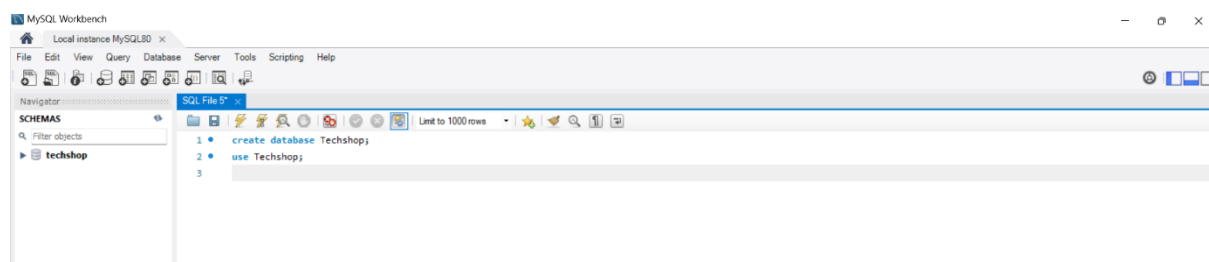


# Name: R. Surya prakash

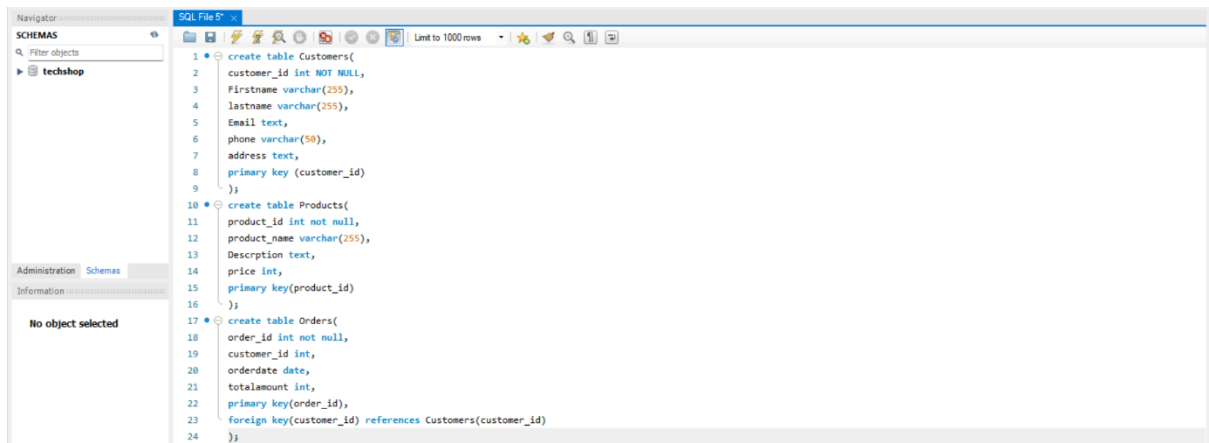
## Assignment-1

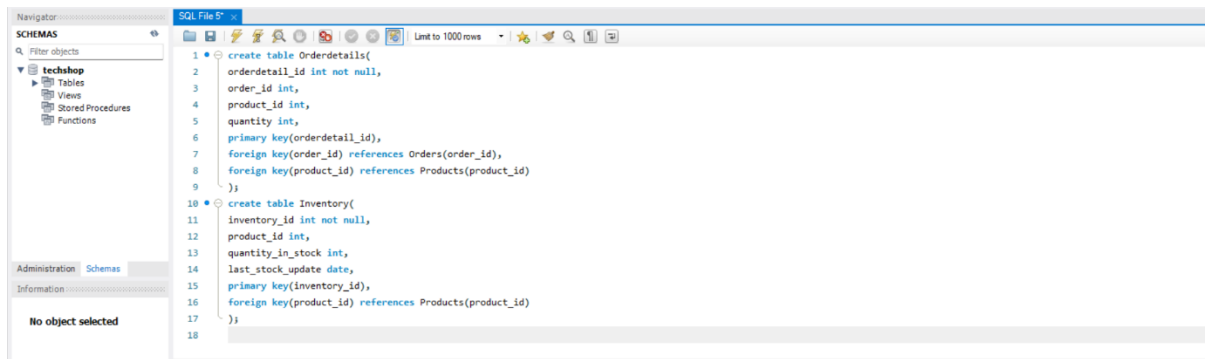
### Task-1: Database Design

1.Create the database named Techshop.



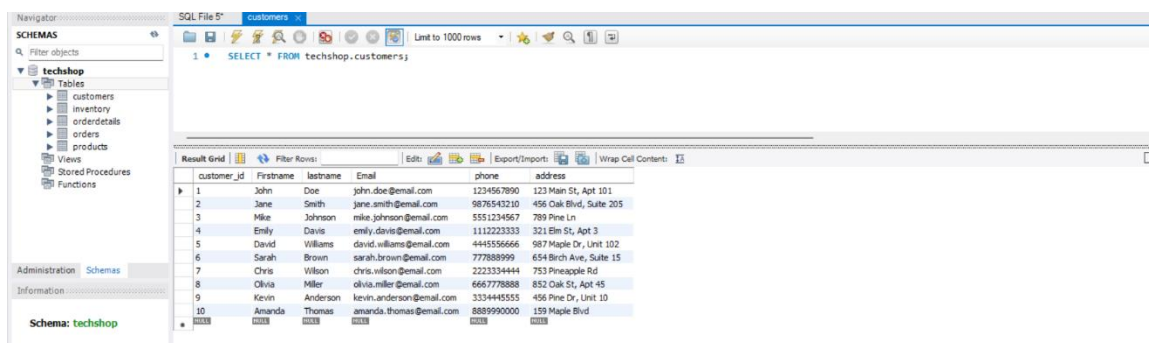
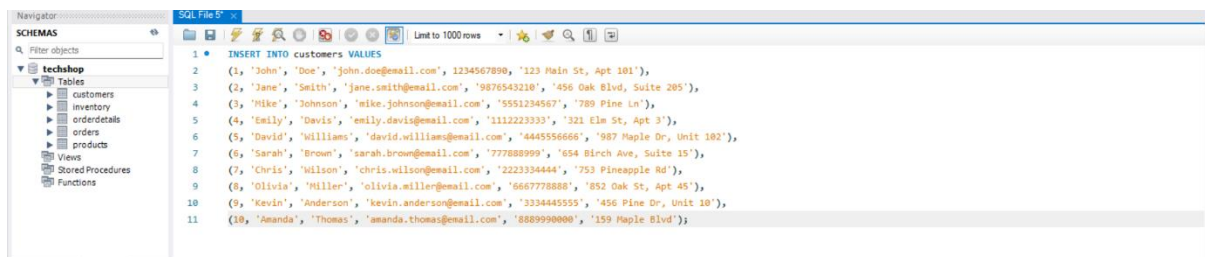
2. Define the schema for the Customers, Products, Orders, Order Details and Inventory tables based on the provided schema.



