

Lab Assignment – 1

Task-1:

1. Create the database named "TechShop"

```
[tanaygeet@Tanaygeets-MacBook-Pro Downloads % mysql -u root -p - 80x24
[Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.3.0 Homebrew

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

[mysql> CREATE DATABASE TechShop;
Query OK, 1 row affected (0.05 sec)

[mysql> USE TechShop;
Database changed
mysql> ]]
```

2. Define the schema for the tables:

- i) Create the Customers table:

```
[tanaygeet@Tanaygeets-MacBook-Pro ~ % mysql -u root -p - 90x29
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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

[mysql> USE TechShop;
Database changed
mysql> CREATE TABLE Customers (
    ->     CustomerID INT AUTO_INCREMENT PRIMARY KEY,
    ->     FirstName VARCHAR(50),
    ->     LastName VARCHAR(50),
    ->     Email VARCHAR(100),
    ->     Phone VARCHAR(15),
    ->     Address VARCHAR(255)
    [ -> );
Query OK, 0 rows affected (0.09 sec)

[mysql> show tables;
+-----+
| Tables_in_techshop |
+-----+
| Customers          |
+-----+
1 row in set (0.02 sec)

mysql> ]]
```

ii) Create the Products table:

```
tanaygeet — mysql -u root -p — 90x29
mysql> CREATE TABLE Products (
    ->     ProductID INT AUTO_INCREMENT PRIMARY KEY,
    ->     ProductName VARCHAR(100),
    ->     Description TEXT,
    ->     Price DECIMAL(10, 2));
Query OK, 0 rows affected (0.02 sec)

[mysql> show tables;
+-----+
| Tables_in_techshop |
+-----+
| Customers          |
| Products           |
+-----+
2 rows in set (0.00 sec)

mysql> ]
```

iii) Create the Orders table:

```
tanaygeet — mysql -u root -p — 90x29
mysql> CREATE TABLE Orders (
    ->     OrderID INT AUTO_INCREMENT PRIMARY KEY,
    ->     CustomerID INT,
    ->     OrderDate DATE,
    ->     TotalAmount DECIMAL(10, 2),
    ->     FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID));
Query OK, 0 rows affected (0.08 sec)

[mysql> show tables;
+-----+
| Tables_in_techshop |
+-----+
| Customers          |
| Orders              |
| Products           |
+-----+
3 rows in set (0.01 sec)

mysql> ]
```

iv) Create the OrderDetails table:

```
tanaygeet — mysql -u root -p — 90x29
mysql> CREATE TABLE OrderDetails (
    ->     OrderDetailID INT AUTO_INCREMENT PRIMARY KEY,
    ->     OrderID INT,
    ->     ProductID INT,
    ->     Quantity INT,
    ->     FOREIGN KEY (OrderID) REFERENCES Orders(OrderID),
    ->     FOREIGN KEY (ProductID) REFERENCES Products(ProductID));
Query OK, 0 rows affected (0.03 sec)

[mysql> show tables;
+-----+
| Tables_in_techshop |
+-----+
| Customers          |
| OrderDetails        |
| Orders              |
| Products            |
+-----+
4 rows in set (0.00 sec)

mysql> ]
```

