
blinkit

Introduction:-

Blinkit (formerly known as **Grofers**) is an Indian online grocery delivery service that allows customers to purchase groceries, daily essentials, snacks, and other products online. The platform was founded in 2013 by **Albinder Dhindsa** and **Saurabh Kumar** with the aim of simplifying and streamlining the process of grocery shopping. Blinkit offers a wide range of products, including fresh fruits and vegetables, dairy products, packaged foods, and personal care items.

Key Features of Blinkit:

1. **Fast Delivery:** Blinkit is known for its quick delivery service, often promising deliveries in as little as 10-30 minutes depending on the location. This speed sets it apart from traditional e-commerce platforms that generally have longer delivery timelines.
2. **Variety of Products:** Blinkit offers a vast range of products across multiple categories such as groceries, household products, personal care, baby care, and more. It also provides an assortment of health and wellness products.
3. **User-Friendly App:** Blinkit operates through a mobile application and a website, making it easy for customers to browse through available products, place orders, and track deliveries. The platform is designed to provide a seamless user experience.
4. **Fresh Produce:** One of the standout features of Blinkit is its emphasis on delivering fresh fruits, vegetables, and other perishable goods. This has become a key differentiator from other online grocery platforms.
5. **Subscription and Offers:** Blinkit often provides subscription-based models for regular purchases and offers various discounts, cashback, and deals to attract customers. The platform also runs promotional campaigns to enhance customer engagement.
6. **Wide Network of Warehouses:** Blinkit operates through a network of warehouses strategically placed across different regions. These warehouses help facilitate quick delivery and allow for efficient inventory management.

Applications of the project:-

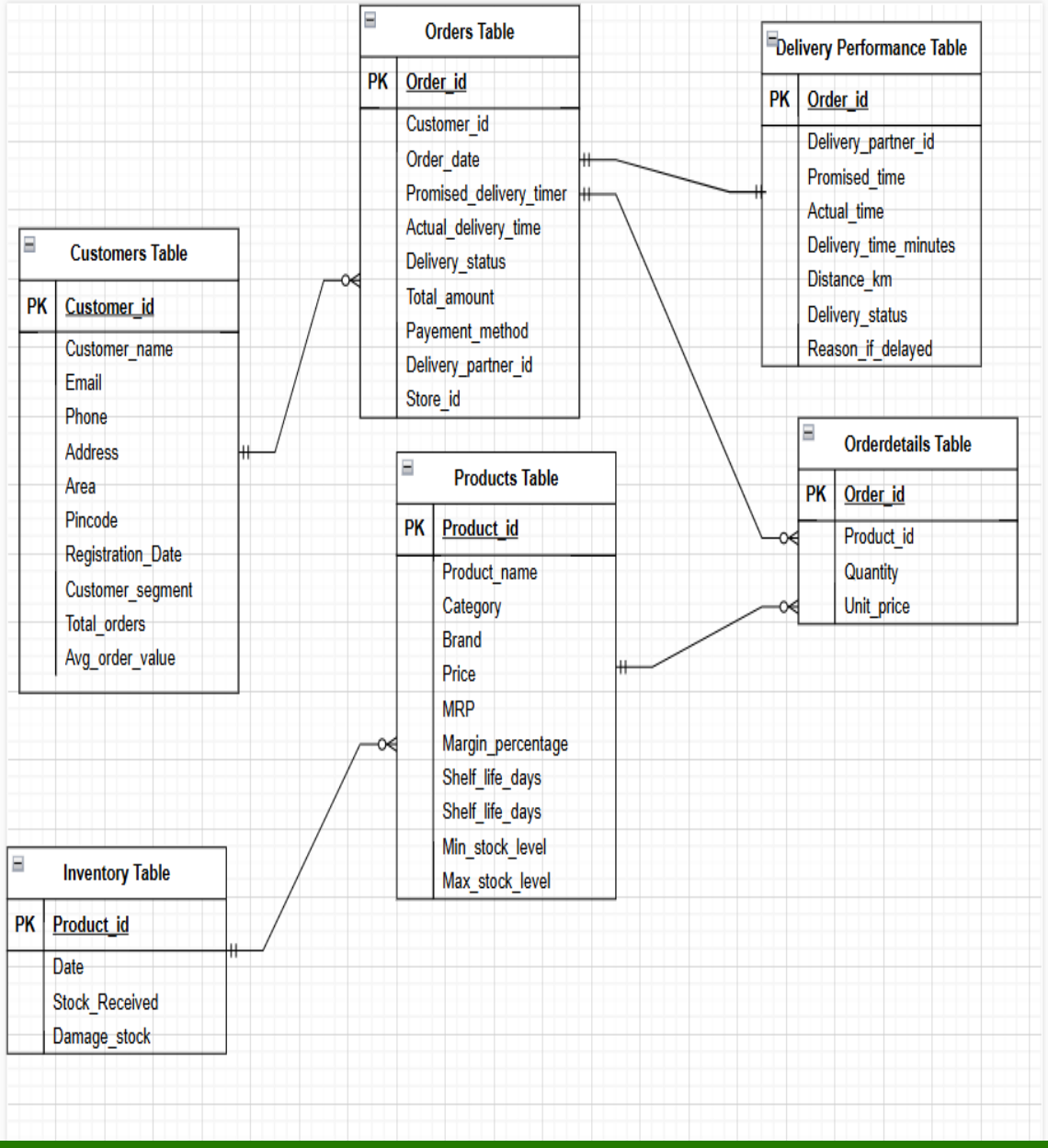
1) Customer Segmentation Analysis:
   - Identify **top customer segments** based on total orders and average order value.
   - Find **high-value customers** who place frequent or large orders.