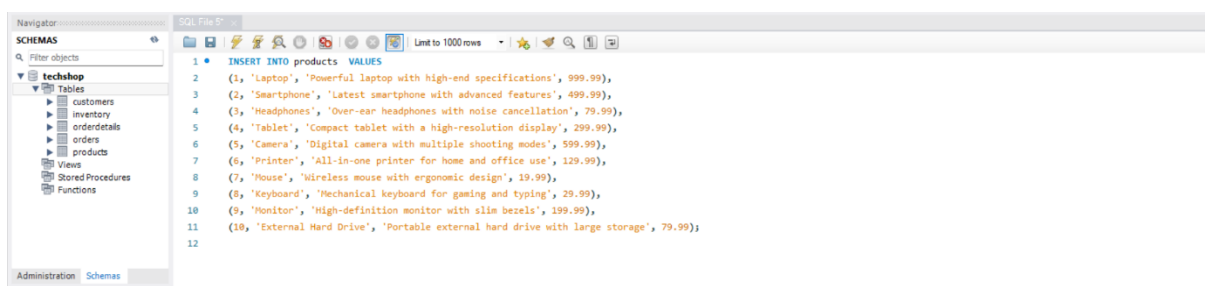


5. Insert at least 10 sample records into each of the following tables.

a. Customers



b. products



Navigator

SQL File 5\* products

1 • SELECT \* FROM techshop.products;

Result Grid

product_id	product_name	Description	price
1	Laptop	Powerful laptop with high-end specifications	1000
2	Smartphone	Latest smartphone with advanced features	500
3	Headphones	Over-ear headphones with noise cancellation	80
4	Tablet	Compact tablet with a high-resolution display	300
5	Camera	Digital camera with multiple shooting modes	600
6	Printer	All-in-one printer for home and office use	130
7	Mouse	Wireless mouse with ergonomic design	20
8	Keyboard	Mechanical keyboard for gaming and typing	30
9	Monitor	High-definition monitor with slim bezels	200
10	External Hard Drive	Portable external hard drive with large storage	80

## c.Orders

Navigator

SQL File 5\* products

1 • INSERT INTO Orders VALUES

2 (1, 1, '2024-01-22', 150.00),

3 (2, 2, '2024-01-23', 300.50),

4 (3, 3, '2024-01-24', 50.25),

5 (4, 4, '2024-01-25', 700.00),

6 (5, 5, '2024-01-26', 120.75),

7 (6, 1, '2024-01-27', 250.00),

8 (7, 2, '2024-01-28', 80.50),

9 (8, 3, '2024-01-29', 430.25),

10 (9, 4, '2024-01-30', 600.00),

11 (10, 5, '2024-01-31', 90.75);

12

File Edit View Query Database Server Tools Scripting Help

Navigator

SQL File 5\* products orders

1 • SELECT \* FROM techshop.orders;

Result Grid

order_id	customer_id	orderdate	totalamount
1	1	2024-01-22	150
2	2	2024-01-23	301
3	3	2024-01-24	50
4	4	2024-01-25	700
5	5	2024-01-26	121
6	1	2024-01-27	250
7	2	2024-01-28	81
8	3	2024-01-29	430
9	4	2024-01-30	600
10	5	2024-01-31	91

## 4.Orderdetails

Navigator

SQL File 5\* products orders

1 • INSERT INTO OrderDetails VALUES

2 (1, 1, 1, 2),

3 (2, 1, 3, 1),

4 (3, 2, 5, 3),

5 (4, 3, 2, 1),

6 (5, 3, 7, 2),

7 (6, 4, 4, 4),

8 (7, 5, 9, 1),

9 (8, 6, 6, 3),

10 (9, 7, 8, 2),

11 (10, 8, 10, 1);

12

Navigator

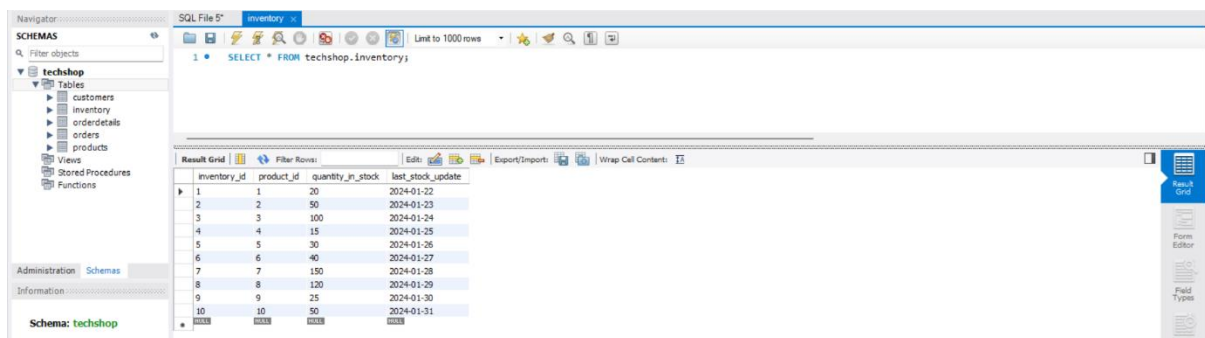
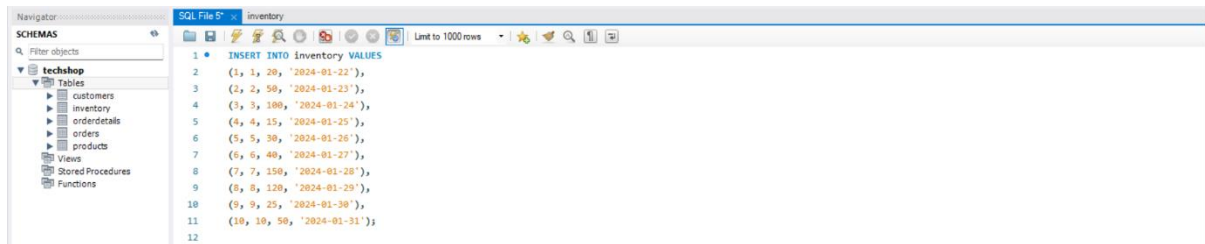
SQL File 5\* products orders orderdetails

1 • SELECT \* FROM techshop.orderdetails;

Result Grid

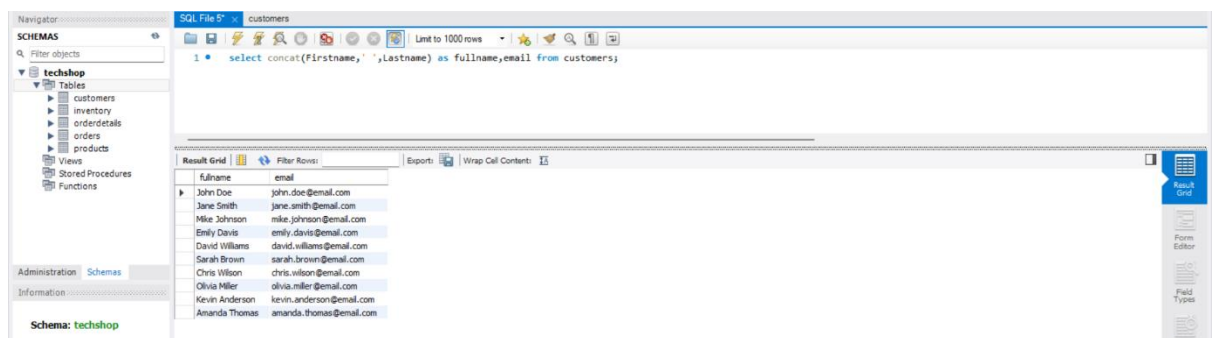
orderdetail_id	order_id	product_id	quantity
1	1	1	2
2	1	3	1
3	2	5	3
4	3	2	1
5	3	7	2
6	4	4	4
7	5	9	1
8	6	6	3
9	7	8	2
10	8	10	1