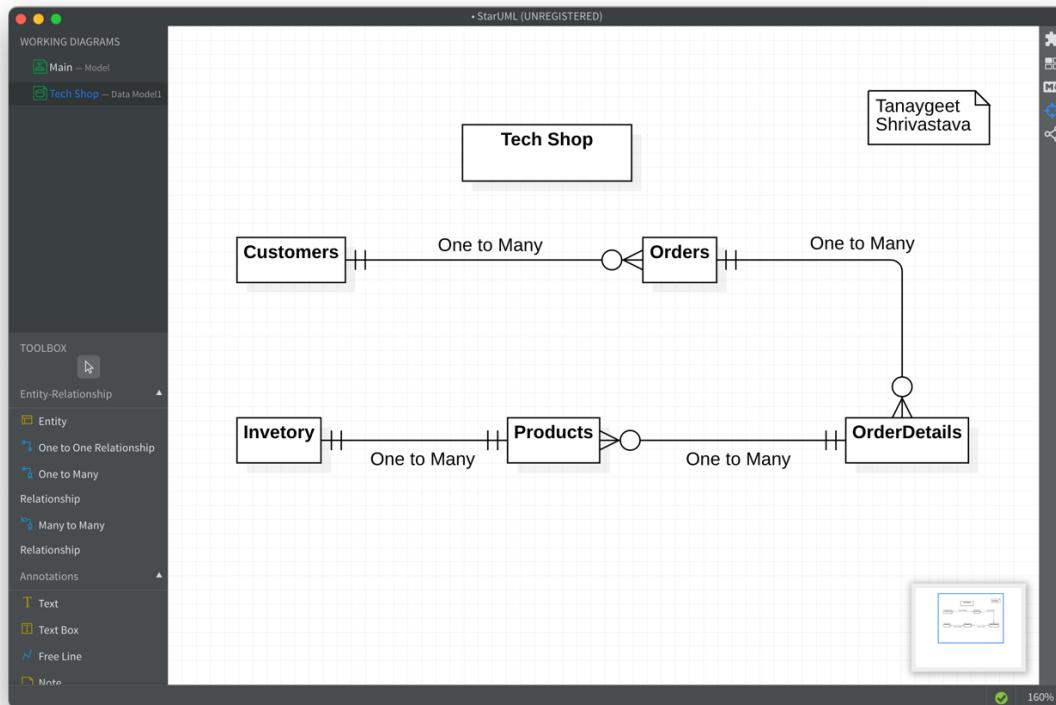
v) Create the Inventory table:

```
tanaygeet — mysql -u root -p — 90x29
mysql> CREATE TABLE Inventory (
    ->     InventoryID INT AUTO_INCREMENT PRIMARY KEY,
    ->     ProductID INT,
    ->     QuantityInStock INT,
    ->     LastStockUpdate DATE,
    ->     FOREIGN KEY (ProductID) REFERENCES Products(ProductID));
Query OK, 0 rows affected (0.01 sec)

[mysql> show tables;
+-----+
| Tables_in_techshop |
+-----+
| Customers          |
| Inventory          |
| OrderDetails        |
| Orders              |
| Products            |
+-----+
5 rows in set (0.01 sec)

mysql> ]
```

3. Create an ERD (Entity Relationship Diagram):



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

These have already been created within the table definitions, ensuring referential integrity between Customers, Orders, OrderDetails, and Products.

