**TASK 2:**

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| employee |

| fanny |

| information\_schema |

| mysql |

| performance\_schema |

| sys |

| techshop |

| testdb |

+--------------------+

8 rows in set (0.08 sec)

mysql> use techshop;

Database changed

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+--------------------------+

| customerid | firstname | lastname | email | phone | address |

+------------+-----------+----------+-------------------+------------+--------------------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune |

| 4 | Ally | Brown | ally@outlook.com | 4567890123 | 159 Pine St Kerela |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana |

+------------+-----------+----------+-------------------+------------+--------------------------+

10 rows in set (0.01 sec)

mysql> select \* from products;

+-----------+--------------+---------------------+---------+

| productid | productname | description | price |

+-----------+--------------+---------------------+---------+

| 1 | Laptop | Dell Inspiron 15 | 799.99 |

| 2 | Smartphone | Samsung Galaxy S22 | 999.99 |

| 3 | Tablet | Apple iPad Pro | 1099.99 |

| 4 | Headphones | Sony WH-1000XM4 | 299.99 |

| 5 | Keyboard | Mechanical Keyboard | 89.99 |

| 6 | Mouse | Wireless Mouse | 49.99 |

| 7 | Monitor | 27-inch 4K Monitor | 349.99 |

| 8 | Printer | HP LaserJet Pro | 199.99 |

| 9 | External SSD | Samsung T7 1TB | 129.99 |

| 10 | Router | Netgear Nighthawk | 179.99 |

+-----------+--------------+---------------------+---------+

10 rows in set (0.00 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+

| orderid | customerid | orderdate | totalamount |

+---------+------------+---------------------+-------------+

| 1 | 1 | 2025-03-26 00:48:51 | 1299.98 |

| 2 | 2 | 2025-03-26 00:48:51 | 999.99 |

| 3 | 3 | 2025-03-26 00:48:51 | 349.99 |

| 4 | 4 | 2025-03-26 00:48:51 | 1099.99 |

| 5 | 5 | 2025-03-26 00:48:51 | 299.99 |

| 6 | 6 | 2025-03-26 00:48:51 | 199.99 |

| 7 | 7 | 2025-03-26 00:48:51 | 89.99 |

| 8 | 8 | 2025-03-26 00:48:51 | 49.99 |

| 9 | 9 | 2025-03-26 00:48:51 | 179.99 |

| 10 | 10 | 2025-03-26 00:48:51 | 129.99 |

+---------+------------+---------------------+-------------+

10 rows in set (0.00 sec)

mysql> select \* from orderdetails;

+---------------+---------+-----------+----------+

| orderdetailid | orderid | productid | quantity |

+---------------+---------+-----------+----------+

| 1 | 1 | 1 | 1 |

| 2 | 1 | 3 | 1 |

| 3 | 2 | 2 | 1 |

| 4 | 3 | 7 | 1 |

| 5 | 4 | 3 | 1 |

| 6 | 5 | 4 | 1 |

| 7 | 6 | 8 | 1 |

| 8 | 7 | 5 | 1 |

| 9 | 8 | 6 | 1 |

| 10 | 9 | 10 | 1 |

+---------------+---------+-----------+----------+

10 rows in set (0.00 sec)

mysql> select \* from inventory;

+-------------+-----------+-----------------+---------------------+

| inventoryid | productid | quantityinstock | laststockupdate |

+-------------+-----------+-----------------+---------------------+

| 1 | 1 | 50 | 2025-03-26 00:57:20 |

| 2 | 2 | 30 | 2025-03-26 00:57:20 |

| 3 | 3 | 20 | 2025-03-26 00:57:20 |

| 4 | 4 | 40 | 2025-03-26 00:57:20 |

| 5 | 5 | 60 | 2025-03-26 00:57:20 |

| 6 | 6 | 70 | 2025-03-26 00:57:20 |

| 7 | 7 | 25 | 2025-03-26 00:57:20 |

| 8 | 8 | 35 | 2025-03-26 00:57:20 |

| 9 | 9 | 50 | 2025-03-26 00:57:20 |

| 10 | 10 | 30 | 2025-03-26 00:57:20 |

+-------------+-----------+-----------------+---------------------+

10 rows in set (0.00 sec)