## 5.Inventory

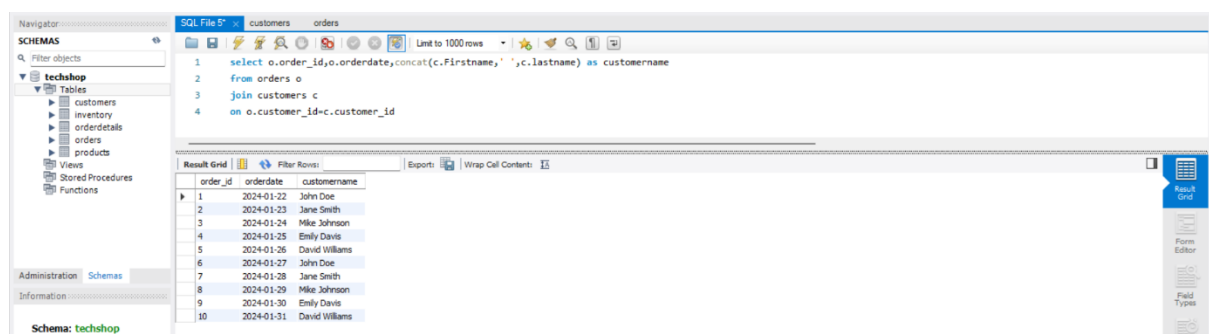


## Tasks 2: Select, Where, Between, AND, LIKE:

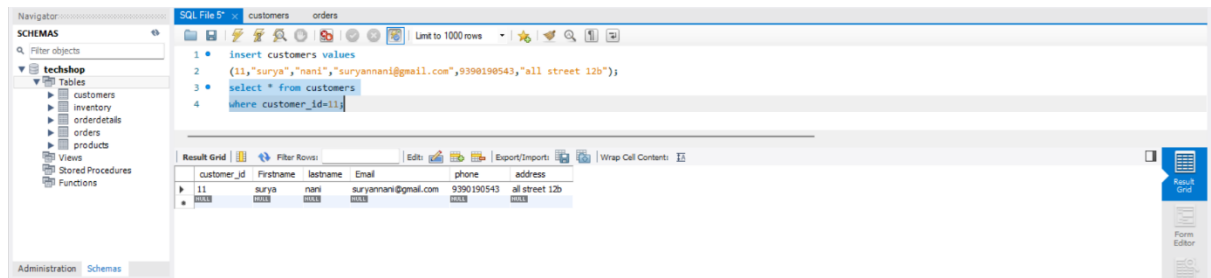
1. Write an SQL query to retrieve the names and emails of all customers.



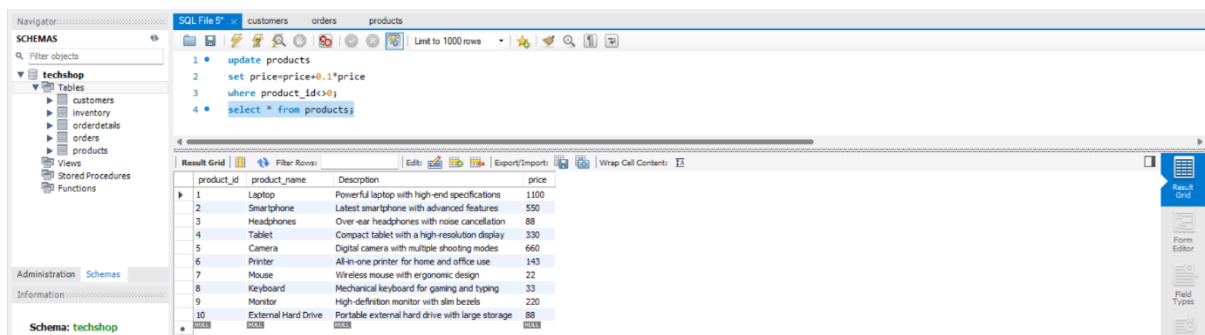
2. Write an SQL query to list all orders with their order dates and corresponding customer names.



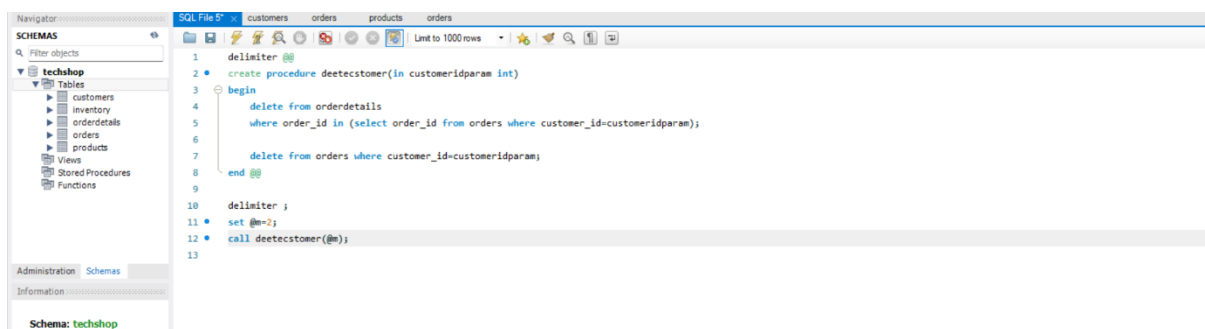
3. Write an SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address



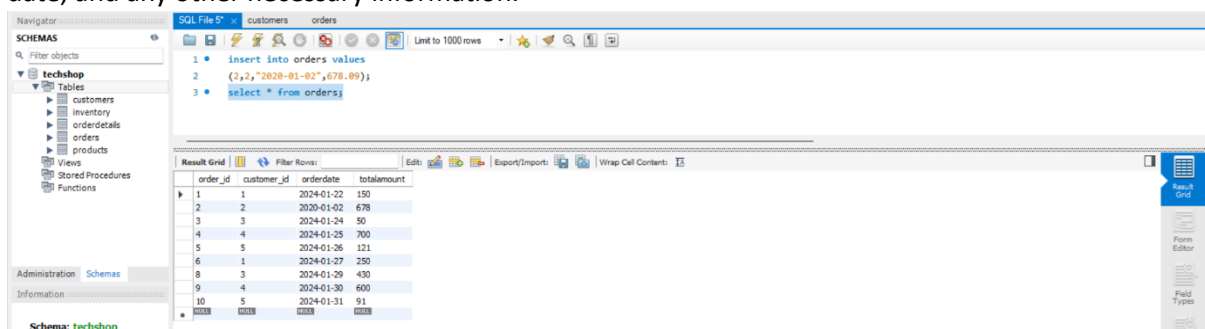
4. Write an SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.



