electronic gadget product.Include the product name and the total revenue.**

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Description automatically generated**3. Write an SQL query to list all customers who have made at least one purchase. Include their names and contact information.**

**4. Write an SQL query to find the most popular electronic gadget, which is the one with the highest total quantity ordered. Include the product name and the total quantity ordered.**

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Description automatically generated**5. Write an SQL query to retrieve a list of electronic gadgets along with their corresponding categories.**

**6. Write an SQL query to calculate the average order value for each customer. Include the customer's name and their average order value.**

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**7. Write an SQL query to find the order with the highest total revenue. Include the order ID, customer information, and the total revenue.**

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**8. Write an SQL query to list electronic gadgets and the number of times each product has been ordered.**

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**Task 4. Subquery and its type:**

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Description automatically generated**3. Write an SQL query to calculate the total revenue generated by TechShop.**

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Description automatically generated**4. Write an SQL query to calculate the average quantity ordered for products in a specific category.Allow users to input the category name as a parameter.**

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Description automatically generated**5. Write an SQL query to calculate the total revenue generated by a specific customer. Allow users to input the customer ID as a parameter.**

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Description automatically generated**6. Write an SQL query to find the customers who have placed the most orders. List their names and the number of orders they've placed.**

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Description automatically generated**7. Write an SQL query to find the most popular product category, which is the one with the highest total quantity ordered across all orders.**

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Description automatically generated**8. Write an SQL query to find the customer who has spent the most money (highest total revenue) on electronic gadgets. List their name and total spending.**

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Description automatically generated**9. Write an SQL query to calculate the average order value (total revenue divided by the number of orders) for all customers.**

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