2) Product Insights:-
   - Identify products with the **highest margin percentage** (profitability).
   - Compare **MRP vs. selling price** to analyze discounts and pricing strategy.

3) Inventory analysis:-
   - Monitor stock trends over **months** to identify seasonal patterns or operational inefficiencies.

4) Revenue and Sales Reports:-
   - Track **sales trends over time** to find peak days.

ER Diagram:-


Orders Table
PK
Order_id
Customer_id
Order_date
Promised_delivery_timer
Actual_delivery_time
Delivery_status
Total_amount
Payement_method
Delivery_partner_id
Store_id
Delivery Performance Table
PK
Order_id
Delivery_partner_id
Promised_time
Actual_time
Delivery_time_minutes
Distance_km
Delivery_status
Reason_if_delayed
Customers Table
PK
Customer_id
Customer_name
Email
Phone
Address
Area
Pincode
Registration_Date
Customer_segment
Total_orders
Avg_order_value
Products Table
PK
Product_id
Product_name
Category
Brand
Price
MRP
Margin_percentage
Shelf_life_days
Shelf_life_days
Min_stock_level
Max_stock_level
Orderdetails Table
PK
Order_id
Product_id
Quantity
Unit_price
Inventory Table
PK
Product_id
Date
Stock_Received
Damage_stock

Blinkit- Quick-Commerce Platform Database Design

Database- Blinkit

Tables-

➢ Blinkit Customer Table

➢ Blinkit Products Table

➢ Blinkit Orders Detail Table

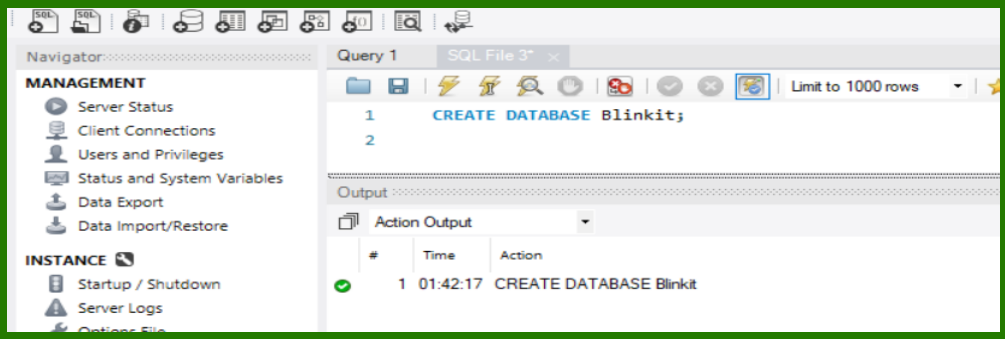
➢ Blinkit Order Table

➢ Blinkit Inventory Table

➢ Blinkit Delivery Performance Table

Key Relationships:

1. **Customers → Orders** (1:M)
2. **Orders → Order Details** (1:M)
3. **Products → Order Details** (1:M)
4. **Products → Inventory** (1:1 or 1:M)
5. **Orders → Delivery Performance** (1:1)



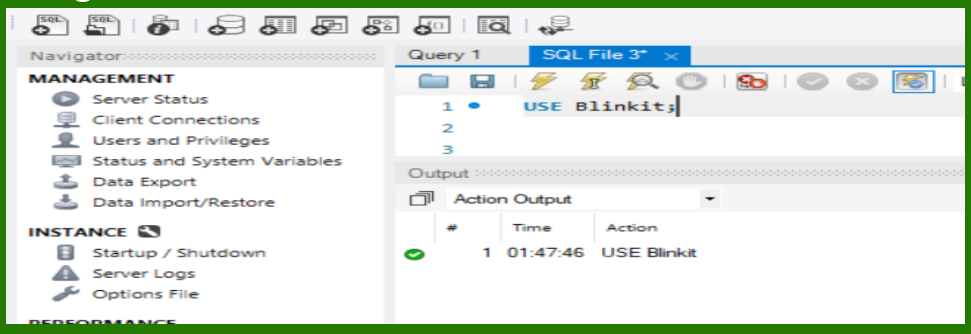
DATA DEFINITION LANGUAGE (DDL):