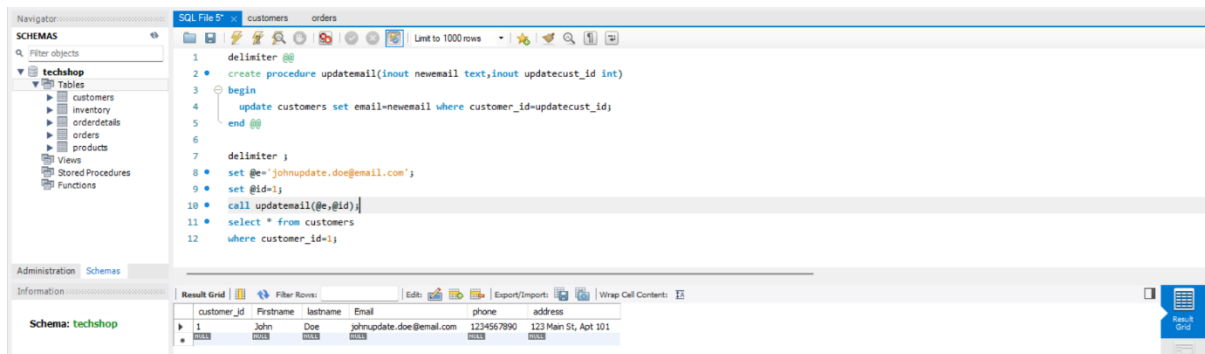
5. Write an SQL query to delete a specific order and its associated order details from the "Orders" and "Order Details" tables. Allow users to input the order ID as a parameter.



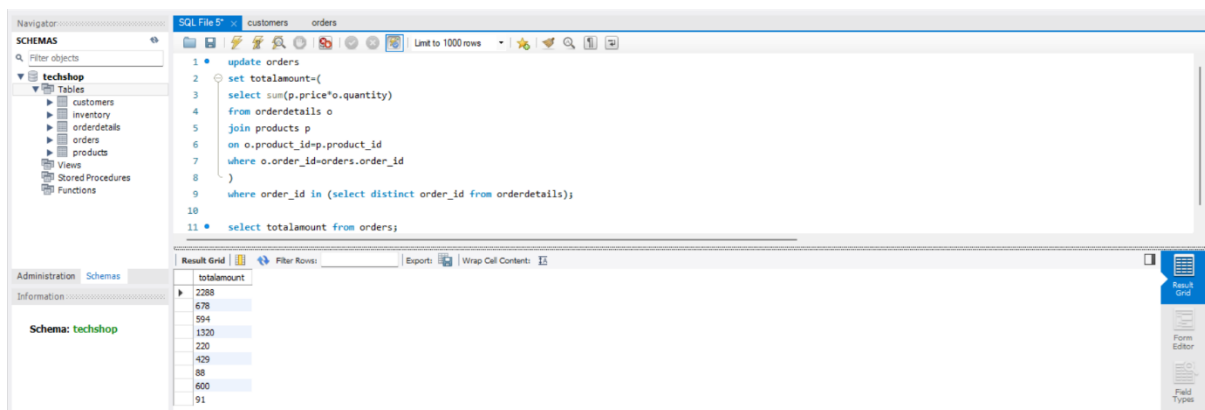
6. Write an SQL query to insert a new order into the "Orders" table. Include the customer ID, order date, and any other necessary information.



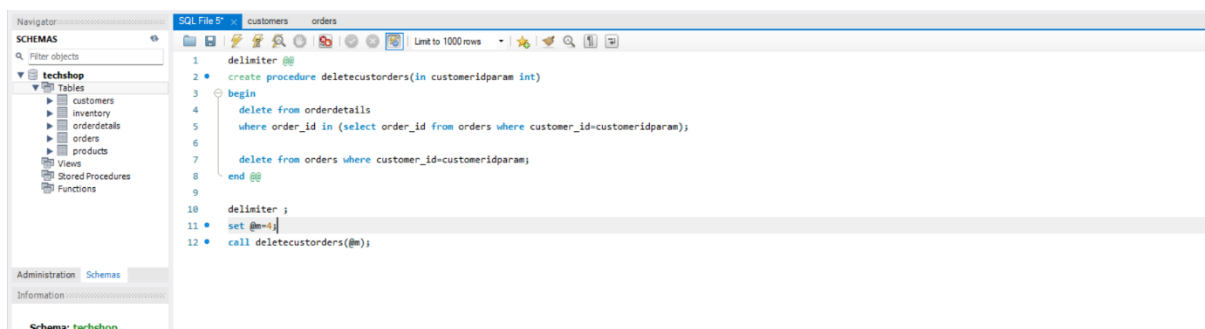
7. Write an SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table. Allow users to input the customer ID and new contact information.



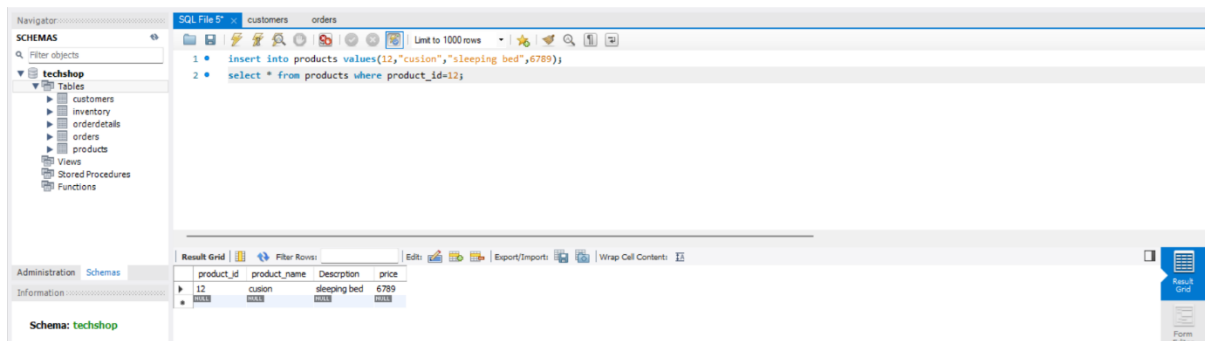
8. Write an SQL query to recalculate and update the total cost of each order in the "Orders" table based on the prices and quantities in the "Order Details" table.



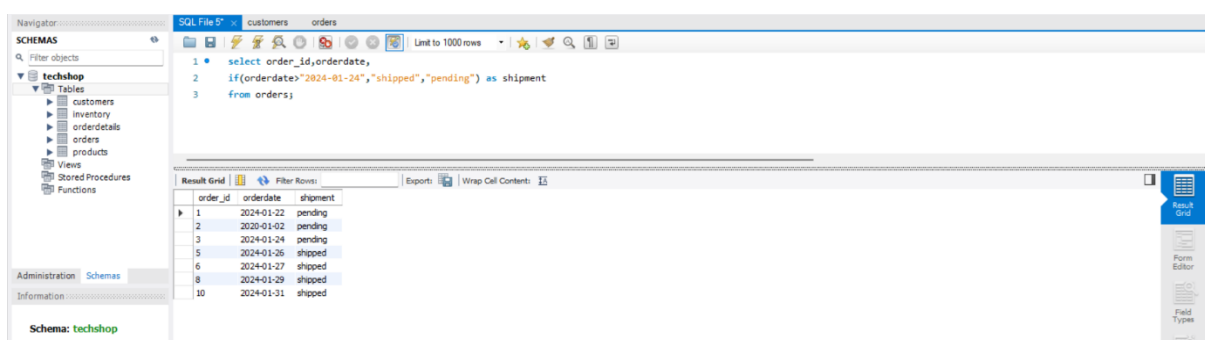
9. Write an SQL query to delete all orders and their associated order details for a specific customer from the "Orders" and "order Details" tables. Allow users to input the customer ID as a parameter.