5. Insert sample data into the tables:

i) Insert data into the Customers table:

```
tanaygeet — mysql -u root -p — 95x32
mysql> INSERT INTO Customers (FirstName, LastName, Email, Phone, Address) VALUES
-> ('Tanaygeet', 'Shrivastava', 'Tanaygeet@example.com', '1234567890', 'Indore'),
-> ('Aditya', 'Khamare', 'Aditya@example.com', '2345678901', 'Pune'),
-> ('Pallavi', 'Sinha', 'Pallavi@example.com', '3456789012', 'Bangalore'),
-> ('Ronak', 'Patel', 'Ronak@example.com', '4567890123', 'Chennai'),
-> ('Latashree', 'Shrivastava', 'Latashree@example.com', '5678901234', 'Ahmedabad'),
-> ('Ravindra', 'Bage', 'Ravindra@example.com', '6789012345', 'Kolkata'),
-> ('Kritika', 'Nigam', 'Kritika@example.com', '7890123456', 'Irvine'),
-> ('Dev', 'Suri', 'Dev@example.com', '8901234567', 'Delhi'),
-> ('Sonoya', 'Tiwari', 'Sonoya@example.com', '9012345678', 'Mumbai'),
[ -> ('Shruti', 'Parmar', 'Shruti@example.com', '0123456789', 'Pondicherry');
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from Customers
[ -> ;
+-----+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Email | Phone | Address |
+-----+-----+-----+-----+-----+-----+
| 1 | Tanaygeet | Shrivastava | Tanaygeet@example.com | 1234567890 | Indore |
| 2 | Aditya | Khamare | Aditya@example.com | 2345678901 | Pune |
| 3 | Pallavi | Sinha | Pallavi@example.com | 3456789012 | Bangalore |
| 4 | Ronak | Patel | Ronak@example.com | 4567890123 | Chennai |
| 5 | Latashree | Shrivastava | Latashree@example.com | 5678901234 | Ahmedabad |
| 6 | Ravindra | Bage | Ravindra@example.com | 6789012345 | Kolkata |
| 7 | Kritika | Nigam | Kritika@example.com | 7890123456 | Irvine |
| 8 | Dev | Suri | Dev@example.com | 8901234567 | Delhi |
| 9 | Sonoya | Tiwari | Sonoya@example.com | 9012345678 | Mumbai |
| 10 | Shruti | Parmar | Shruti@example.com | 0123456789 | Pondicherry |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

ii) Insert data into the Products table:

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Products (ProductName, Description, Price) VALUES
-> ('Smartphone', 'Latest smartphone with high resolution camera', 25699.99),
-> ('Laptop', '15-inch laptop with 16GB RAM and 512GB SSD', 78999.99),
-> ('Tablet', '10-inch tablet with 64GB storage', 24299.99),
-> ('Smartwatch', 'Smartwatch with heart rate monitor', 1199.99),
-> ('Bluetooth Speaker', 'Portable Bluetooth speaker with 10 hours battery life', 4449.99),
-> ('Wireless Earbuds', 'Noise-cancelling wireless earbuds', 6129.99),
-> ('Gaming Console', 'Next-gen gaming console with 1TB storage', 61499.99),
-> ('4K TV', '50-inch 4K Ultra HD Smart TV', 43799.99),
-> ('Digital Camera', '24MP digital camera with 4K video recording', 30599.99),
-> ('Drone', 'Quadcopter drone with 1080p HD camera', 7399.99);
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from Products
[   -> ;
+-----+-----+-----+-----+
| ProductID | ProductName | Description | Price |
+-----+-----+-----+-----+
| 1 | Smartphone | Latest smartphone with high resolution camera | 25699.99 |
| 2 | Laptop | 15-inch laptop with 16GB RAM and 512GB SSD | 78999.99 |
| 3 | Tablet | 10-inch tablet with 64GB storage | 24299.99 |
| 4 | Smartwatch | Smartwatch with heart rate monitor | 1199.99 |
| 5 | Bluetooth Speaker | Portable Bluetooth speaker with 10 hours battery life | 4449.99 |
| 6 | Wireless Earbuds | Noise-cancelling wireless earbuds | 6129.99 |
| 7 | Gaming Console | Next-gen gaming console with 1TB storage | 61499.99 |