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

mysql> select firstname, lastname, email from customers;

+-----------+----------+-------------------+

| firstname | lastname | email |

+-----------+----------+-------------------+

| John | Down | john@gmail.com |

| Persis | Eloite | persis@gmail.com |

| Bob | Johnson | bob@yahoo.com |

| Ally | Brown | ally@outlook.com |

| Charles | David | charles@gmail.com |

| Evangelin | Miller | eva@gmail.com |

| Daniel | Wilson | daniel@gmail.com |

| Sophia | Mordecai | sophia@gmail.com |

| Fanny | Anderson | fanny@yahoo.com |

| Olivia | Harris | olivia@gmail.com |

+-----------+----------+-------------------+

10 rows in set (0.00 sec)

**QUESTION 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 | 2025-03-26 00:48:51 | John | Down |

| 2 | 2025-03-26 00:48:51 | Persis | Eloite |

| 3 | 2025-03-26 00:48:51 | Bob | Johnson |

| 4 | 2025-03-26 00:48:51 | Ally | Brown |

| 5 | 2025-03-26 00:48:51 | Charles | David |

| 6 | 2025-03-26 00:48:51 | Evangelin | Miller |

| 7 | 2025-03-26 00:48:51 | Daniel | Wilson |

| 8 | 2025-03-26 00:48:51 | Sophia | Mordecai |

| 9 | 2025-03-26 00:48:51 | Fanny | Anderson |

| 10 | 2025-03-26 00:48:51 | Olivia | Harris |

+---------+---------------------+-----------+----------+

10 rows in set (0.00 sec)

**QUESTION 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', 'Scott', 'michael@gmail.com', '9876543210', '125 main st Kolkata');

Query OK, 1 row affected (0.01 sec)

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+--------------------------+

| customerid | firstname | lastname | email | phone | address |

+------------+-----------+----------+-------------------+------------+--------------------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune |

| 4 | Ally | Brown | ally@outlook.com | 4567890123 | 159 Pine St Kerela |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata |

+------------+-----------+----------+-------------------+------------+--------------------------+

11 rows in set (0.00 sec)

**QUESTION 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 WHERE productname IN ('La

ptop','Smartphone','Tablet','Headphones','Monitor','Router');

Query OK, 6 rows affected, 6 warnings (0.01 sec)

Rows matched: 6 Changed: 6 Warnings: 6

mysql> select \* from products;

+-----------+--------------+---------------------+---------+

| productid | productname | description | price |

+-----------+--------------+---------------------+---------+

| 1 | Laptop | Dell Inspiron 15 | 879.99 |

| 2 | Smartphone | Samsung Galaxy S22 | 1099.99 |

| 3 | Tablet | Apple iPad Pro | 1209.99 |

| 4 | Headphones | Sony WH-1000XM4 | 329.99 |

| 5 | Keyboard | Mechanical Keyboard | 89.99 |

| 6 | Mouse | Wireless Mouse | 49.99 |

| 7 | Monitor | 27-inch 4K Monitor | 384.99 |

| 8 | Printer | HP LaserJet Pro | 199.99 |

| 9 | External SSD | Samsung T7 1TB | 129.99 |

| 10 | Router | Netgear Nighthawk | 197.99 |

+-----------+--------------+---------------------+---------+

10 rows in set (0.00 sec)

**QUESTION 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=3;

Query OK, 1 row affected (0.01 sec)

mysql> DELETE from orders WHERE orderid=3;

Query OK, 1 row affected (0.00 sec)

mysql> select \* from orderdetails;