1){Create}-

- Creating Database and Tables

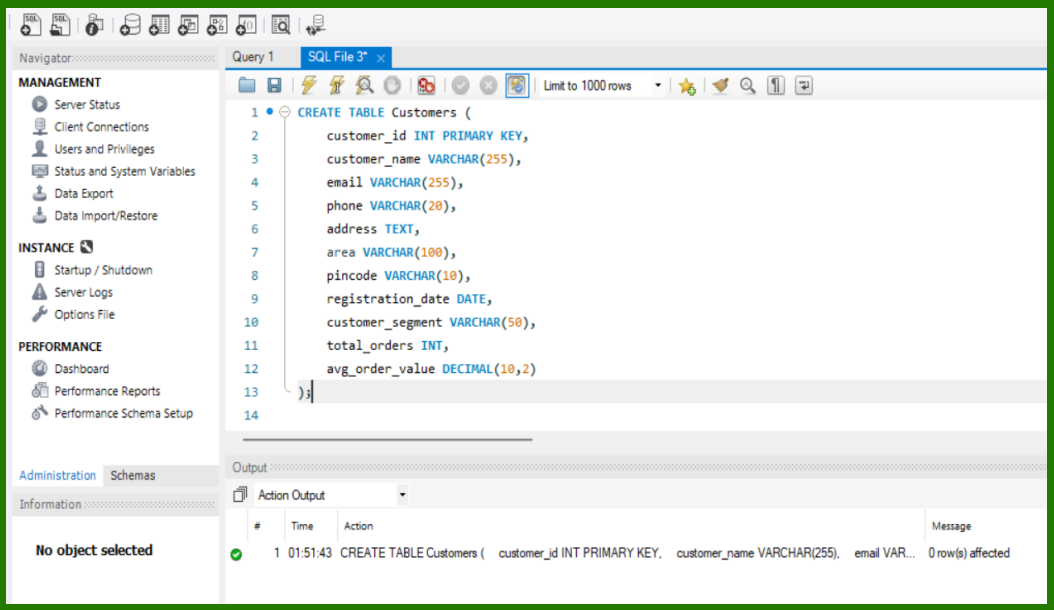
A) Create Database Blinkit:-

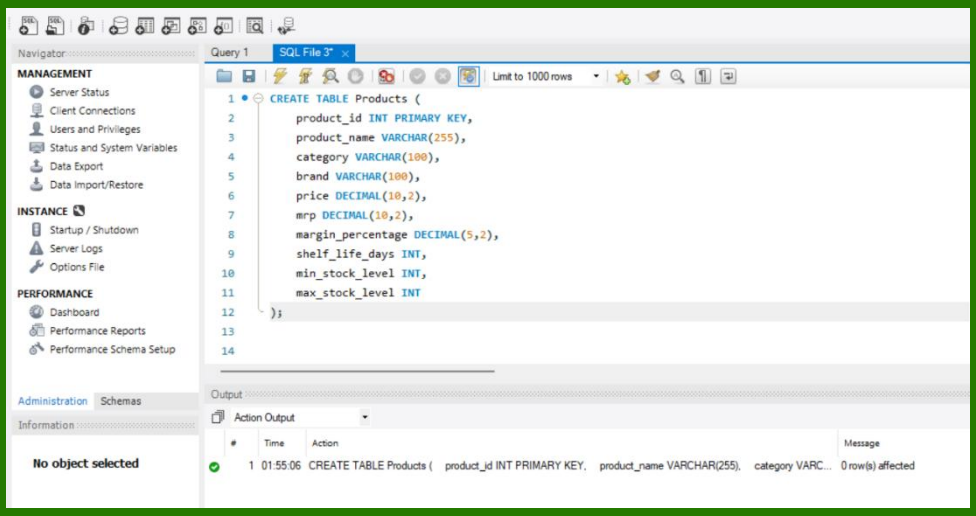
B) Using the Database:-



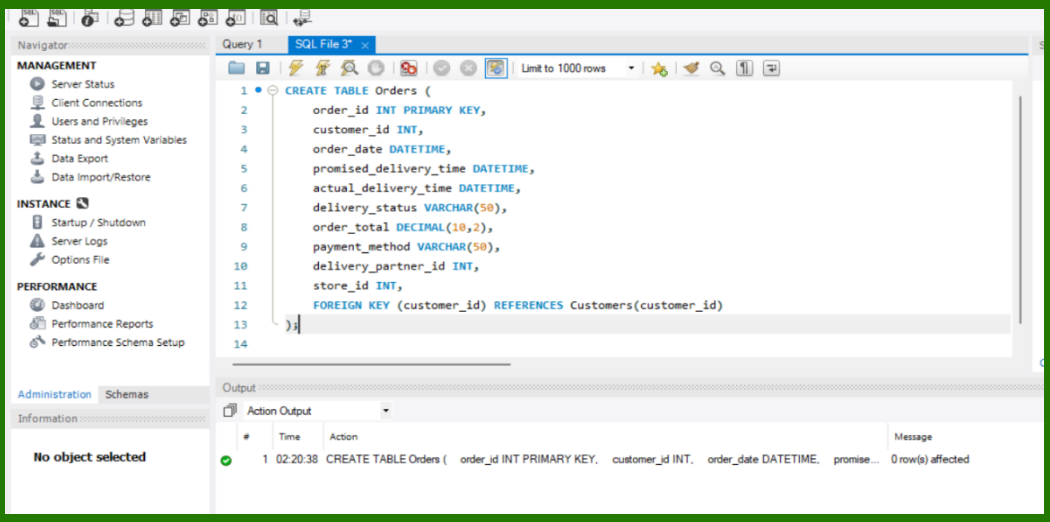
C) Creating Table Customer:-