| 8 | 4K TV | 50-inch 4K Ultra HD Smart TV | 43799.99 |
| 9 | Digital Camera | 24MP digital camera with 4K video recording | 30599.99 |
| 10 | Drone | Quadcopter drone with 1080p HD camera | 7399.99 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

iii) Insert data into the Orders table:

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Orders (CustomerID, OrderDate, TotalAmount) VALUES
-> (1, '2024-09-01', 34749.99),
-> (2, '2024-09-02', 81299.99),
-> (3, '2024-09-03', 56449.99),
-> (4, '2024-09-04', 27249.99),
-> (5, '2024-09-05', 97699.99),
-> (6, '2024-09-06', 67599.99),
-> (7, '2024-09-07', 21399.99),
-> (8, '2024-09-08', 89399.99),
-> (9, '2024-09-09', 23999.99),
-> (10, '2024-09-10', 12299.99);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from orders;
+-----+-----+-----+-----+
| OrderID | CustomerID | OrderDate | TotalAmount |
+-----+-----+-----+-----+
| 1 | 1 | 2024-09-01 | 34749.99 |
| 2 | 2 | 2024-09-02 | 81299.99 |
| 3 | 3 | 2024-09-03 | 56449.99 |
| 4 | 4 | 2024-09-04 | 27249.99 |
| 5 | 5 | 2024-09-05 | 97699.99 |
| 6 | 6 | 2024-09-06 | 67599.99 |
| 7 | 7 | 2024-09-07 | 21399.99 |
| 8 | 8 | 2024-09-08 | 89399.99 |
| 9 | 9 | 2024-09-09 | 23999.99 |
| 10 | 10 | 2024-09-10 | 12299.99 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

iv) Insert data into the OrderDetails table:

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO OrderDetails (OrderID, ProductID, Quantity) VALUES
-> (1, 1, 2),
-> (2, 2, 3),
-> (3, 3, 4),
-> (4, 4, 3),
-> (5, 5, 2),
-> (6, 6, 4),
-> (7, 7, 2),
-> (8, 8, 3),
-> (9, 9, 2),
-> (10, 10, 2);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from OrdersDetails;
ERROR 1146 (42S02): Table 'techshop.ordersdetails' doesn't exist
mysql> select * from OrderDetails;
+-----+-----+-----+
| OrderDetailID | OrderID | ProductID | Quantity |
+-----+-----+-----+
|      1 |      1 |        1 |        2 |
|      2 |      2 |        2 |        3 |
|      3 |      3 |        3 |        4 |
|      4 |      4 |        4 |        3 |
|      5 |      5 |        5 |        2 |
|      6 |      6 |        6 |        4 |
|      7 |      7 |        7 |        2 |
|      8 |      8 |        8 |        3 |
|      9 |      9 |        9 |        2 |
|     10 |     10 |       10 |        2 |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

v) Insert data into the Inventory table:

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Inventory (ProductID, QuantityInStock, LastStockUpdate) VALUES
-> (1, 100, '2024-08-01'),
-> (2, 50, '2024-08-02'),
-> (3, 200, '2024-08-03'),
-> (4, 150, '2024-08-04'),
-> (5, 300, '2024-08-05'),
-> (6, 75, '2024-08-06'),
-> (7, 60, '2024-08-07'),
-> (8, 40, '2024-08-08'),
-> (9, 120, '2024-08-09'),
-> (10, 80, '2024-08-10');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from Inventory;
+-----+-----+-----+
| InventoryID | ProductID | QuantityInStock | LastStockUpdate |
+-----+-----+-----+
|      1 |      1 |        100 | 2024-08-01 |
|      2 |      2 |         50 | 2024-08-02 |
|      3 |      3 |        200 | 2024-08-03 |
|      4 |      4 |        150 | 2024-08-04 |
|      5 |      5 |        300 | 2024-08-05 |
|      6 |      6 |         75 | 2024-08-06 |
|      7 |      7 |         60 | 2024-08-07 |
|      8 |      8 |         40 | 2024-08-08 |
|      9 |      9 |        120 | 2024-08-09 |
|     10 |     10 |         80 | 2024-08-10 |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

Task-1:

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

