## TASK 2

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   Jane   Alice   Bob   Eva   Charlie   Grace   David   Sophia   Oliver	Doe   Smith   Johnson   Williams   Brown   Davis   Miller   Moore   Lee   Anderson	john.doe@example.com jane.smith@example.com alice.johnson@example.com bob.williams@example.com eva.brown@example.com charlie.davis@example.com grace.miller@example.com david.moore@example.com sophia.lee@example.com oliver.anderson@example.com

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

```
mysql> select OrderID, OrderDate, (select CONCAT(FirstName,' ',LastName) from Customers
    -> where Customers.CustomerID=Orders.CustomerID) AS 'Customer Name'
   -> from Orders;
 OrderID | OrderDate | Customer Name |
           2024-01-15 | John Doe
           2024-01-16 | Alice Johnson
           2024-01-17
                        Jane Smith
           2024-01-18
                        Eva Brown
           2024-01-19
                        Bob Williams
           2024-01-20
       6
                         John Doe
           2024-01-21
                        Charlie Davis
           2024-01-22 | Grace Miller
       8
       9
            2024-01-23
                        Sophia Lee
       10
           2024-01-24
                        David Moore
l0 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(CustomerID, FirstName, Email, Address) VALUES
-> (11, "Manas", "manasrustagi16@gmail.com", "Karol Bagh, Delhi");
Query OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM Customers;
 CustomerID | FirstName | LastName | email
                                                                       Phone
                                                                                   Address
               John
                            Doe
                                        john.doe@example.com
                                                                       1234567890
                                                                                    123 Main St
                            Smith
                                        jane.smith@example.com
                                                                       9876543210
                                                                                     456 Oak St
               Jane
               Alice
                                       alice.johnson@example.com
                                                                       5551234567
                                                                                     789 Pine St
                            Johnson
                                       bob.williams@example.com
                                                                                     101 Elm St
               Bob
                            Williams
                                                                       9998887777
                                       eva.brown@example.com
               Eva
                            Brown
                                                                                     202 Maple St
               Charlie
                            Davis
                                       charlie.davis@example.com
                                                                       4445556666
                                                                                     303 Cedar St
                                       grace.miller@example.com
               Grace
                            Miller
                                                                       7776665555
                                                                                     404 Birch St
               David
                                       david.moore@example.com
                                                                       2223334444
                                                                                     505 Redwood St
                            Moore
                                       sophia.lee@example.com
                                                                       6667778888
                                                                                     606 Willow St
               Sophia
                            Lee
          10
               Oliver
                            Anderson
                                       oliver.anderson@example.com
                                                                       3334445555
                                                                                     707 Walnut St
               Manas
                            NULL
                                       manasrustagi16@gmail.com
                                                                             NULL
                                                                                     Karol Bagh, Delhi
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*1.1;
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 with SSD storage
                                                                                            1320
         2
           Smartphone
                                   Latest smartphone with dual cameras
                                                                                             880
             Headphones
                                   Wireless over-ear headphones with noise cancellation
                                                                                             165
             Tablet
                                   10-inch tablet with HD display
         4
                                                                                             330
                                   Fitness tracking smartwatch with heart rate monitor
             Smartwatch
                                                                                             220
                                   Powerful desktop PC for gaming and multitasking
             Desktop PC
                                                                                            1650
                                   Portable speaker with built-in Bluetooth
             Bluetooth Speaker
                                                                                              55
         8
                                   Digital camera with high-resolution sensor
                                                                                             660
             Camera
         9
             External Hard Drive
                                   1TB external hard drive for data storage
                                                                                              88
        10
             Gaming Console
                                   Latest gaming console with 4K support
                                                                                             440
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> DELIMITER ##
mysql> CREATE PROCEDURE del(IN id int)
   -> BEGIN
   -> DELETE FROM OrderDetails WHERE OrderID=id;
   -> DELETE FROM Orders WHERE OrderID=id;
   -> END ##
Query OK, 0 rows affected (0.01 sec)
mysql> DELIMITER ;
mysql> CALL del(3);
Query OK, 1 row affected (0.01 sec)
mysql> Select * from Orders;
 OrderID | CustomerID | OrderDate | TotalAmount |
      1 |
                   1 | 2024-01-15 |
                                          3080
                 3 | 2024-01-15 |
       2
                                           165
       4
                  5 | 2024-01-18 |
                                          660
       5 |
                  4 | 2024-01-19 |
                                          880
                  1 | 2024-01-20 |
                                         4950
       6 |
                                         1320
       7
                   6 | 2024-01-21
                  7 | 2024-01-22 |
       8
                                          440
       9
                  9 2024-01-23
                                           700
                  8
                       2024-01-24
                                           220
      10
             9 | 2023-05-25 |
                                           440
10 rows in set (0.00 sec)
mysql> Select * from OrderDetails;
 OrderDetailID | OrderID | ProductID | Quantity |
                   1 |
1 |
                                             3
             1 |
                                 5 |
             2
                                            2
                                  3 I
             3
                     2
                                            1
            5
                     4
                                  4
                                            2
                     5 |
            6
                                 2 |
                                            1