+---------------+---------+-----------+----------+

| orderdetailid | orderid | productid | quantity |

+---------------+---------+-----------+----------+

| 1 | 1 | 1 | 1 |

| 2 | 1 | 3 | 1 |

| 3 | 2 | 2 | 1 |

| 5 | 4 | 3 | 1 |

| 6 | 5 | 4 | 1 |

| 7 | 6 | 8 | 1 |

| 8 | 7 | 5 | 1 |

| 9 | 8 | 6 | 1 |

| 10 | 9 | 10 | 1 |

+---------------+---------+-----------+----------+

9 rows in set (0.00 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+

| orderid | customerid | orderdate | totalamount |

+---------+------------+---------------------+-------------+

| 1 | 1 | 2025-03-26 00:48:51 | 1299.98 |

| 2 | 2 | 2025-03-26 00:48:51 | 999.99 |

| 4 | 4 | 2025-03-26 00:48:51 | 1099.99 |

| 5 | 5 | 2025-03-26 00:48:51 | 299.99 |

| 6 | 6 | 2025-03-26 00:48:51 | 199.99 |

| 7 | 7 | 2025-03-26 00:48:51 | 89.99 |

| 8 | 8 | 2025-03-26 00:48:51 | 49.99 |

| 9 | 9 | 2025-03-26 00:48:51 | 179.99 |

| 10 | 10 | 2025-03-26 00:48:51 | 129.99 |

+---------+------------+---------------------+-------------+

9 rows in set (0.00 sec)

**QUESTION 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, totalamount) VALUES(3, 500.00);

Query OK, 1 row affected (0.01 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+

| orderid | customerid | orderdate | totalamount |

+---------+------------+---------------------+-------------+

| 1 | 1 | 2025-03-26 00:48:51 | 1299.98 |

| 2 | 2 | 2025-03-26 00:48:51 | 999.99 |

| 4 | 4 | 2025-03-26 00:48:51 | 1099.99 |

| 5 | 5 | 2025-03-26 00:48:51 | 299.99 |

| 6 | 6 | 2025-03-26 00:48:51 | 199.99 |

| 7 | 7 | 2025-03-26 00:48:51 | 89.99 |

| 8 | 8 | 2025-03-26 00:48:51 | 49.99 |

| 9 | 9 | 2025-03-26 00:48:51 | 179.99 |

| 10 | 10 | 2025-03-26 00:48:51 | 129.99 |

| 11 | 3 | 2025-03-27 10:40:13 | 500.00 |

+---------+------------+---------------------+-------------+

10 rows in set (0.00 sec)

mysql> UPDATE Orders SET OrderDate = '2025-03-15 09:12:45' WHERE OrderID = 1;

Query OK, 1 row affected (0.03 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-16 14:23:10' WHERE OrderID = 2;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-17 19:35:30' WHERE OrderID = 4;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-19 21:55:50' WHERE OrderID = 5;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-22 08:30:15' WHERE OrderID = 6;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-24 12:10:25' WHERE OrderID = 7;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-25 17:20:40' WHERE OrderID = 8;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-27 22:05:55' WHERE OrderID = 9;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-29 14:45:30' WHERE OrderID = 10;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Orders SET OrderDate = '2025-03-30 18:25:05' WHERE OrderID = 11;

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from orders;

+---------+------------+---------------------+-------------+

| orderid | customerid | orderdate | totalamount |

+---------+------------+---------------------+-------------+

| 1 | 1 | 2025-03-15 09:12:45 | 1299.98 |

| 2 | 2 | 2025-03-16 14:23:10 | 999.99 |

| 4 | 4 | 2025-03-17 19:35:30 | 1099.99 |

| 5 | 5 | 2025-03-19 21:55:50 | 299.99 |

| 6 | 6 | 2025-03-22 08:30:15 | 199.99 |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 |

| 9 | 9 | 2025-03-27 22:05:55 | 179.99 |

| 10 | 10 | 2025-03-29 14:45:30 | 129.99 |

| 11 | 3 | 2025-03-30 18:25:05 | 500.00 |

+---------+------------+---------------------+-------------+

10 rows in set (0.00 sec)

**QUESTION 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='nuana@gmail.com', address='56 main

street Chattisgarh' WHERE customerid=4;

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 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata |

+------------+-----------+----------+-------------------+------------+----------------------------+

11 rows in set (0.00 sec)