```
tanaygeet — mysql -u root -p — 103x33
mysql> SELECT FirstName, LastName, Email
[   -> FROM Customers;
+-----+
| FirstName | LastName | Email
+-----+
| Tanaygeet | Shrivastava | Tanaygeet@example.com
| Aditya    | Khamare   | Aditya@example.com
| Pallavi   | Sinha     | Pallavi@example.com
| Ronak     | Patel     | Ronak@example.com
| Latashree | Shrivastava | Latashree@example.com
| Ravindra  | Bage      | Ravindra@example.com
| Kritika   | Nigam     | Kritika@example.com
| Dev       | Suri      | Dev@example.com
| Soniya   | Tiwari    | Soniya@example.com
| Shruti   | Parmar    | Shruti@example.com
+-----+
10 rows in set (0.00 sec)

mysql>
```

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

```
tanaygeet — mysql -u root -p — 103x33
mysql> SELECT Orders.OrderID, Orders.OrderDate, Customers.FirstName, Customers.LastName
[   -> FROM Orders
[   -> JOIN Customers ON Orders.CustomerID = Customers.CustomerID;
+-----+
| OrderID | OrderDate | FirstName | LastName
+-----+
| 1 | 2024-09-01 | Tanaygeet | Shrivastava
| 2 | 2024-09-02 | Aditya    | Khamare
| 3 | 2024-09-03 | Pallavi   | Sinha
| 4 | 2024-09-04 | Ronak     | Patel
| 5 | 2024-09-05 | Latashree | Shrivastava
| 6 | 2024-09-06 | Ravindra  | Bage
| 7 | 2024-09-07 | Kritika   | Nigam
| 8 | 2024-09-08 | Dev       | Suri
| 9 | 2024-09-09 | Soniya   | Tiwari
| 10 | 2024-09-10 | Shruti   | Parmar
+-----+
10 rows in set (0.01 sec)

mysql>
```

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

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Customers (FirstName, LastName, Email, Phone, Address)
[   -> VALUES ('Dhairya', 'Jain', 'Dhairya@example.com', '9876543210', 'Bhopal');
Query OK, 1 row affected (0.01 sec)

mysql> select * from Customers;
+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Email           | Phone      | Address        |
+-----+-----+-----+-----+-----+
|      1 | Tanaygeet | Shrivastava | Tanaygeet@example.com | 1234567890 | Indore         |
|      2 | Aditya    | Khamare     | Aditya@example.com  | 2345678901 | Pune          |
|      3 | Pallavi   | Sinha       | Pallavi@example.com | 3456789012 | Bangalore     |
|      4 | Ronak     | Patel       | Ronak@example.com  | 4567890123 | Chennai        |
|      5 | Latashree | Shrивastava | Latashree@example.com | 5678901234 | Ahmedabad     |
|      6 | Ravindra  | Bage        | Ravindra@example.com | 6789012345 | Kolkata        |
|      7 | Kritika   | Nigam       | Kritika@example.com | 7890123456 | Irvine         |
|      8 | Dev        | Suri        | Dev@example.com    | 8901234567 | Delhi          |
|      9 | Soniya    | Tiwari     | Soniya@example.com | 9012345678 | Mumbai         |
|     10 | Shruti    | Parmar     | Shruti@example.com | 0123456789 | Pondicherry   |
|     11 | Dhairya   | Jain        | Dhairya@example.com | 9876543210 | Bhopal         |
+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
```

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

```
tanaygeet — mysql -u root -p — 103x33
mysql> UPDATE Products
[   -> SET Price = Price * 1.10;
Query OK, 10 rows affected, 10 warnings (0.02 sec)
Rows matched: 10  Changed: 10  Warnings: 10

mysql> select * from Products;
+-----+-----+-----+-----+
| ProductID | ProductName | Description           | Price   |
+-----+-----+-----+-----+
|      1 | Smartphone | Latest smartphone with high resolution camera | 28269.99 |
|      2 | Laptop      | 15-inch laptop with 16GB RAM and 512GB SSD      | 86899.99 |
|      3 | Tablet      | 10-inch tablet with 64GB storage                 | 26729.99 |
|      4 | Smartwatch  | Smartwatch with heart rate monitor             | 1319.99  |
|      5 | Bluetooth Speaker | Portable Bluetooth speaker with 10 hours battery life | 4894.99 |
|      6 | Wireless Earbuds | Noise-cancelling wireless earbuds              | 6742.99  |
|      7 | Gaming Console | Next-gen gaming console with 1TB storage        | 67649.99 |
|      8 | 4K TV        | 50-inch 4K Ultra HD Smart TV                  | 48179.99 |
|      9 | Digital Camera | 24MP digital camera with 4K video recording   | 33659.99 |
|     10 | Drone        | Quadcopter drone with 1080p HD camera          | 8139.99  |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> SET @OrderID = 1; -- order ID
Query OK, 0 rows affected (0.00 sec)

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

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

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

mysql>
```

