TECHSHOP, AN ELECTRONIC GADGETS SHOP

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

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

```
mysql> use techshop;
Database changed

mysql> SELECT FirstName, LastName, Email
    -> FROM Customers;
+-----------+----------+-------------------------+
| FirstName | LastName | Email                   |
+-----------+----------+-------------------------+
| John      | Doe      | john.doe@example.com    |
| Alice     | Smith    | alice.smith@example.com |
| Bob       | Johnson  | bob.j@example.com       |
| Clara     | Brown    | clara.b@example.com     |
| David     | White    | david.w@example.com     |
| Emma      | Clark    | emma.c@example.com      |
| Frank     | Adams    | frank.a@example.com     |
| Grace     | Baker    | grace.b@example.com     |
| Henry     | Miller   | henry.m@example.com     |
| Ivy       | Williams | ivy.w@example.com       |
+-----------+----------+-------------------------+
10 rows in set (0.00 sec)
```

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

```
mysql> SELECT Orders.OrderID, Orders.OrderDate, Customers.FirstName,
Customers.LastName
    -> FROM Orders
    -> JOIN Customers ON Orders.CustomerID = Customers.CustomerID;
+---------+------------+-----------+----------+
| OrderID | OrderDate  | FirstName | LastName |
+---------+------------+-----------+----------+
|       1 | 2024-03-01 | John      | Doe      |
|       2 | 2024-03-05 | Alice     | Smith    |
|       3 | 2024-03-10 | Bob       | Johnson  |
|       4 | 2024-03-15 | Clara     | Brown    |
|       5 | 2024-03-18 | David     | White    |
|       6 | 2024-03-21 | Emma      | Clark    |
|       7 | 2024-03-25 | Frank     | Adams    |
|       8 | 2024-03-28 | Grace     | Baker    |
|       9 | 2024-03-30 | Henry     | Miller   |
|      10 | 2024-04-01 | Ivy       | Williams |
+---------+------------+-----------+----------+
10 rows in set (0.00 sec)
```

3. Write an SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.

```
mysql> INSERT INTO Customers (FirstName, LastName, Email, Phone, Address)
    -> VALUES ('Michael', 'Jordan', 'michael.jordan@example.com', '9997776665',
'23 Basketball St');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from customers;
+------------+-----------+----------+---------------------------+------------+------------------+
| CustomerID | FirstName | LastName | Email                     | Phone      | Address          |
+------------+-----------+----------+---------------------------+------------+------------------+
|          1 | John      | Doe      | john.doe@example.com      | 1234567890 | 123 Main St      |
|          2 | Alice     | Smith    | alice.smith@example.com   | 9876543210 | 456 Oak St       |
|          3 | Bob       | Johnson  | bob.j@example.com         | 5556667777 | 789 Pine St      |
|          4 | Clara     | Brown    | clara.b@example.com       | 4445556666 | 147 Birch St     |
|          5 | David     | White    | david.w@example.com       | 3332221111 | 369 Cedar St     |
|          6 | Emma      | Clark    | emma.c@example.com        | 1112223333 | 258 Spruce St    |
|          7 | Frank     | Adams    | frank.a@example.com       | 6667778888 | 753 Maple St     |
|          8 | Grace     | Baker    | grace.b@example.com       | 9998887777 | 951 Elm St       |
|          9 | Henry     | Miller   | henry.m@example.com       | 7778889999 | 852 Walnut St    |
|         10 | Ivy       | Williams | ivy.w@example.com         | 1239874560 | 654 Willow St    |
|         11 | Michael   | Jordan   | michael.jordan@example.com | 9997776665 | 23 Basketball St |
+------------+-----------+----------+---------------------------+------------+------------------+
11 rows in set (0.00 sec)
```