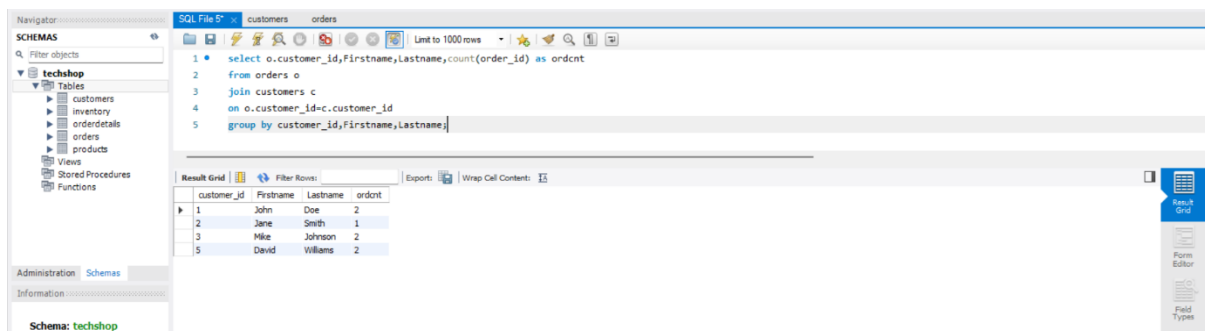
10. Write an SQL query to insert a new electronic gadget product into the "Products" table, including product name, category, price, and any other relevant details.



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.

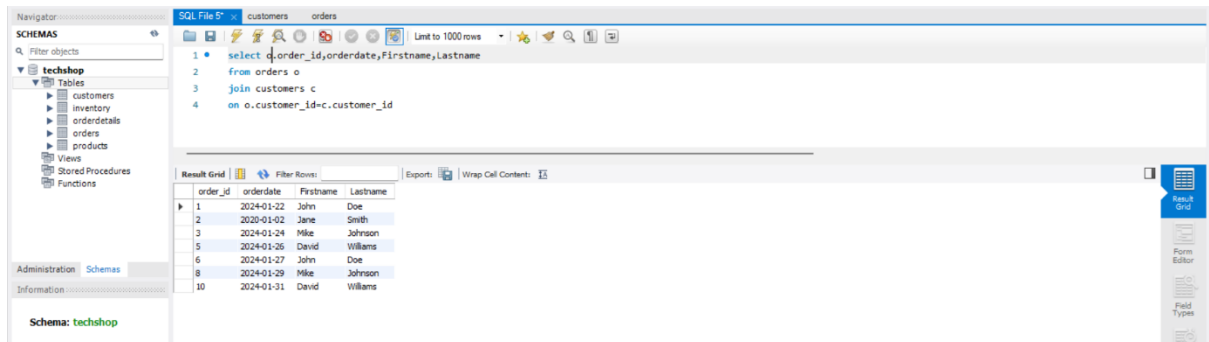


12. Write an SQL query to calculate and update the number of orders placed by each customer in the "Customers" table based on the data in the "Orders" table.



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

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



The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'techshop' schema with tables: customers, inventory, orderdetails, orders, and products. The central pane contains the following SQL query:

```

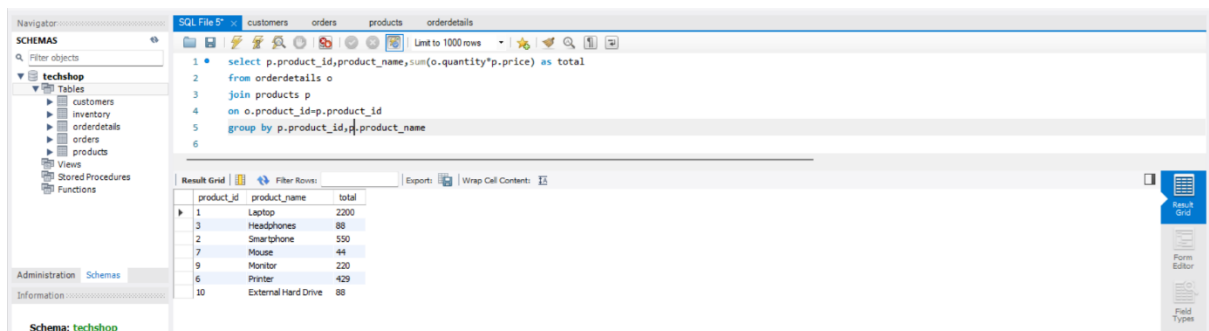
1 select o.order_id,orderdate,Firstname,Lastname
2 from orders o
3 join customers c
4 on o.customer_id=c.customer_id

```

The right pane shows the 'Result Grid' with the following data:

order_id	orderdate	Firstname	Lastname
1	2024-01-22	John	Doe
2	2020-01-02	Jane	Smith
3	2024-01-24	Mike	Johnson
5	2024-01-26	David	Williams
6	2024-01-27	John	Doe
8	2024-01-29	Mike	Johnson
10	2024-01-31	David	Williams

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



The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'techshop' schema. The central pane contains the following SQL query:

```

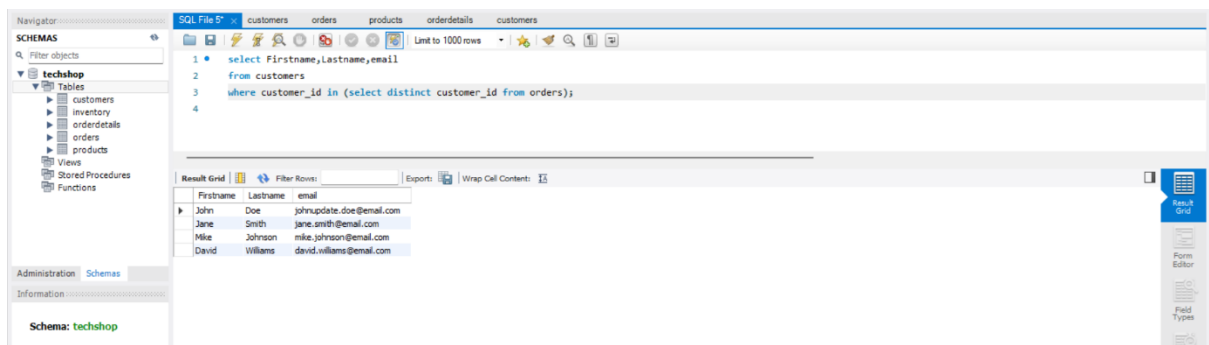
1 select p.product_id,product_name,sum(o.quantity*p.price) as total
2 from orderdetails o
3 join products p
4 on o.product_id=p.product_id
5 group by p.product_id,p.product_name
6

```

The right pane shows the 'Result Grid' with the following data:

product_id	product_name	total
1	Laptop	2200
3	Headphones	88
2	Smartphone	550
7	Mouse	44
9	Monitor	220
6	Printer	429
10	External Hard Drive	88

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



The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'techshop' schema. The central pane contains the following SQL query:

```

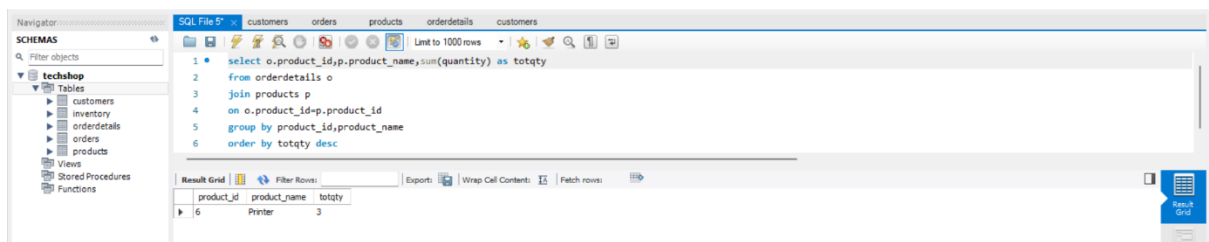
1 select Firstname,Lastname,email
2 from customers
3 where customer_id in (select distinct customer_id from orders);
4