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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Orders (CustomerID, OrderDate, TotalAmount)
[   -> VALUES (1, '2024-09-15', 86500.00);
Query OK, 1 row affected (0.01 sec)

mysql> select * from Orders;
+-----+-----+-----+-----+
| OrderID | CustomerID | OrderDate | TotalAmount |
+-----+-----+-----+-----+
|      2 |      2 | 2024-09-02 |    81299.99 |
|      3 |      3 | 2024-09-03 |    56449.99 |
|      4 |      4 | 2024-09-04 |    27249.99 |
|      5 |      5 | 2024-09-05 |    97699.99 |
|      6 |      6 | 2024-09-06 |    67599.99 |
|      7 |      7 | 2024-09-07 |    21399.99 |
|      8 |      8 | 2024-09-08 |    89399.99 |
|      9 |      9 | 2024-09-09 |    23999.99 |
|     10 |     10 | 2024-09-10 |    12299.99 |
|     11 |      1 | 2024-09-15 |   86500.00 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> SET @CustomerID = 8; -- customer ID
Query OK, 0 rows affected (0.00 sec)

mysql> SET @NewEmail = 'DevSuri@example.com';
Query OK, 0 rows affected (0.00 sec)

mysql> SET @NewAddress = 'Noida';
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> UPDATE Customers
-> SET Email = @NewEmail, Address = @NewAddress
[   -> WHERE CustomerID = @CustomerID;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

[mysql> select * from Customers;
+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Email           | Phone        | Address      |
+-----+-----+-----+-----+-----+
| 1 | Tanaygeet | Shrivastava | Tanaygeet@example.com | 1234567890 | Indore       |
| 2 | Aditya    | Khamare     | Aditya@example.com   | 2345678901 | Pune         |
| 3 | Pallavi   | Sinha       | Pallavi@example.com | 3456789012 | Bangalore    |
| 4 | Ronak     | Patel       | Ronak@example.com   | 4567890123 | Chennai      |
| 5 | Latashree | Shrivastava | Latashree@example.com | 5678901234 | Ahmedabad    |
| 6 | Ravindra   | Bage        | Ravindra@example.com | 6789012345 | Kolkata      |
| 7 | Kritika   | Nigam       | Kritika@example.com | 7890123456 | Irvine       |
| 8 | Dev        | Suri        | DevSuri@example.com | 8901234567 | Noida        |
| 9 | Soniya    | Tiwari     | Soniya@example.com  | 9012345678 | Mumbai       |
| 10 | Shruti   | Parmar     | Shruti@example.com  | 0123456789 | Pondicherry |
| 11 | Dhairya   | Jain        | Dhairya@example.com | 9876543210 | Bhopal      |
+-----+-----+-----+-----+-----+
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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> UPDATE Orders O
-> JOIN (
->     SELECT OrderID, SUM(OD.Quantity * P.Price) AS TotalAmount
->     FROM OrderDetails OD
->     JOIN Products P ON OD.ProductID = P.ProductID
->     GROUP BY OrderID
-> ) AS Subquery ON O.OrderID = Subquery.OrderID
[   -> SET O.TotalAmount = Subquery.TotalAmount;
Query OK, 9 rows affected (0.01 sec)
Rows matched: 9  Changed: 9  Warnings: 0