4. Write an SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.

```
mysql> UPDATE Products
    -> SET Price = Price * 1.10;
Query OK, 10 rows affected (0.01 sec)
Rows matched: 10  Changed: 10  Warnings: 0
```

```
mysql> select * from products;
+-----------+---------------------+-----------------------------+----------+
| ProductID | ProductName         | Description                 | Price    |
+-----------+---------------------+-----------------------------+----------+
|         1 | Laptop              | High performance laptop     | 1320.00 |
|         2 | Smartphone          | Latest model smartphone     |  880.00 |
|         3 | Tablet              | 10-inch screen tablet       |  495.00 |
|         4 | Smartwatch          | Fitness and health tracking |  220.00 |
|         5 | Gaming Console      | Latest-gen gaming console   |  550.00 |
|         6 | Wireless Headphones | Noise-canceling headphones  |  165.00 |
|         7 | External Hard Drive | 1TB storage                 |  110.00 |
|         8 | Keyboard            | Mechanical gaming keyboard  |   82.50 |
|         9 | Mouse               | Ergonomic wireless mouse    |   55.00 |
|        10 | Monitor             | 27-inch 4K UHD display      |  330.00 |
+-----------+---------------------+-----------------------------+----------+
10 rows in set (0.00 sec)
```

5. Write an SQL query to delete a specific order and its associated order details from the "Orders" and "OrderDetails" tables. Allow users to input the order ID as a parameter.

```
mysql> DELETE FROM OrderDetails WHERE OrderID = 5;
Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM Orders WHERE OrderID = 5;
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from orderdetails;
+---------------+---------+-----------+----------+
| OrderDetailID | OrderID | ProductID | Quantity |
+---------------+---------+-----------+----------+
|             1 |       1 |         1 |        1 |
|             2 |       1 |         6 |        2 |
|             3 |       2 |         2 |        1 |
|             4 |       2 |         7 |        1 |
|             5 |       3 |         3 |        1 |
|             6 |       4 |         5 |        1 |
|             8 |       6 |        10 |        1 |
|             9 |       7 |         4 |        1 |
|            10 |       8 |         9 |        1 |
+---------------+---------+-----------+----------+
9 rows in set (0.00 sec)
```

```
mysql> select * from orders;
+---------+------------+------------+-------------+
| OrderID | CustomerID | OrderDate  | TotalAmount |
+---------+------------+------------+-------------+
|       1 |          1 | 2024-03-01 |     1400.00 |
|       2 |          2 | 2024-03-05 |      950.00 |
|       3 |          3 | 2024-03-10 |      300.00 |
|       4 |          4 | 2024-03-15 |      650.00 |
|       6 |          6 | 2024-03-21 |     1250.00 |
|       7 |          7 | 2024-03-25 |      500.00 |
|       8 |          8 | 2024-03-28 |     1750.00 |
|       9 |          9 | 2024-03-30 |      700.00 |
|      10 |         10 | 2024-04-01 |     2000.00 |
+---------+------------+------------+-------------+
9 rows in set (0.00 sec)
```

6. Write an SQL query to insert a new order into the "Orders" table. Include the customer ID, order date, and any other necessary information.

```
mysql> INSERT INTO Orders (CustomerID, OrderDate, TotalAmount)
    -> VALUES (3, '2024-03-15', 750.00);
Query OK, 1 row affected (0.03 sec)
```

```
mysql> Select * from orders;
+---------+------------+------------+-------------+
| OrderID | CustomerID | OrderDate  | TotalAmount |
+---------+------------+------------+-------------+
|       1 |          1 | 2024-03-01 |     1400.00 |
|       2 |          2 | 2024-03-05 |      950.00 |
|       3 |          3 | 2024-03-10 |      300.00 |
|       4 |          4 | 2024-03-15 |      650.00 |
|       6 |          6 | 2024-03-21 |     1250.00 |
|       7 |          7 | 2024-03-25 |      500.00 |
|       8 |          8 | 2024-03-28 |     1750.00 |
|       9 |          9 | 2024-03-30 |      700.00 |
|      10 |         10 | 2024-04-01 |     2000.00 |
|      11 |          3 | 2024-03-15 |      750.00 |
+---------+------------+------------+-------------+
10 rows in set (0.00 sec)
```