```

The right pane shows the 'Result Grid' with the following data:

Firstname	Lastname	email
John	Doe	johnupdate.doe@email.com
Jane	Smith	jane.smith@email.com
Mike	Johnson	mike.johnson@email.com
David	Williams	david.williams@email.com

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



The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'techshop' schema. The central pane contains the following SQL query:

```

1 select o.product_id,p.product_name,sum(quantity) as totqty
2 from orderdetails o
3 join products p
4 on o.product_id=p.product_id
5 group by product_id,product_name
6 order by totqty desc

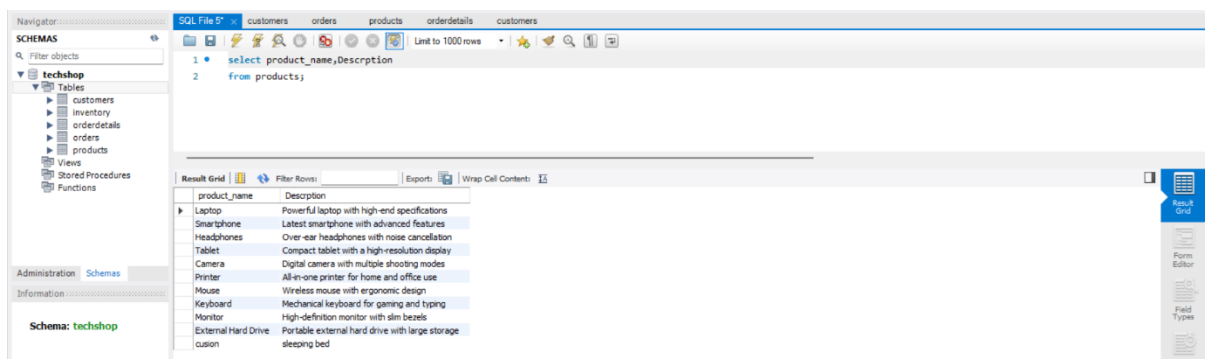
```

The right pane shows the 'Result Grid' with the following data:

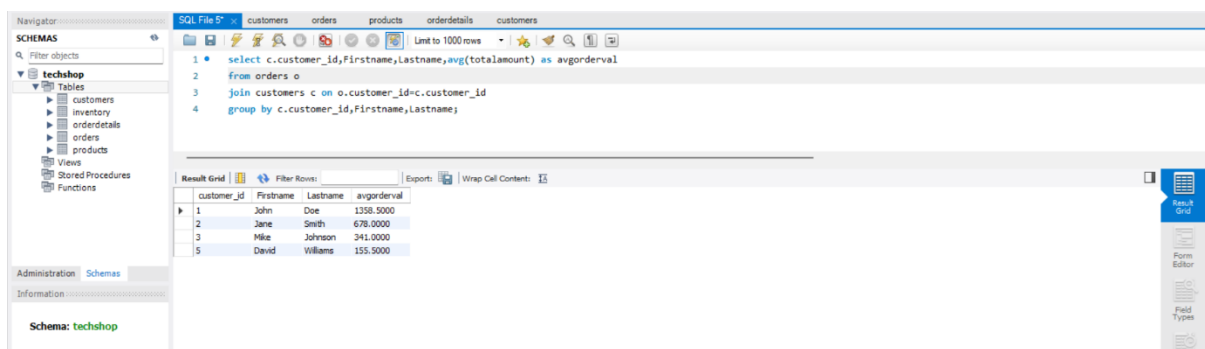
product_id	product_name	totqty
6	Printer	3



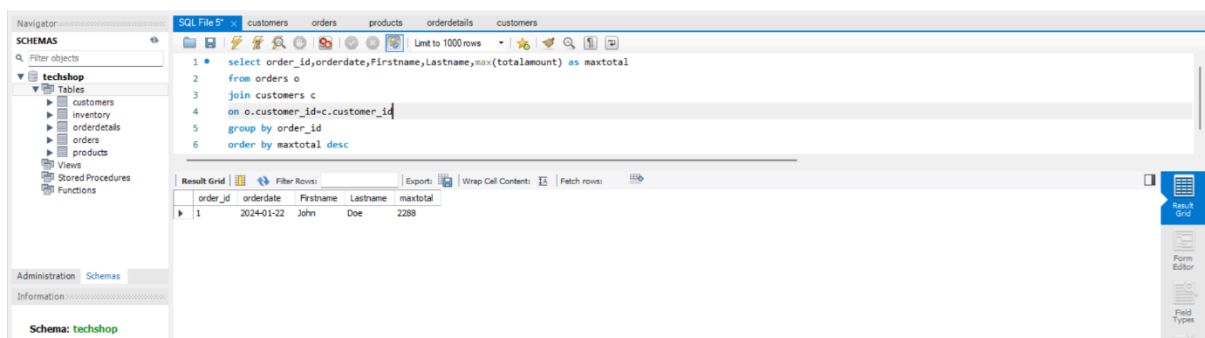
5. Write an SQL query to retrieve a list of electronic gadgets along with their corresponding categories.



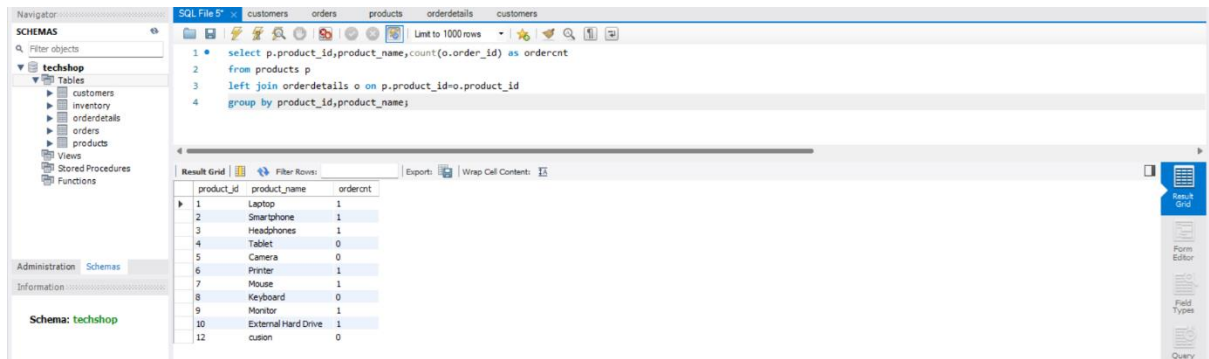
6. Write an SQL query to calculate the average order value for each customer. Include the customer's name and their average order value.