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

mysql>
```

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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> SET @CustomerID = 2; -- customer ID
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> DELETE FROM OrderDetails
-> WHERE OrderID IN (SELECT OrderID FROM Orders WHERE CustomerID = @CustomerID);
Query OK, 1 row affected (0.03 sec)

mysql>
mysql> DELETE FROM Orders
[   -> WHERE CustomerID = @CustomerID;
Query OK, 1 row affected (0.00 sec)

[mysql> select * from Orders;
+----+-----+-----+-----+
| OrderID | CustomerID | OrderDate | TotalAmount |
+----+-----+-----+-----+
| 3 | 3 | 2024-09-03 | 106919.96 |
| 4 | 4 | 2024-09-04 | 3959.97 |
| 5 | 5 | 2024-09-05 | 9789.98 |
| 6 | 6 | 2024-09-06 | 26971.96 |
| 7 | 7 | 2024-09-07 | 135299.98 |
| 8 | 8 | 2024-09-08 | 144539.97 |
| 9 | 9 | 2024-09-09 | 67319.98 |
| 10 | 10 | 2024-09-10 | 16279.98 |
| 11 | 1 | 2024-09-15 | 86500.00 |
+----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

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.

```
tanaygeet — mysql -u root -p — 103x33
mysql> INSERT INTO Products (ProductName, Description, Price)
[   -> VALUES ('Smart Glasses', 'Wearable smart glasses with AR features', 17299.99);
Query OK, 1 row affected (0.00 sec)

[mysql> select * from Products;
+----+-----+-----+-----+
| ProductID | ProductName | Description | Price |
+----+-----+-----+-----+
| 1 | Smartphone | Latest smartphone with high resolution camera | 28269.99 |
| 2 | Laptop | 15-inch laptop with 16GB RAM and 512GB SSD | 86899.99 |
| 3 | Tablet | 10-inch tablet with 64GB storage | 26729.99 |
| 4 | Smartwatch | Smartwatch with heart rate monitor | 1319.99 |
| 5 | Bluetooth Speaker | Portable Bluetooth speaker with 10 hours battery life | 4894.99 |
| 6 | Wireless Earbuds | Noise-cancelling wireless earbuds | 6742.99 |
| 7 | Gaming Console | Next-gen gaming console with 1TB storage | 67649.99 |
| 8 | 4K TV | 50-inch 4K Ultra HD Smart TV | 48179.99 |
| 9 | Digital Camera | 24MP digital camera with 4K video recording | 33659.99 |
| 10 | Drone | Quadcopter drone with 1080p HD camera | 8139.99 |
| 11 | Smart Glasses | Wearable smart glasses with AR features | 17299.99 |
+----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
```

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.

i) Adding new column as status in orders table:

```
tanaygeet — mysql -u root -p — 103x33
mysql> ALTER TABLE Orders
[   -> ADD COLUMN Status VARCHAR(20) DEFAULT 'Pending';
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from Orders;
+-----+-----+-----+-----+-----+
| OrderID | CustomerID | OrderDate | TotalAmount | Status |
+-----+-----+-----+-----+-----+
|      3 |         3 | 2024-09-03 |    106919.96 | Pending |
|      4 |         4 | 2024-09-04 |      3959.97 | Pending |
|      5 |         5 | 2024-09-05 |      9789.98 | Pending |
|      6 |         6 | 2024-09-06 |    26971.96 | Pending |
|      7 |         7 | 2024-09-07 |   135299.98 | Pending |
|      8 |         8 | 2024-09-08 |   144539.97 | Pending |
|      9 |         9 | 2024-09-09 |      67319.98 | Pending |
|     10 |        10 | 2024-09-10 |    16279.98 | Pending |
|     11 |         1 | 2024-09-15 |    86500.00 | Pending |
+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