D) Creating Table Products:-

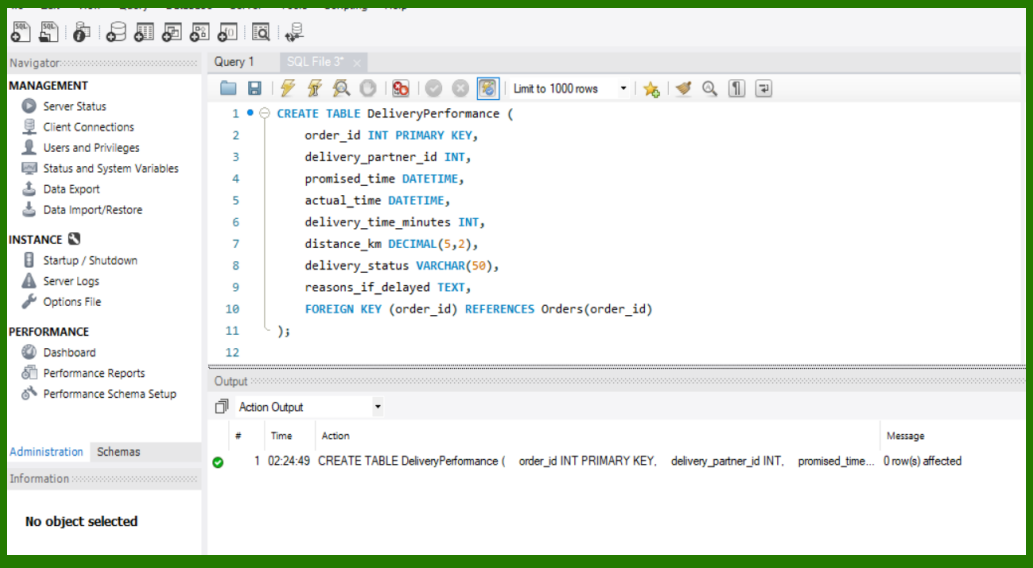




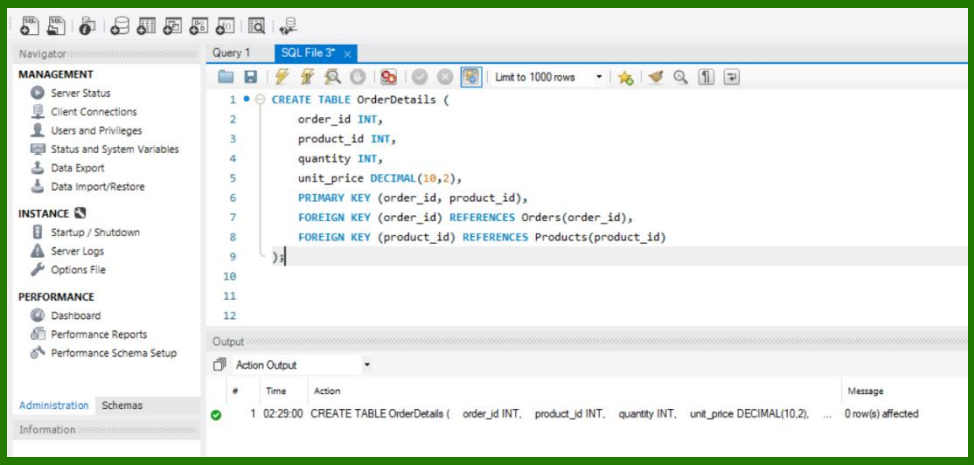
E) Creating Table Orders:-



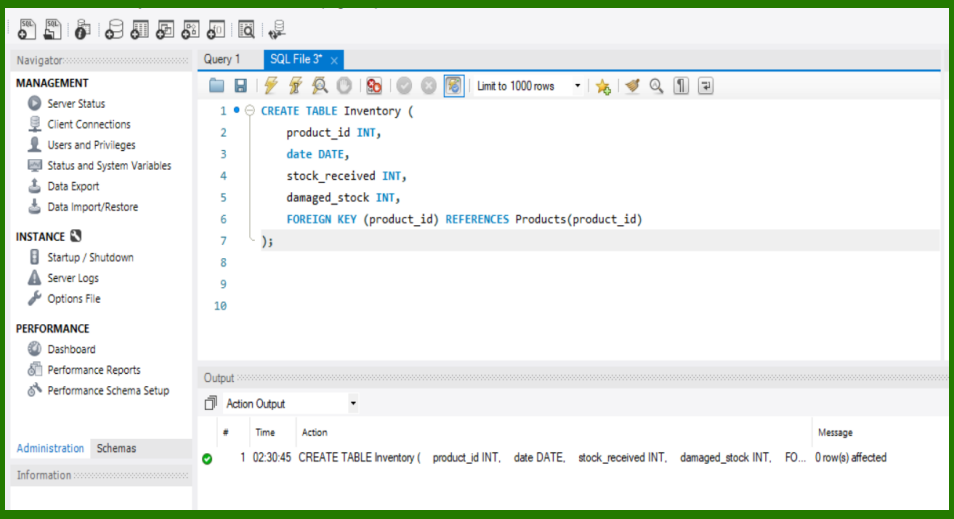
F) Creating Table Delivery Performance:-