**QUESTION 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=(select COALESCE(SUM(price\*quant

ity),0) FROM orderdetails, products WHERE orderdetails.productid=prod

ucts.productid AND orderdetails.orderid=orders.orderid);

Query OK, 7 rows affected (0.01 sec)

Rows matched: 10 Changed: 7 Warnings: 0

**QUESTION 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 thecustomer ID as a parameter.**

mysql> DELETE FROM orderdetails WHERE orderid IN(select orderid FROM

orders WHERE customerid=6);

Query OK, 1 row affected (0.01 sec)

mysql> DELETE FROM orders WHERE customerid=6;

Query OK, 1 row affected (0.01 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+

| orderid | customerid | orderdate | totalamount |

+---------+------------+---------------------+-------------+

| 1 | 1 | 2025-03-15 09:12:45 | 2089.98 |

| 2 | 2 | 2025-03-16 14:23:10 | 1099.99 |

| 4 | 4 | 2025-03-17 19:35:30 | 1209.99 |

| 5 | 5 | 2025-03-19 21:55:50 | 329.99 |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 |

| 9 | 9 | 2025-03-27 22:05:55 | 197.99 |

| 10 | 10 | 2025-03-29 14:45:30 | 0.00 |

| 11 | 3 | 2025-03-30 18:25:05 | 0.00 |

+---------+------------+---------------------+-------------+

9 rows in set (0.00 sec)

**QUESTION 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 (

'Smartwatch','Apple Watch series 9',399.99);

Query OK, 1 row affected (0.01 sec)

mysql> select \* from products;

+-----------+--------------+----------------------+---------+

| productid | productname | description | price |

+-----------+--------------+----------------------+---------+

| 1 | Laptop | Dell Inspiron 15 | 879.99 |

| 2 | Smartphone | Samsung Galaxy S22 | 1099.99 |

| 3 | Tablet | Apple iPad Pro | 1209.99 |

| 4 | Headphones | Sony WH-1000XM4 | 329.99 |

| 5 | Keyboard | Mechanical Keyboard | 89.99 |

| 6 | Mouse | Wireless Mouse | 49.99 |

| 7 | Monitor | 27-inch 4K Monitor | 384.99 |

| 8 | Printer | HP LaserJet Pro | 199.99 |

| 9 | External SSD | Samsung T7 1TB | 129.99 |

| 10 | Router | Netgear Nighthawk | 197.99 |

| 11 | Smartwatch | Apple Watch series 9 | 399.99 |

+-----------+--------------+----------------------+---------+

11 rows in set (0.00 sec)

**QUESTION 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 status varchar(20) DEFAULT 'Pend

ing';

Query OK, 0 rows affected (0.21 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> select \* from orders;

+---------+------------+---------------------+-------------+---------+

| orderid | customerid | orderdate | totalamount | status |

+---------+------------+---------------------+-------------+---------+

| 1 | 1 | 2025-03-15 09:12:45 | 2089.98 | Pending |

| 2 | 2 | 2025-03-16 14:23:10 | 1099.99 | Pending |

| 4 | 4 | 2025-03-17 19:35:30 | 1209.99 | Pending |

| 5 | 5 | 2025-03-19 21:55:50 | 329.99 | Pending |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 | Pending |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 | Pending |

| 9 | 9 | 2025-03-27 22:05:55 | 197.99 | Pending |

| 10 | 10 | 2025-03-29 14:45:30 | 0.00 | Pending |

| 11 | 3 | 2025-03-30 18:25:05 | 0.00 | Pending |

+---------+------------+---------------------+-------------+---------+

9 rows in set (0.00 sec)

mysql> UPDATE orders SET status='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 | status |

+---------+------------+---------------------+-------------+---------+

| 1 | 1 | 2025-03-15 09:12:45 | 2089.98 | Pending |

| 2 | 2 | 2025-03-16 14:23:10 | 1099.99 | Shipped |

| 4 | 4 | 2025-03-17 19:35:30 | 1209.99 | Pending |

| 5 | 5 | 2025-03-19 21:55:50 | 329.99 | Pending |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 | Pending |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 | Pending |

| 9 | 9 | 2025-03-27 22:05:55 | 197.99 | Pending |

| 10 | 10 | 2025-03-29 14:45:30 | 0.00 | Pending |

| 11 | 3 | 2025-03-30 18:25:05 | 0.00 | Pending |

+---------+------------+---------------------+-------------+---------+

9 rows in set (0.00 sec)