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.

```
mysql> UPDATE Customers
    -> SET Email = 'newemail@example.com', Address = '456 New Address St'
    -> WHERE CustomerID = 3;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from customers;
+------------+-----------+----------+---------------------------+------------+--------------------+
| CustomerID | FirstName | LastName | Email                     | Phone      | Address            |
+------------+-----------+----------+---------------------------+------------+--------------------+
|          1 | John      | Doe      | john.doe@example.com      | 1234567890 | 123 Main St        |
|          2 | Alice     | Smith    | alice.smith@example.com   | 9876543210 | 456 Oak St         |
|          3 | Bob       | Johnson  | newemail@example.com      | 5556667777 | 456 New Address St |
|          4 | Clara     | Brown    | clara.b@example.com       | 4445556666 | 147 Birch St       |
|          5 | David     | White    | david.w@example.com       | 3332221111 | 369 Cedar St       |
|          6 | Emma      | Clark    | emma.c@example.com        | 1112223333 | 258 Spruce St      |
|          7 | Frank     | Adams    | frank.a@example.com       | 6667778888 | 753 Maple St       |
|          8 | Grace     | Baker    | grace.b@example.com       | 9998887777 | 951 Elm St         |
|          9 | Henry     | Miller   | henry.m@example.com       | 7778889999 | 852 Walnut St      |
|         10 | Ivy       | Williams | ivy.w@example.com         | 1239874560 | 654 Willow St      |
|         11 | Michael   | Jordan   | michael.jordan@example.com | 9997776665 | 23 Basketball St   |
+------------+-----------+----------+---------------------------+------------+--------------------+
11 rows in set (0.00 sec)
```

8. Write an SQL query to recalculate and update the total cost of each order in the "Orders" table based on the prices and quantities in the "OrderDetails" table.

```
mysql> UPDATE Orders
    -> SET TotalAmount = COALESCE(
    ->     (SELECT SUM(OrderDetails.Quantity * Products.Price)
    ->      FROM OrderDetails
    ->      JOIN Products ON OrderDetails.ProductID = Products.ProductID
    ->      WHERE OrderDetails.OrderID = Orders.OrderID), 0
    -> );
Query OK, 10 rows affected (0.01 sec)
Rows matched: 10  Changed: 10  Warnings: 0

mysql> SELECT * FROM ORDERS;
+---------+------------+------------+-------------+
| OrderID | CustomerID | OrderDate  | TotalAmount |
+---------+------------+------------+-------------+
|       1 |          1 | 2024-03-01 |     1650.00 |
|       2 |          2 | 2024-03-05 |      990.00 |
|       3 |          3 | 2024-03-10 |      495.00 |
|       4 |          4 | 2024-03-15 |      550.00 |
|       6 |          6 | 2024-03-21 |      330.00 |
|       7 |          7 | 2024-03-25 |      220.00 |
|       8 |          8 | 2024-03-28 |       55.00 |
|       9 |          9 | 2024-03-30 |        0.00 |
|      10 |         10 | 2024-04-01 |        0.00 |
|      11 |          3 | 2024-03-15 |        0.00 |
+---------+------------+------------+-------------+
10 rows in set (0.00 sec)
```

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.

```
mysql> DELETE FROM OrderDetails WHERE OrderID IN (SELECT OrderID FROM Orders
WHERE CustomerID = 4);
Query OK, 1 row affected (0.02 sec)

mysql> DELETE FROM Orders WHERE CustomerID = 4;
Query OK, 1 row affected (0.01 sec)

mysql> select * from orderdetails;
+---------------+---------+-----------+----------+
| OrderDetailID | OrderID | ProductID | Quantity |
+---------------+---------+-----------+----------+
|             1 |       1 |         1 |        1 |
|             2 |       1 |         6 |        2 |
|             3 |       2 |         2 |        1 |
|             4 |       2 |         7 |        1 |
|             5 |       3 |         3 |        1 |
|             8 |       6 |        10 |        1 |
|             9 |       7 |         4 |        1 |
|            10 |       8 |         9 |        1 |
+---------------+---------+-----------+----------+
8 rows in set (0.00 sec)
```