G) Creating Table Order Deatails:-

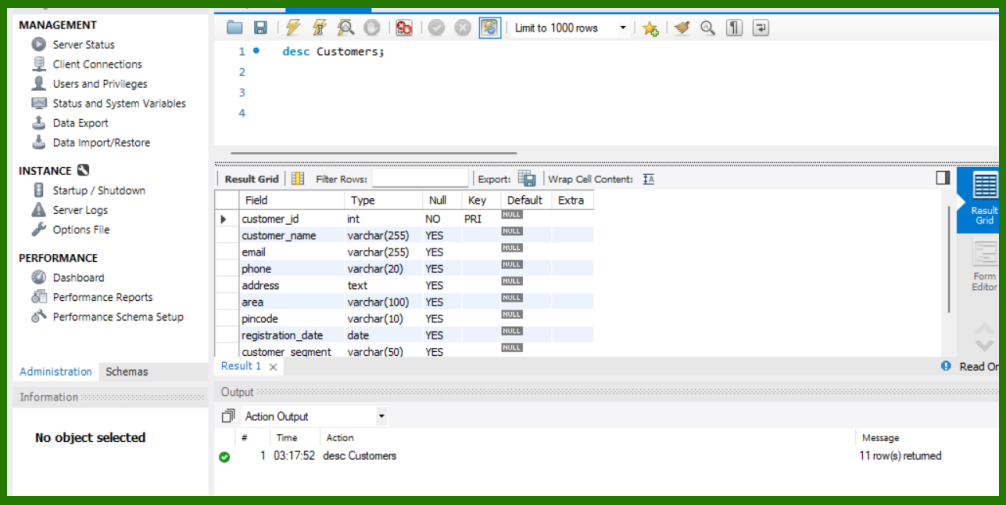


H) Creating Table Inventory:-

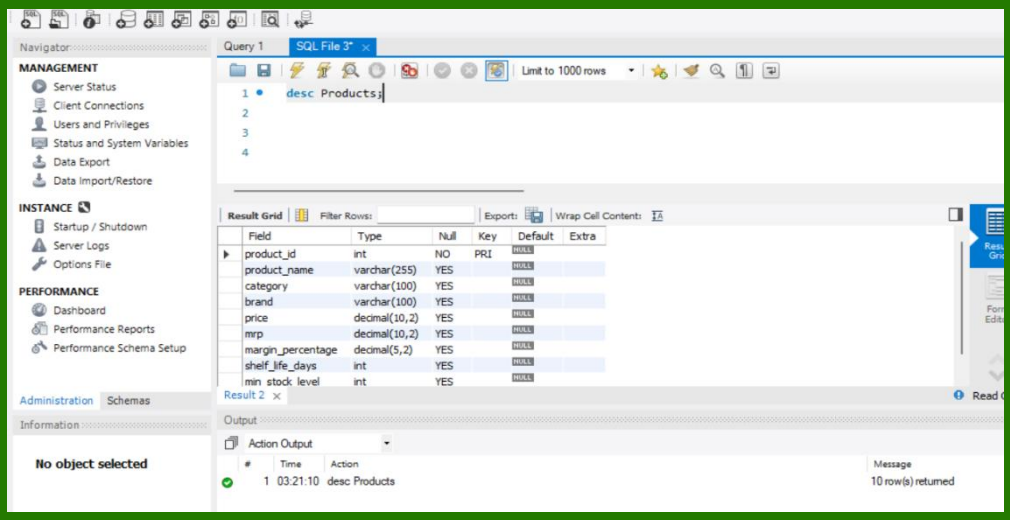


2) CHECK THE STRUCTURE OF TABLE

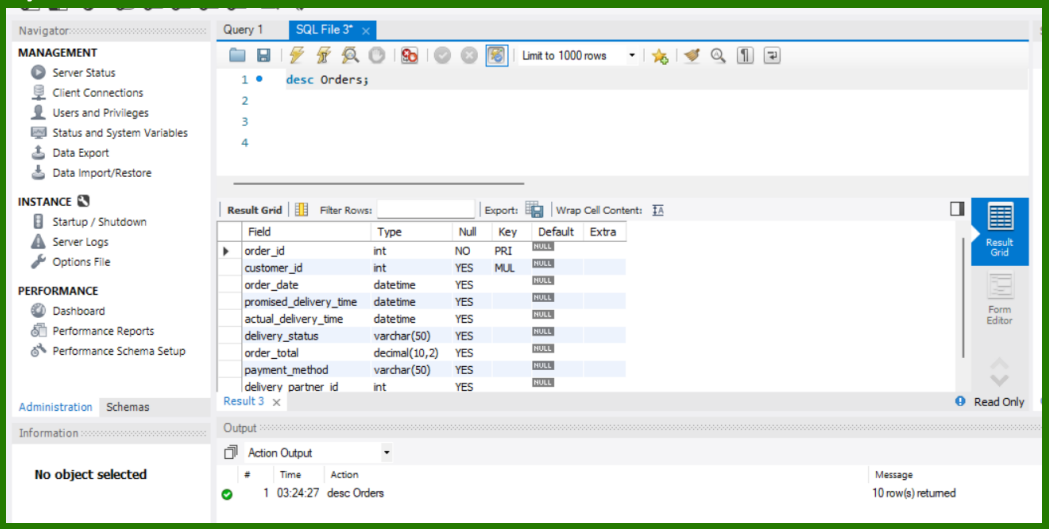