**QUESTION 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 totalorders int DEFAULT 0;

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 0 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 0 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 0 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 0 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 0 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 0 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 0 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 0 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 0 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

mysql> UPDATE Customers

-> SET TotalOrders = (

-> 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> UPDATE Customers

-> SET TotalOrders = (

-> SELECT COUNT(\*) FROM Orders WHERE Orders.CustomerID = Customers.CustomerID

-> );

Query OK, 0 rows affected (0.00 sec)

Rows matched: 11 Changed: 0 Warnings: 0

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 1 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 1 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 1 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 1 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 1 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 1 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 1 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 1 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 1 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

mysql> SELECT Customerid, totalOrders FROM Customers;

+------------+-------------+

| Customerid | totalOrders |

+------------+-------------+

| 1 | 1 |

| 2 | 1 |

| 3 | 1 |

| 4 | 1 |

| 5 | 1 |

| 6 | 0 |

| 7 | 1 |

| 8 | 1 |

| 9 | 1 |

| 10 | 1 |

| 12 | 0 |

+------------+-------------+

11 rows in set (0.00 sec)

mysql> SELECT customerid, COUNT(\*) AS ordercount FROM Orders GROUP BY customerid;

+------------+------------+

| customerid | ordercount |

+------------+------------+

| 1 | 1 |

| 2 | 1 |

| 3 | 1 |

| 4 | 1 |

| 5 | 1 |

| 7 | 1 |

| 8 | 1 |

| 9 | 1 |

| 10 | 1 |

+------------+------------+

9 rows in set (0.00 sec)

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 1 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 1 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 1 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 1 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 1 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 1 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 1 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 1 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 1 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

mysql> UPDATE Customers

-> SET TotalOrders = (

-> SELECT COUNT(\*) FROM Orders WHERE Orders.CustomerID = Customers.CustomerID

-> );

Query OK, 0 rows affected (0.00 sec)

Rows matched: 11 Changed: 0 Warnings: 0

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 1 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 1 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 1 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 1 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 1 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 1 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 1 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 1 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 1 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

**INSERTION OF NEW ORDERS INTO THE ORDER TABLE:**

mysql> INSERT into orders (Customerid, orderdate, totalamount, status) VALUES (1, '2025-04-01 10:30:00', 500.00, 'Pending'),

-> (3, '2025-04-02 15:45:00', 750.00, 'Shipped'),

-> (5, '2025-04-03 18:00:00', 300.00, 'Pending'),

-> (7, '2025-04-05 09:15:00', 120.00, 'Shipped');

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> UPDATE Customers

-> SET TotalOrders = (

-> SELECT COUNT(\*) FROM Orders WHERE Orders.CustomerID = Customers.CustomerID

-> );

Query OK, 4 rows affected (0.01 sec)

Rows matched: 11 Changed: 4 Warnings: 0

mysql> SELECT CustomerID, TotalOrders FROM Customers;

+------------+-------------+

| CustomerID | TotalOrders |

+------------+-------------+

| 1 | 2 |

| 2 | 1 |

| 3 | 2 |

| 4 | 1 |

| 5 | 2 |

| 6 | 0 |

| 7 | 2 |

| 8 | 1 |

| 9 | 1 |

| 10 | 1 |

| 12 | 0 |

+------------+-------------+

11 rows in set (0.00 sec)

mysql> SELECT CustomerID, COUNT(\*) AS OrderCount FROM Orders GROUP BY CustomerID;