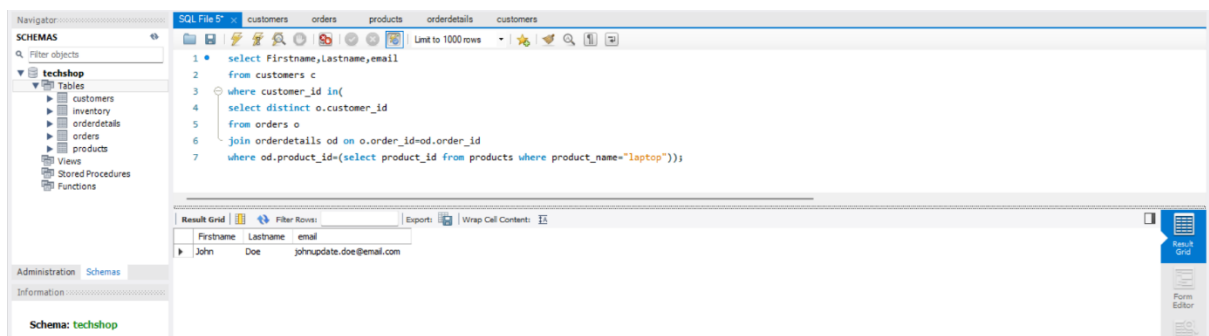
7. Write an SQL query to find the order with the highest total revenue. Include the order ID, customer information, and the total revenue.



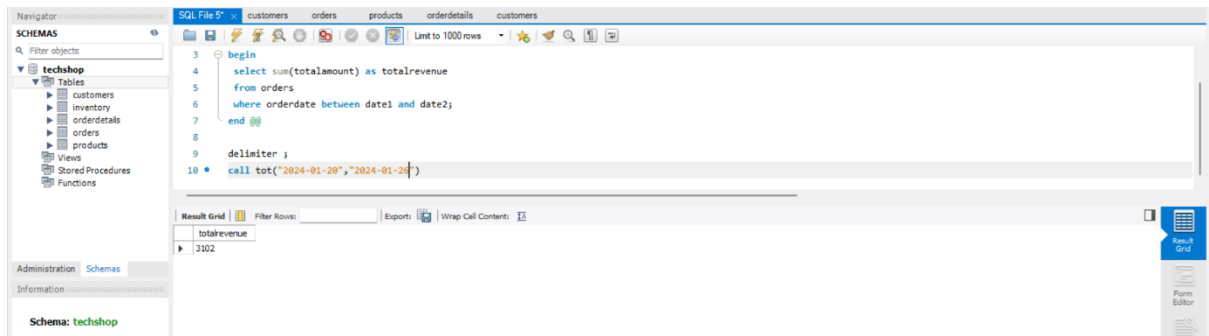
8. Write an SQL query to list electronic gadgets and the number of times each product has been ordered.



9. Write an SQL query to find customers who have purchased a specific electronic gadget product. Allow users to input the product name as a parameter.

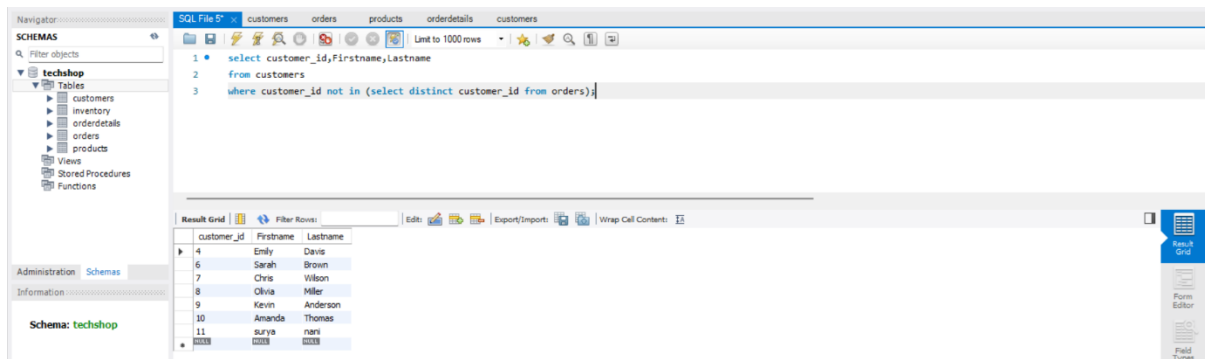


10. Write an SQL query to calculate the total revenue generated by all orders placed within a specific time period. Allow users to input the start and end dates as parameters.

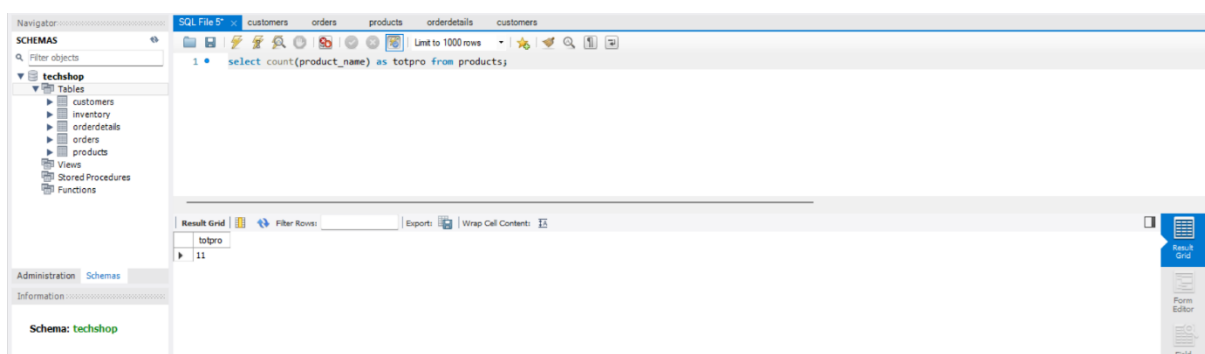


## Task 4. Subquery and its type

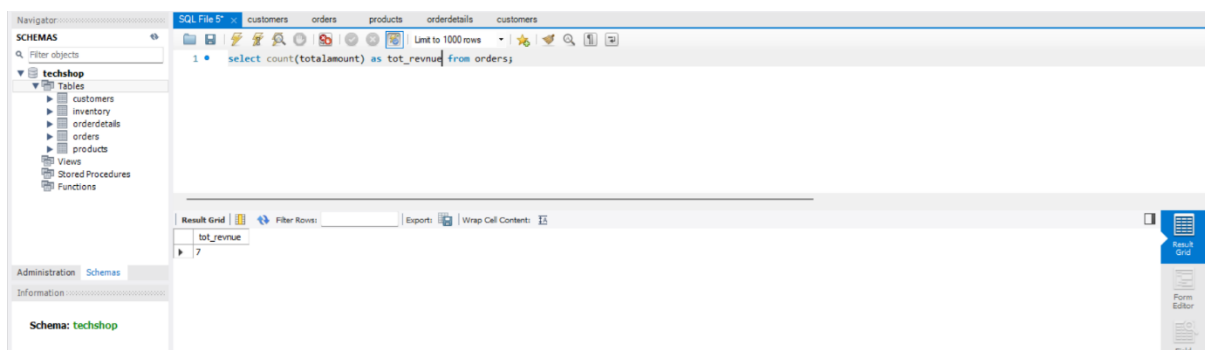
1. Write an SQL query to find out which customers have not placed any orders.