A) Customers Table:-



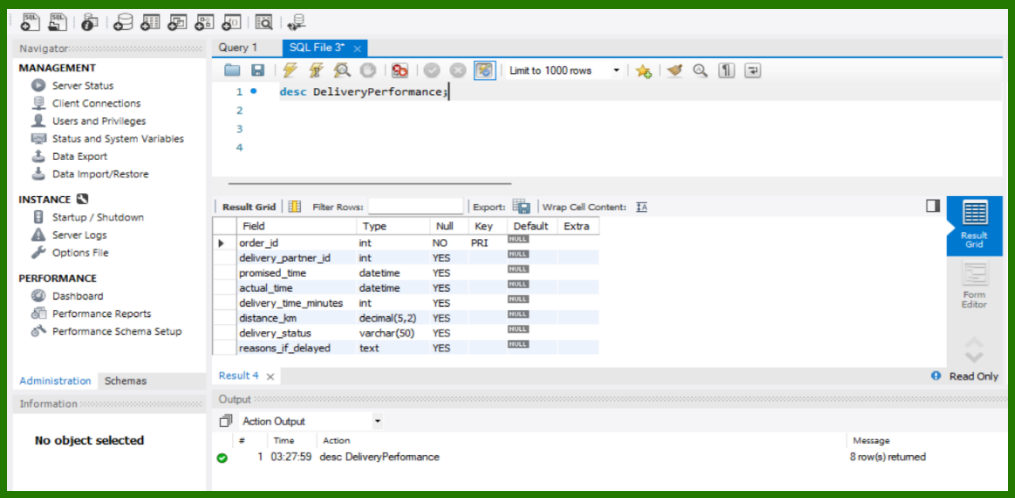
B) Product Table:-



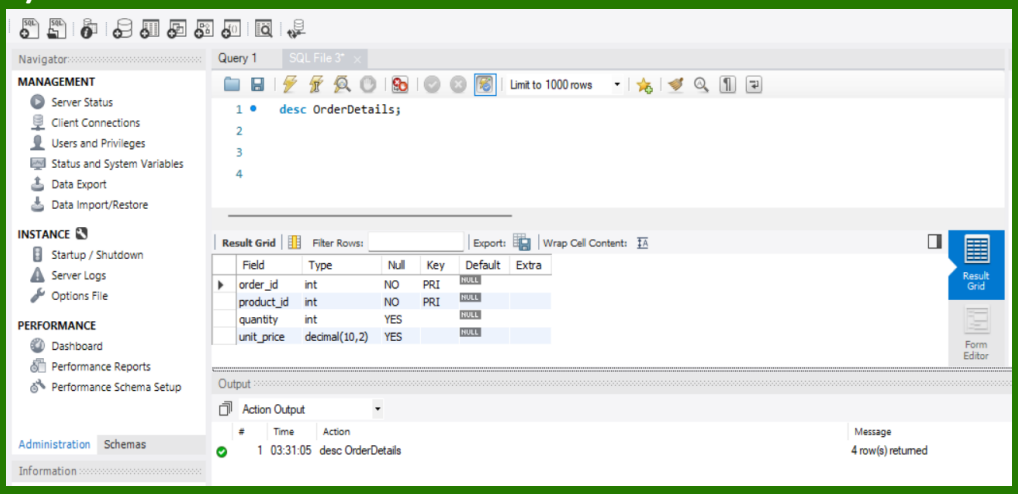
C) Order Table:-



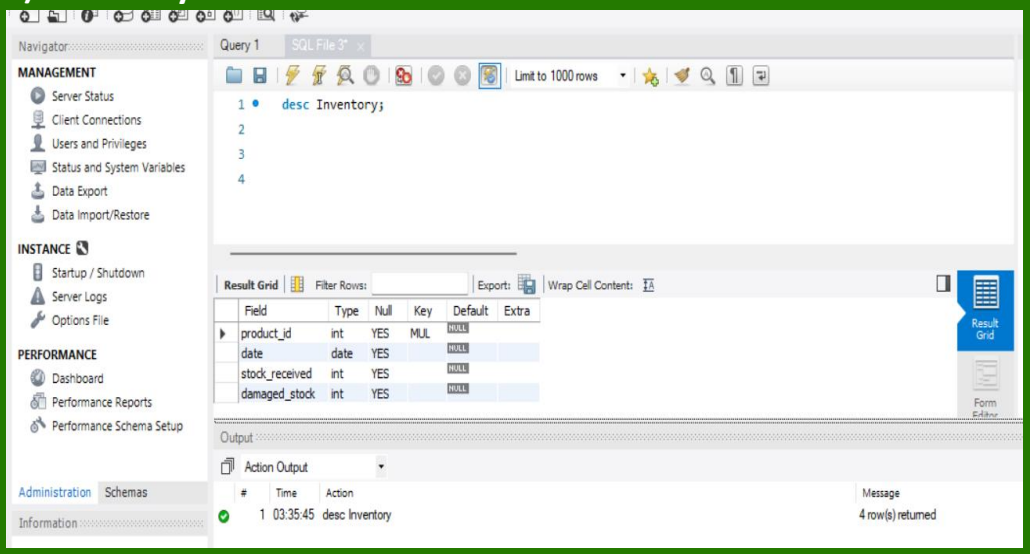
D) Delivery Performance Table:-



E) Order Details Table:-