+------------+------------+

| CustomerID | OrderCount |

+------------+------------+

| 1 | 2 |

| 2 | 1 |

| 3 | 2 |

| 4 | 1 |

| 5 | 2 |

| 7 | 2 |

| 8 | 1 |

| 9 | 1 |

| 10 | 1 |

+------------+------------+

9 rows in set (0.00 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+---------+

| orderid | customerid | orderdate | totalamount | status |

+---------+------------+---------------------+-------------+---------+

| 1 | 1 | 2025-03-15 09:12:45 | 2089.98 | Pending |

| 2 | 2 | 2025-03-16 14:23:10 | 1099.99 | Shipped |

| 4 | 4 | 2025-03-17 19:35:30 | 1209.99 | Pending |

| 5 | 5 | 2025-03-19 21:55:50 | 329.99 | Pending |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 | Pending |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 | Pending |

| 9 | 9 | 2025-03-27 22:05:55 | 197.99 | Pending |

| 10 | 10 | 2025-03-29 14:45:30 | 0.00 | Pending |

| 11 | 3 | 2025-03-30 18:25:05 | 0.00 | Pending |

| 12 | 1 | 2025-04-01 10:30:00 | 500.00 | Pending |

| 13 | 3 | 2025-04-02 15:45:00 | 750.00 | Shipped |

| 14 | 5 | 2025-04-03 18:00:00 | 300.00 | Pending |

| 15 | 7 | 2025-04-05 09:15:00 | 120.00 | Shipped |

+---------+------------+---------------------+-------------+---------+

13 rows in set (0.00 sec)

mysql> select \* from products;

+-----------+--------------+----------------------+---------+

| productid | productname | description | price |

+-----------+--------------+----------------------+---------+

| 1 | Laptop | Dell Inspiron 15 | 879.99 |

| 2 | Smartphone | Samsung Galaxy S22 | 1099.99 |

| 3 | Tablet | Apple iPad Pro | 1209.99 |

| 4 | Headphones | Sony WH-1000XM4 | 329.99 |

| 5 | Keyboard | Mechanical Keyboard | 89.99 |

| 6 | Mouse | Wireless Mouse | 49.99 |

| 7 | Monitor | 27-inch 4K Monitor | 384.99 |

| 8 | Printer | HP LaserJet Pro | 199.99 |

| 9 | External SSD | Samsung T7 1TB | 129.99 |

| 10 | Router | Netgear Nighthawk | 197.99 |

| 11 | Smartwatch | Apple Watch series 9 | 399.99 |

+-----------+--------------+----------------------+---------+

11 rows in set (0.01 sec)

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 2 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 1 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 2 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 1 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 2 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 2 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 1 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 1 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 1 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

mysql> SELECT od.orderdetailid, od.orderid, c.customerid,

-> CONCAT(c.firstname, ' ', c.lastname) AS customername,

-> p.productname, p.price, od.quantity

-> FROM orderdetails od

-> JOIN orders o ON od.orderid = o.orderid

-> JOIN customers c ON o.customerid = c.customerid

-> JOIN products p ON od.productid = p.productid;

+---------------+---------+------------+-----------------+--------------+---------+----------+

| orderdetailid | orderid | customerid | customername | productname | price | quantity |

+---------------+---------+------------+-----------------+--------------+---------+----------+

| 1 | 1 | 1 | John Down | Laptop | 879.99 | 1 |

| 2 | 1 | 1 | John Down | External SSD | 129.99 | 1 |

| 11 | 12 | 1 | John Down | Laptop | 879.99 | 1 |

| 3 | 2 | 2 | Persis Eloite | Smartphone | 1099.99 | 1 |

| 10 | 11 | 3 | Bob Johnson | Printer | 199.99 | 1 |

| 12 | 13 | 3 | Bob Johnson | Smartphone | 1099.99 | 1 |

| 4 | 4 | 4 | Ally Brown | Tablet | 1209.99 | 1 |

| 5 | 5 | 5 | Charles David | Headphones | 329.99 | 1 |

| 13 | 14 | 5 | Charles David | Headphones | 329.99 | 1 |

| 6 | 7 | 7 | Daniel Wilson | Keyboard | 89.99 | 1 |

| 14 | 15 | 7 | Daniel Wilson | Keyboard | 89.99 | 1 |

| 7 | 8 | 8 | Sophia Mordecai | Mouse | 49.99 | 1 |

| 8 | 9 | 9 | Fanny Anderson | Router | 197.99 | 1 |

| 9 | 10 | 10 | Olivia Harris | Monitor | 384.99 | 1 |

+---------------+---------+------------+-----------------+--------------+---------+----------+