                     6
            8
                                  8
                                            2
            9
                                 10
                     8
                                            1
            10
                     10
                     15
                                 5
                                             2
            11
10 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 value (15,9,'2023-05-25',450);
Query OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM Orders;
 OrderID | CustomerID | OrderDate | TotalAmount
                         2024-01-15
                                               500
                     1
        1
        2
                     3 | 2024-01-16 |
                                              1200
                     2
                       2024-01-17
        3
                                               300
        4
                     5
                         2024-01-18
                                               800
        5
                     4
                       2024-01-19
                                               150
        6
                     1
                       2024-01-20
                                              1000
                     6
                         2024-01-21
                                               200
                     7
                         2024-01-22
        8
                                               400
                     9
        9
                        2024-01-23
                                               700
       10
                     8
                         2024-01-24
                                               600
       15
                     9
                         2023-05-25
                                               450
11 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> Delimiter @@
mysql> CREATE PROCEDURE disp(IN cust id int, ema text, addr text)
    -> BEGIN
    -> UPDATE Customers SET Email=ema, Address=addr WHERE CustomerID=cust_id;
    -> END @@
Query OK, 0 rows affected (0.01 sec)
mysql> call disp(11, 'manasrustagi123@gmail.com', 'Karol Bagh');
Query OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM Customers;
 CustomerID | FirstName | LastName | email
                                                                          Address
                                  john.doe@example.com
          1 John
                         Doe
                                                               1234567890 | 123 Main St
             Jane
                         Smith
                                   jane.smith@example.com
                                                               9876543210
                                                                            456 Oak St
                                                              5551234567
          3
             Alice
                         Johnson
                                   alice.johnson@example.com
                                                                            789 Pine St
                                   bob.williams@example.com
          4
             Bob
                        Williams
                                                               9998887777
                                                                            101 Elm St
          5
                                   eva.brown@example.com
             Eva
                         Brown
                                                                1112223333
                                                                            202 Maple St
                                   charlie.davis@example.com
          6
             Charlie
                         Davis
                                                               4445556666
                                                                            303 Cedar St
                                   grace.miller@example.com
                         Miller
                                                                7776665555
                                                                            404 Birch St
             Grace
                                   david.moore@example.com
                                                                2223334444
             David
          8
                         Moore
                                                                            505 Redwood St
                                   sophia.lee@example.com
          9
             Sophia
                                                                6667778888
                                                                            606 Willow St
                         Lee
                                                                            707 Walnut St
         10
                         Anderson
                                   oliver.anderson@example.com
                                                                3334445555
             Oliver
         11
             Manas
                         Rustagi
                                  manasrustagi123@gmail.com
                                                                7982681438
                                                                            Karol Bagh
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.

```
-> TotalAmount=(SELECT SUM(Price*Quantity) FROM
   -> (SELECT Quantity, OrderID, (SELECT Price FROM Products WHERE Products.ProductID=OrderDetails.ProductID) AS PRICE FROM OrderDetails) AS COST -> WHERE COST.OrderID=Orders.OrderID)
    -> WHERE OrderID IN
    -> (SELECT DISTINCT OrderID FROM OrderDetails);
Query OK, 10 rows affected (0.00 sec)
Rows matched: 10 Changed: 10 Warnings: 0
mysql> SELECT * FROM Orders;
 OrderID | CustomerID | OrderDate | TotalAmount
                           2024-01-15
                                                  3080
                           2024-01-16
                           2024-01-17
                                                  5280
                           2024-01-18
                                                   660
                           2024-01-19
                                                   880
                           2024-01-20
                                                  4950
                           2024-01-21
                           2024-01-22
                                                   440
                           2024-01-23
                                                   700
                           2024-01-24
                                                   220
       10
                           2023-05-25
11 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> DELIMITER @@
mysql> CREATE PROCEDURE del1(IN id int)
   -> BEGIN
    -> DELETE FROM OrderDetails WHERE OrderID IN (SELECT OrderID FROM Orders WHERE CustomerID=id);
    -> DELETE FROM Orders WHERE CustomerID=id;
   -> END @@
Query OK, 0 rows affected (0.01 sec)
mysql> DELIMITER ;
mysql> CALL del1(3);
Query OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM Orders;
 OrderID | CustomerID | OrderDate | TotalAmount
       1 |
                    1 | 2024-01-15 |
                                             3080
                    5 | 2024-01-18
       4
                                              660
                    4
       5
                         2024-01-19
                                              880
       6
                    1
                         2024-01-20
                                             4950
       7
                    6
                       2024-01-21
                                             1320
       8
                       2024-01-22
                                              440
                       2024-01-23
       9
                    9
                                              700
                      2024-01-24
                    8
                                              220
      10
      15
                    9 | 2023-05-25 |
                                              440
 rows in set (0.00 sec)
mysql> SELECT * FROM OrderDetails;
 OrderDetailID | OrderID | ProductID | Quantity
              1
                       1 |
                                               2
              5
                        4
                                    4
             6
                                    2
                                               1
              7
                       6
                                    6
             8
                                   8
                                               2
             9
                       8
                                   10
                                               1
```

4

10

11

rows in set (0.00 sec)

10