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.

```
mysql> INSERT INTO Products (ProductName, Description, Price)
    -> VALUES ('Bluetooth Speaker', 'Portable waterproof Bluetooth speaker',
80.00);
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM PRODUCTS;
+-----------+--------------------+--------------------------------------+---------+
| ProductID | ProductName        | Description                          | Price   |
+-----------+--------------------+--------------------------------------+---------+
|         1 | Laptop             | High performance laptop              | 1320.00 |
|         2 | Smartphone         | Latest model smartphone              |  880.00 |
|         3 | Tablet             | 10-inch screen tablet                |  495.00 |
|         4 | Smartwatch         | Fitness and health tracking          |  220.00 |
|         5 | Gaming Console     | Latest-gen gaming console            |  550.00 |
|         6 | Wireless Headphones | Noise-canceling headphones          |  165.00 |
|         7 | External Hard Drive | 1TB storage                         |  110.00 |
|         8 | Keyboard           | Mechanical gaming keyboard           |   82.50 |
|         9 | Mouse              | Ergonomic wireless mouse             |   55.00 |
|        10 | Monitor            | 27-inch 4K UHD display               |  330.00 |
|        11 | Bluetooth Speaker  | Portable waterproof Bluetooth speaker |   80.00 |
+-----------+--------------------+--------------------------------------+---------+
11 rows in set (0.00 sec)
```

**11. Write an SQL query to update the status of a specific order in the "Orders" table (e.g., from
"Pending" to "Shipped"). Allow users to input the order ID and the new status.**

```
mysql> ALTER TABLE Orders ADD COLUMN OrderStatus VARCHAR(20) DEFAULT 'Pending';
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0


mysql> UPDATE Orders
    -> SET OrderStatus = 'Shipped'
    -> WHERE OrderID = 2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0


mysql> SELECT * FROM ORDERS;
+---------+------------+------------+-------------+-------------+
| OrderID | CustomerID | OrderDate  | TotalAmount | OrderStatus |
+---------+------------+------------+-------------+-------------+
|       1 |          1 | 2024-03-01 |     1650.00 | Pending     |
|       2 |          2 | 2024-03-05 |      990.00 | Shipped     |
|       3 |          3 | 2024-03-10 |      495.00 | Pending     |
|       4 |          4 | 2024-03-15 |      550.00 | Pending     |
|       6 |          6 | 2024-03-21 |      330.00 | Pending     |
|       7 |          7 | 2024-03-25 |      220.00 | Pending     |
|       8 |          8 | 2024-03-28 |       55.00 | Pending     |
|       9 |          9 | 2024-03-30 |        0.00 | Pending     |
|      10 |         10 | 2024-04-01 |        0.00 | Pending     |
|      11 |          3 | 2024-03-15 |        0.00 | Pending     |
+---------+------------+------------+-------------+-------------+
10 rows in set (0.00 sec)
```

12. Write an SQL query to calculate and update the number of orders placed by each customer in the "Customers" table based on the data in the "Orders" table

```
mysql> ALTER TABLE Customers ADD COLUMN OrderCount INT DEFAULT 0;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0.

mysql> UPDATE Customers
    -> SET OrderCount = (
    ->     SELECT COUNT(*)
    ->     FROM Orders
    ->     WHERE Orders.CustomerID = Customers.CustomerID
    -> );
Query OK, 9 rows affected (0.01 sec)
Rows matched: 11  Changed: 9  Warnings: 0
```

```
mysql> SELECT * FROM CUSTOMERS;
```

CustomerID	FirstName	LastName	Email	Phone	Address	OrderCount
1	John	Doe	john.doe@example.com	1234567890	123 Main St	1
2	Alice	Smith	alice.smith@example.com	9876543210	456 Oak St	1
3	Bob	Johnson	newemail@example.com	5556667777	456 New Address St	2
4	Clara	Brown	clara.b@example.com	4445556666	147 Birch St	1
5	David	White	david.w@example.com	3332221111	369 Cedar St	0
6	Emma	Clark	emma.c@example.com	1112223333	258 Spruce St	1
7	Frank	Adams	frank.a@example.com	6667778888	753 Maple St	1
8	Grace	Baker	grace.b@example.com	9998887777	951 Elm St	1
9	Henry	Miller	henry.m@example.com	7778889999	852 Walnut St	1
10	Ivy	Williams	ivy.w@example.com	1239874560	654 Willow St	1
11	Michael	Jordan	michael.jordan@example.com	9997776665	23 Basketball St	0

11 rows in set (0.00 sec)