ii) Status Update:

```
tanaygeet — mysql -u root -p — 103x33
mysql> SET @OrderID = 7; -- order ID
Query OK, 0 rows affected (0.00 sec)

mysql> SET @NewStatus = 'Shipped';
Query OK, 0 rows affected (0.00 sec)

mysql>
mysql> UPDATE Orders
[   -> SET Status = @NewStatus
[   -> WHERE OrderID = @OrderID;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from Orders;
+-----+-----+-----+-----+-----+
| OrderID | CustomerID | OrderDate | TotalAmount | Status |
+-----+-----+-----+-----+-----+
|      3 |         3 | 2024-09-03 |    106919.96 | Pending |
|      4 |         4 | 2024-09-04 |      3959.97 | Pending |
|      5 |         5 | 2024-09-05 |      9789.98 | Pending |
|      6 |         6 | 2024-09-06 |    26971.96 | Pending |
|      7 |         7 | 2024-09-07 |   135299.98 | Shipped |
|      8 |         8 | 2024-09-08 |   144539.97 | Pending |
|      9 |         9 | 2024-09-09 |      67319.98 | Pending |
|     10 |        10 | 2024-09-10 |    16279.98 | Pending |
|     11 |         1 | 2024-09-15 |    86500.00 | Pending |
+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

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.

- i) Adding new column as Number of Orders in Customers table:

```
tanaygeet — mysql -u root -p — 110x24

[mysql]> ALTER TABLE Customers ADD COLUMN NumberOfOrders INT DEFAULT 0;
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

[mysql]> select * from Customers;
+-----+-----+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Email | Phone | Address | NumberOfOrders |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | Tanaygeet | Shrivastava | Tanaygeet@example.com | 1234567890 | Indore | 0 |
| 2 | Aditya | Khamare | Aditya@example.com | 2345678901 | Pune | 0 |
| 3 | Pallavi | Sinha | Pallavi@example.com | 3456789012 | Bangalore | 0 |
| 4 | Ronak | Patel | Ronak@example.com | 4567890123 | Chennai | 0 |
| 5 | LataShree | Shrivastava | LataShree@example.com | 5678901234 | Ahemdbabad | 0 |
| 6 | Ravindra | Bage | Ravindra@example.com | 6789012345 | Kolkata | 0 |
| 7 | Kritika | Nigam | Kritika@example.com | 7890123456 | Irvine | 0 |
| 8 | Dev | Suri | DevSuri@example.com | 8901234567 | Noida | 0 |
| 9 | Soniya | Tiwari | Soniya@example.com | 9012345678 | Mumbai | 0 |
| 10 | Shruti | Parmar | Shruti@example.com | 0123456789 | Pondicherry | 0 |
| 11 | Dhairyा | Jain | Dhairyा@example.com | 9876543210 | Bhopal | 0 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
```

- ii) Updating No. of orders:

```
tanaygeet — mysql -u root -p — 110x28

mysql> UPDATE Customers C
    -> SET C.NumberOfOrders =
    ->     SELECT COUNT(*)
    ->     FROM Orders O
    ->     WHERE O.CustomerID = C.CustomerID
    -> );
Query OK, 9 rows affected (0.02 sec)
Rows matched: 11  Changed: 9  Warnings: 0

[mysql]> select * from Customers;
+-----+-----+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Email | Phone | Address | NumberOfOrders |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | Tanaygeet | Shrivastava | Tanaygeet@example.com | 1234567890 | Indore | 1 |
| 2 | Aditya | Khamare | Aditya@example.com | 2345678901 | Pune | 0 |
| 3 | Pallavi | Sinha | Pallavi@example.com | 3456789012 | Bangalore | 1 |
| 4 | Ronak | Patel | Ronak@example.com | 4567890123 | Chennai | 1 |
| 5 | LataShree | Shrivastava | LataShree@example.com | 5678901234 | Ahemdbabad | 1 |
| 6 | Ravindra | Bage | Ravindra@example.com | 6789012345 | Kolkata | 1 |
| 7 | Kritika | Nigam | Kritika@example.com | 7890123456 | Irvine | 1 |
| 8 | Dev | Suri | DevSuri@example.com | 8901234567 | Noida | 1 |
| 9 | Soniya | Tiwari | Soniya@example.com | 9012345678 | Mumbai | 1 |
| 10 | Shruti | Parmar | Shruti@example.com | 0123456789 | Pondicherry | 1 |
| 11 | Dhairyा | Jain | Dhairyा@example.com | 9876543210 | Bhopal | 0 |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

mysql>
```