14 rows in set (0.00 sec)

mysql> UPDATE orders o

-> JOIN (

-> SELECT od.orderid, SUM(p.price \* od.quantity) AS calculated\_total

-> FROM orderdetails od

-> JOIN products p ON od.productid = p.productid

-> GROUP BY od.orderid

-> ) AS totals ON o.orderid = totals.orderid

-> SET o.totalamount = totals.calculated\_total;

Query OK, 7 rows affected (0.01 sec)

Rows matched: 13 Changed: 7 Warnings: 0

mysql> SELECT o.orderid, o.totalamount,

-> SUM(p.price \* od.quantity) AS calculated\_total

-> FROM orders o

-> LEFT JOIN orderdetails od ON o.orderid = od.orderid

-> LEFT JOIN products p ON od.productid = p.productid

-> GROUP BY o.orderid

-> HAVING o.totalamount <> calculated\_total;

Empty set (0.00 sec)

mysql> select \* from customers;

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| customerid | firstname | lastname | email | phone | address | totalorders |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

| 1 | John | Down | john@gmail.com | 1234567890 | 123 Main St Banglore | 2 |

| 2 | Persis | Eloite | persis@gmail.com | 2345678901 | 456 Erran St Chennai | 1 |

| 3 | Bob | Johnson | bob@yahoo.com | 3456789012 | 789 Nagar St Pune | 2 |

| 4 | Ally | Brown | nuana@gmail.com | 4567890123 | 56 main street Chattisgarh | 1 |

| 5 | Charles | David | charles@gmail.com | 5678901234 | 753 Birch St Mumbai | 2 |

| 6 | Evangelin | Miller | eva@gmail.com | 6789012345 | 951 Cedar St Chennai | 0 |

| 7 | Daniel | Wilson | daniel@gmail.com | 7890123456 | 357 Maple St Mumbai | 2 |

| 8 | Sophia | Mordecai | sophia@gmail.com | 8901234567 | 852 Crosswood St Delhi | 1 |

| 9 | Fanny | Anderson | fanny@yahoo.com | 9012345678 | 654 Redwood St Goa | 1 |

| 10 | Olivia | Harris | olivia@gmail.com | 0123456789 | 321 Cypress St Telangana | 1 |

| 12 | Michael | Scott | michael@gmail.com | 9876543210 | 125 main st Kolkata | 0 |

+------------+-----------+----------+-------------------+------------+----------------------------+-------------+

11 rows in set (0.00 sec)

mysql> select \* from products;

+-----------+--------------+----------------------+---------+

| productid | productname | description | price |

+-----------+--------------+----------------------+---------+

| 1 | Laptop | Dell Inspiron 15 | 879.99 |

| 2 | Smartphone | Samsung Galaxy S22 | 1099.99 |

| 3 | Tablet | Apple iPad Pro | 1209.99 |

| 4 | Headphones | Sony WH-1000XM4 | 329.99 |

| 5 | Keyboard | Mechanical Keyboard | 89.99 |

| 6 | Mouse | Wireless Mouse | 49.99 |

| 7 | Monitor | 27-inch 4K Monitor | 384.99 |

| 8 | Printer | HP LaserJet Pro | 199.99 |

| 9 | External SSD | Samsung T7 1TB | 129.99 |

| 10 | Router | Netgear Nighthawk | 197.99 |

| 11 | Smartwatch | Apple Watch series 9 | 399.99 |

+-----------+--------------+----------------------+---------+

11 rows in set (0.00 sec)

mysql> select \* from orders;