10. Write an SQL query to insert a new electronic gadget product into the "Products" table.

```
mysql> INSERT INTO Products VALUE(11,"PS5","Latest Play Station with high FPS",520);
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM Products;
 ProductID | ProductName
                                  Description
                                                                                          Price
         1 | Laptop
                                   High-performance laptop with SSD storage
                                                                                            1320
                                   Latest smartphone with dual cameras
         2 | Smartphone
                                                                                             880
                                   Wireless over-ear headphones with noise cancellation
           Headphones
                                                                                             165
         3
                                   10-inch tablet with HD display
             Tablet
                                                                                             330
         4
                                   Fitness tracking smartwatch with heart rate monitor
         5
             Smartwatch
                                                                                             220
                                   Powerful desktop PC for gaming and multitasking
         6
             Desktop PC
                                                                                            1650
             Bluetooth Speaker
                                   Portable speaker with built-in Bluetooth
                                                                                             55
         8
                                   Digital camera with high-resolution sensor
                                                                                             660
             Camera
                                   1TB external hard drive for data storage
         9
             External Hard Drive
                                                                                             88
        10
             Gaming Console
                                   Latest gaming console with 4K support
                                                                                             440
                                   Latest Play Station with high FPS
                                                                                             520
        11 | PS5
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> Delimiter @@
mysql> CREATE PROCEDURE C(IN O int, s text)
   -> BEGIN
    -> UPDATE ORDERS SET STATUS = 5 WHERE ORDERID=0;
   -> END @@
Query OK, 0 rows affected (0.01 sec)
mysql> DELIMITER ;
mysql> CALL C(12,'SHIPPED');
Query OK, 1 row affected (0.00 sec)
mysql> SELECT * FROM ORDERS;
 ORDERID | CUSTOMERID | ORDERDATE | TOTALAMOUNT
                                                          STATUS
                  1 | 2024-01-11 |
                                                2199.978
      11
                                                           Shipped
                    2 | 2024-01-12 |
3 | 2024-01-13 |
      12
                                                  549.45
                                                           SHIPPED
       13
                                                 395.956
                                                           NULL
                    4 | 2024-01-14 | 197.835000000000004 |
      14
                                                           NULL
                    5 | 2024-01-15 | 219.945000000000000
      15
                                                           NULL
      16
                    6 | 2024-01-16
                                                   141.9
                                                           NULL
                                      113.8500000000000001
                     7
                         2024-01-17
                                                           NULL
       18
                    8 | 2024-01-18 | 659.9780000000001 |
                                                           NULL
                    9 | 2024-01-19 |
       19
                                                  109.78
                                                           NULL
       20
                    10
                         2024-01-20
                                                  87.989
                                                           NULL
       21 |
                    11 | 2024-01-21 |
                                                     100
                                                           NULL
11 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> SELECT
    -> c.CustomerID,
    -> c.FirstName,
    -> COUNT(o.OrderID) AS NumberOfOrders
    -> FROM
    -> Customers c
    -> LEFT JOIN
    -> Orders o ON c.CustomerID = o.CustomerID
    -> GROUP BY
    -> c.CustomerID;
  CustomerID | FirstName | NumberOfOrders |
       1 | John
2 | Jane
3 | Alice
                                               2
                                               0
                                               0
           4 Bob
          4 | BOD
5 | Eva
6 | Charlie
7 | Grace
8 | David
9 | Sophia
10 | Oliver
                                               1
                                               1
                                              1
                                              0
         11 | Manas
                                              0 |
11 rows in set (0.04 sec)
```