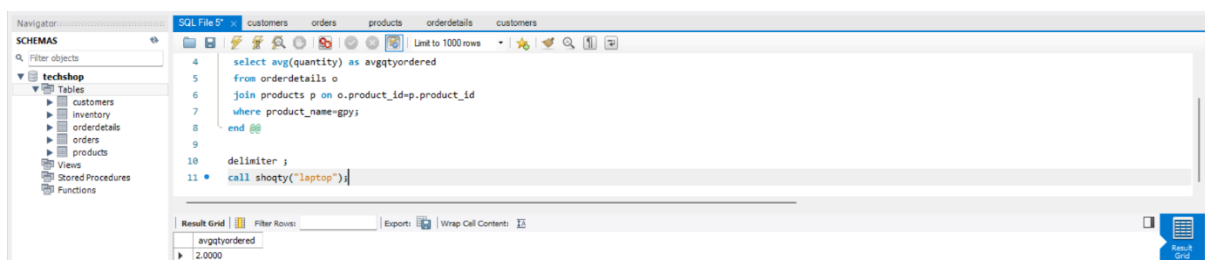
2. Write an SQL query to find the total number of products available for sale



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



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



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

The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The SQL editor contains the following query:

```
5 from orders o
6 join customers c on o.customer_id=c.customer_id
7 where o.customer_id=1
8 group by o.customer_id;
9 end @@
10
11 delimiter ;
12 call rev(c);
```

The Result Grid shows the following data:

customer_id	Firstname	Lastname	tot_revenue
1	Jane	Smith	678

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

The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The SQL editor contains the following query:

```
1 select c.customer_id,Firstname,Lastname,count(order_id) as ordercnt
2 from orders o
3 join customers c on o.customer_id=c.customer_id
4 group by order_id
5 order by ordercnt desc
6 limit 1;
```

The Result Grid shows the following data:

customer_id	Firstname	Lastname	ordercnt
1	John	Doe	1

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

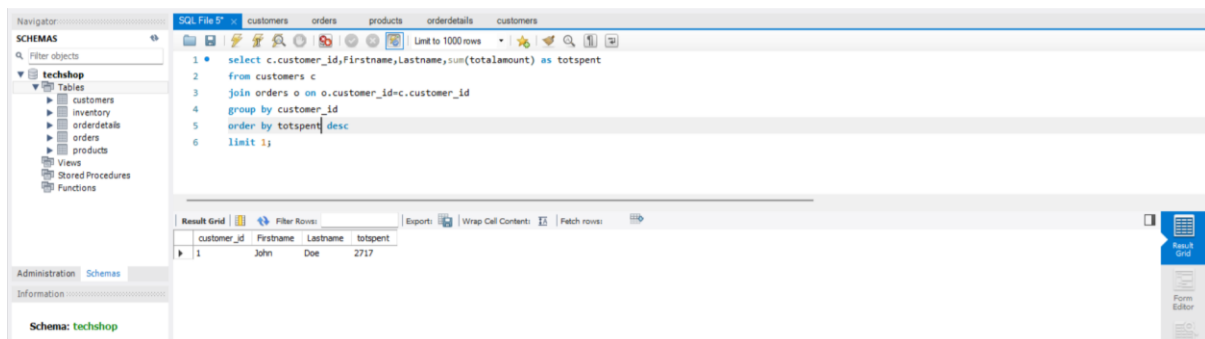
The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The SQL editor contains the following query:

```
1 select p.product_id,sum(quantity) as totqty
2 from orderdetails o
3 join products p on o.product_id=o.product_id
4 group by product_id
5 order by totqty desc
6 limit 1;
```

The Result Grid shows the following data:

product_id	totqty
1	11

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



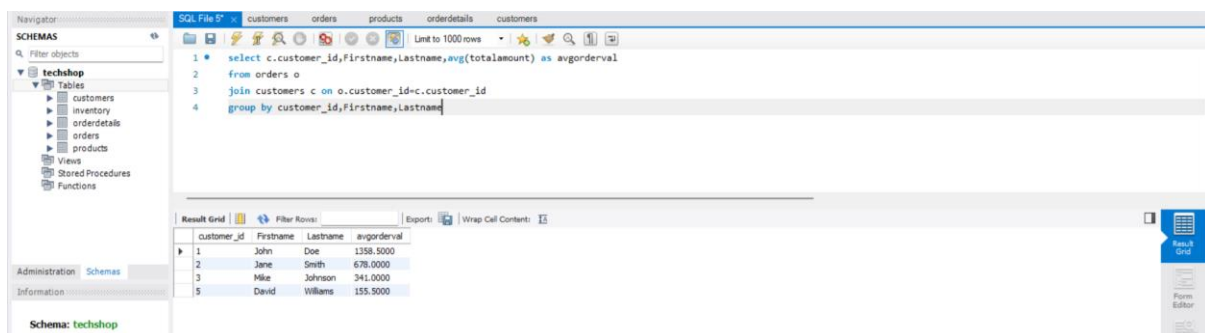
The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The query editor contains the following SQL code:

```
1 select c.customer_id,Firstname,Lastname,sum(totalamount) as totspent
2 from customers c
3 join orders o on o.customer_id=c.customer_id
4 group by customer_id
5 order by totspent desc
6 limit 1;
```

The Result Grid displays the following data:

customer_id	Firstname	Lastname	totspent
1	John	Doe	2717

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



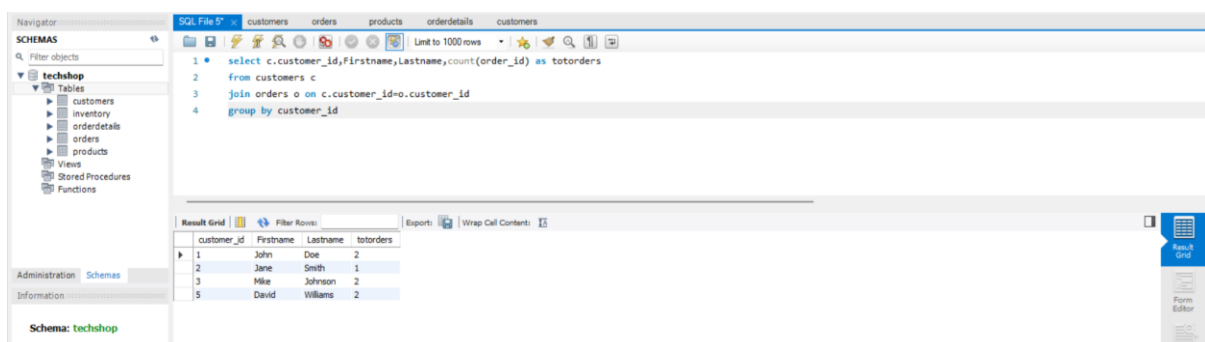
The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The query editor contains the following SQL code:

```
1 select c.customer_id,Firstname,Lastname,avg(totalamount) as avgorderval
2 from orders o
3 join customers c on o.customer_id=c.customer_id
4 group by customer_id,Firstname,Lastname;
```

The Result Grid displays the following data:

customer_id	Firstname	Lastname	avgorderval
1	John	Doe	1358.5000
2	Jane	Smith	678.0000
3	Mike	Johnson	341.0000
5	David	Williams	155.5000

10. Write an SQL query to find the total number of orders placed by each customer and list their names along with the order count.



The screenshot shows the SQL Studio interface with the 'techshop' schema selected. The query editor contains the following SQL code:

```
1 select c.customer_id,Firstname,Lastname,count(order_id) as totorders
2 from customers c
3 join orders o on c.customer_id=o.customer_id
4 group by customer_id;
```

The Result Grid displays the following data:

customer_id	Firstname	Lastname	totorders
1	John	Doe	2
2	Jane	Smith	1
3	Mike	Johnson	2
5	David	Williams	2