+---------+------------+---------------------+-------------+---------+

| orderid | customerid | orderdate | totalamount | status |

+---------+------------+---------------------+-------------+---------+

| 1 | 1 | 2025-03-15 09:12:45 | 1009.98 | Pending |

| 2 | 2 | 2025-03-16 14:23:10 | 1099.99 | Shipped |

| 4 | 4 | 2025-03-17 19:35:30 | 1209.99 | Pending |

| 5 | 5 | 2025-03-19 21:55:50 | 329.99 | Pending |

| 7 | 7 | 2025-03-24 12:10:25 | 89.99 | Pending |

| 8 | 8 | 2025-03-25 17:20:40 | 49.99 | Pending |

| 9 | 9 | 2025-03-27 22:05:55 | 197.99 | Pending |

| 10 | 10 | 2025-03-29 14:45:30 | 384.99 | Pending |

| 11 | 3 | 2025-03-30 18:25:05 | 199.99 | Pending |

| 12 | 1 | 2025-04-01 10:30:00 | 879.99 | Pending |

| 13 | 3 | 2025-04-02 15:45:00 | 1099.99 | Shipped |

| 14 | 5 | 2025-04-03 18:00:00 | 329.99 | Pending |

| 15 | 7 | 2025-04-05 09:15:00 | 89.99 | Shipped |

+---------+------------+---------------------+-------------+---------+

13 rows in set (0.00 sec)

mysql> select \* from orderdetails;

+---------------+---------+-----------+----------+

| orderdetailid | orderid | productid | quantity |

+---------------+---------+-----------+----------+

| 1 | 1 | 1 | 1 |

| 2 | 1 | 9 | 1 |

| 3 | 2 | 2 | 1 |

| 4 | 4 | 3 | 1 |

| 5 | 5 | 4 | 1 |

| 6 | 7 | 5 | 1 |

| 7 | 8 | 6 | 1 |

| 8 | 9 | 10 | 1 |

| 9 | 10 | 7 | 1 |

| 10 | 11 | 8 | 1 |

| 11 | 12 | 1 | 1 |

| 12 | 13 | 2 | 1 |

| 13 | 14 | 4 | 1 |

| 14 | 15 | 5 | 1 |

+---------------+---------+-----------+----------+

14 rows in set (0.00 sec)

mysql> select \* from inventory;

+-------------+-----------+-----------------+---------------------+

| inventoryid | productid | quantityinstock | laststockupdate |

+-------------+-----------+-----------------+---------------------+

| 1 | 1 | 50 | 2025-03-26 00:57:20 |

| 2 | 2 | 30 | 2025-03-26 00:57:20 |

| 3 | 3 | 20 | 2025-03-26 00:57:20 |

| 4 | 4 | 40 | 2025-03-26 00:57:20 |

| 5 | 5 | 60 | 2025-03-26 00:57:20 |

| 6 | 6 | 70 | 2025-03-26 00:57:20 |

| 7 | 7 | 25 | 2025-03-26 00:57:20 |

| 8 | 8 | 35 | 2025-03-26 00:57:20 |

| 9 | 9 | 50 | 2025-03-26 00:57:20 |

| 10 | 10 | 30 | 2025-03-26 00:57:20 |

+-------------+-----------+-----------------+---------------------+

10 rows in set (0.01 sec)

mysql> SELECT o.orderid

-> FROM orders o

-> LEFT JOIN orderdetails od ON o.orderid = od.orderid

-> WHERE od.orderid IS NULL;

Empty set (0.00 sec)

mysql> SELECT orderid, productid, COUNT(\*)

-> FROM orderdetails

-> GROUP BY orderid, productid

-> HAVING COUNT(\*) > 1;

Empty set (0.00 sec)

**THE PEOPLE WHO HAVEN’T PLACED THE ORDER:**

mysql> SELECT c.customerid, c.firstname, c.lastname

-> FROM customers c

-> LEFT JOIN orders o ON c.customerid = o.customerid

-> WHERE o.customerid IS NULL;

+------------+-----------+----------+

| customerid | firstname | lastname |

+------------+-----------+----------+

| 6 | Evangelin | Miller |

| 12 | Michael | Scott |

+------------+-----------+----------+

2 rows in set (0.00 sec)