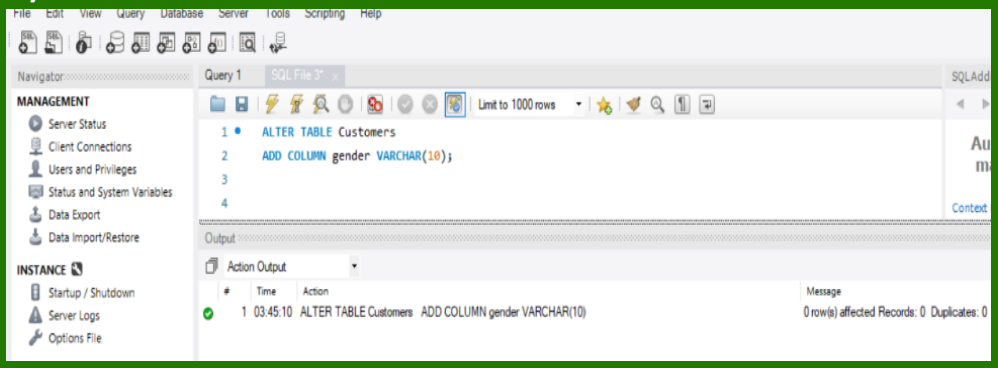


F) Inventory Table:-

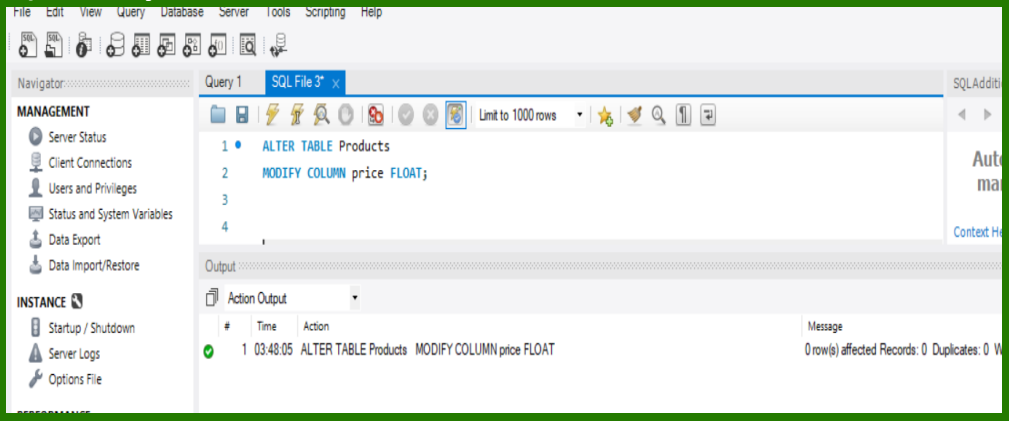


3) {Alter}

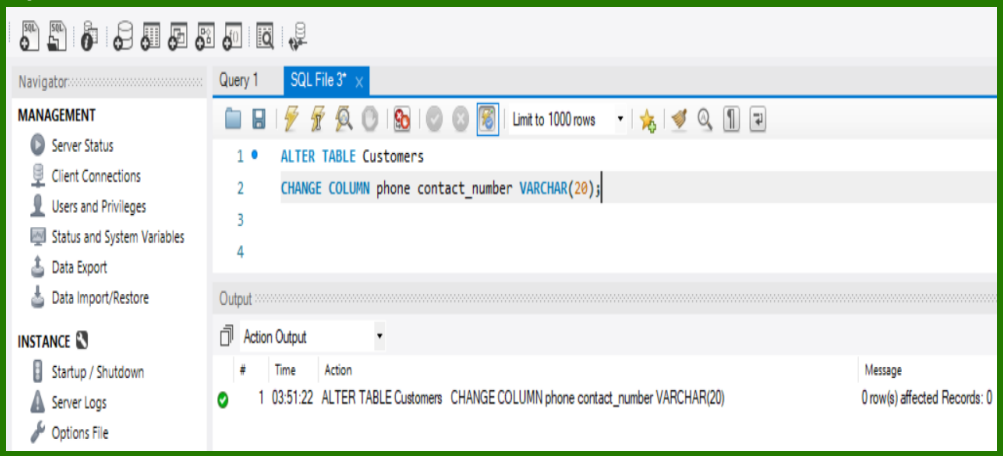
A) Add a Column:-



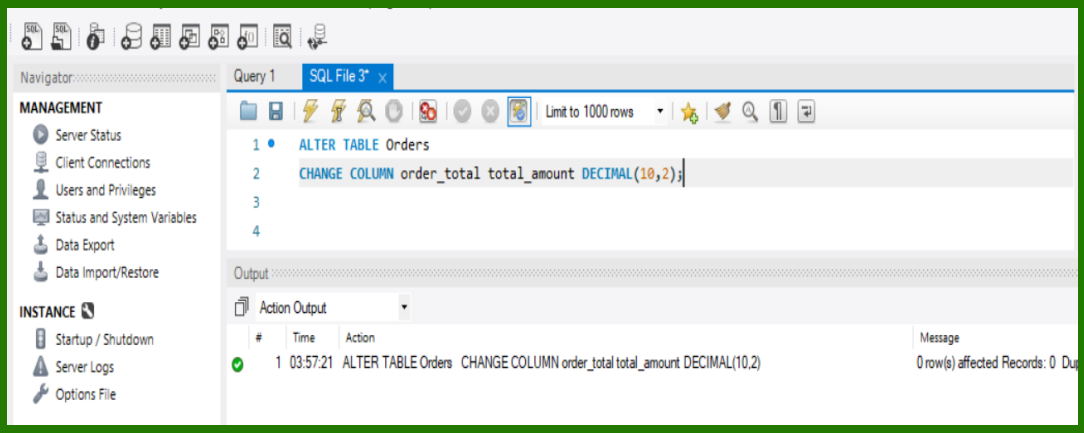
B) Modify Column:-



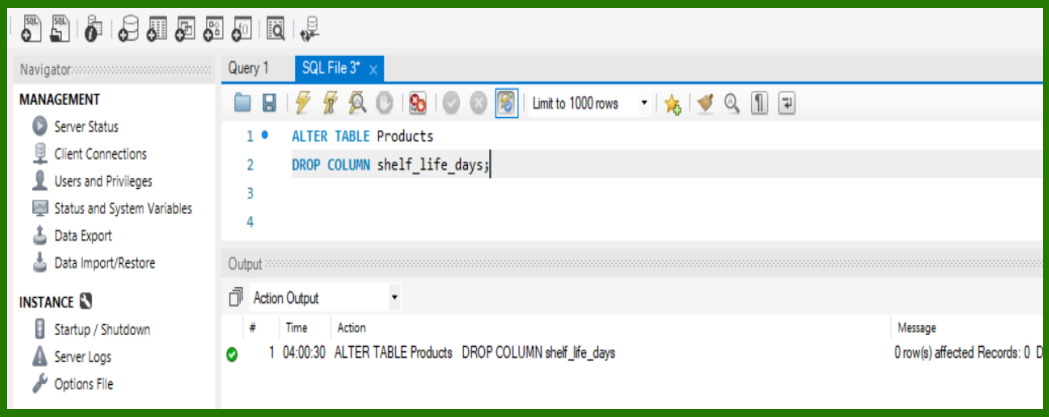
C) Rename a Column:-



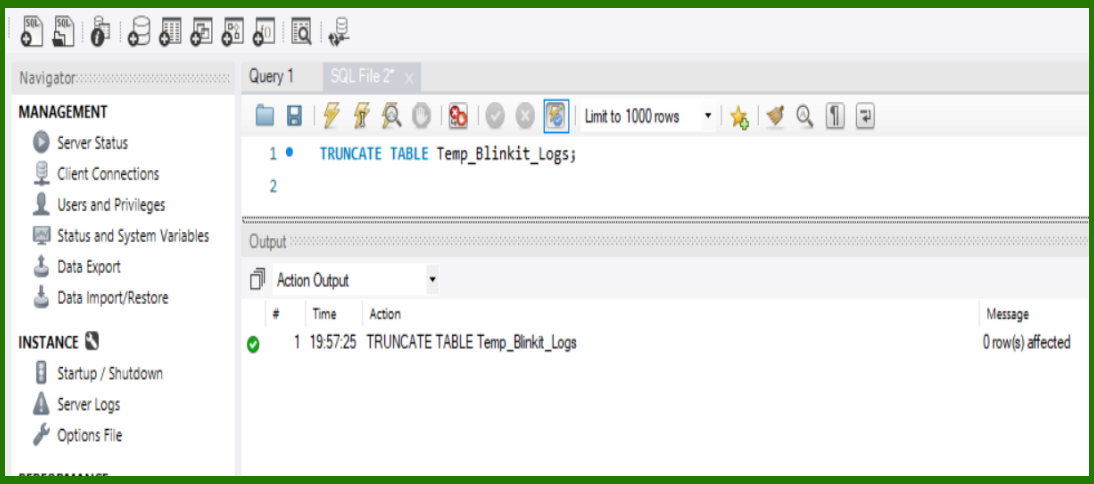
D) Change a Column Name:-



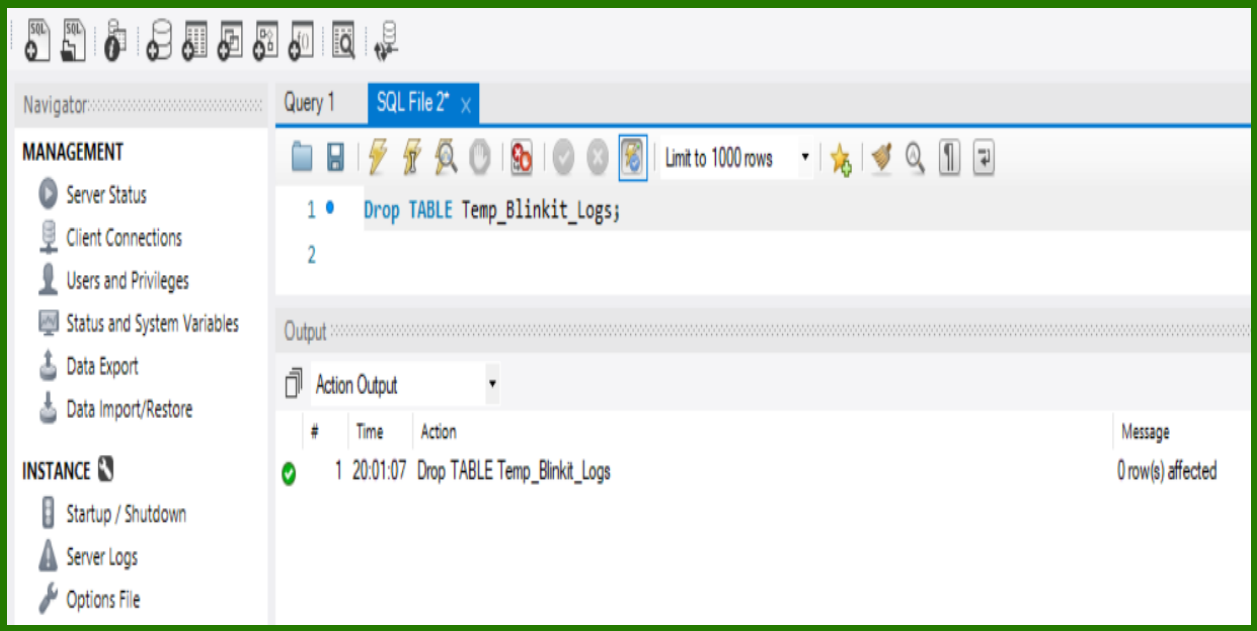
E) Drop a Column:-



4) {Truncate}

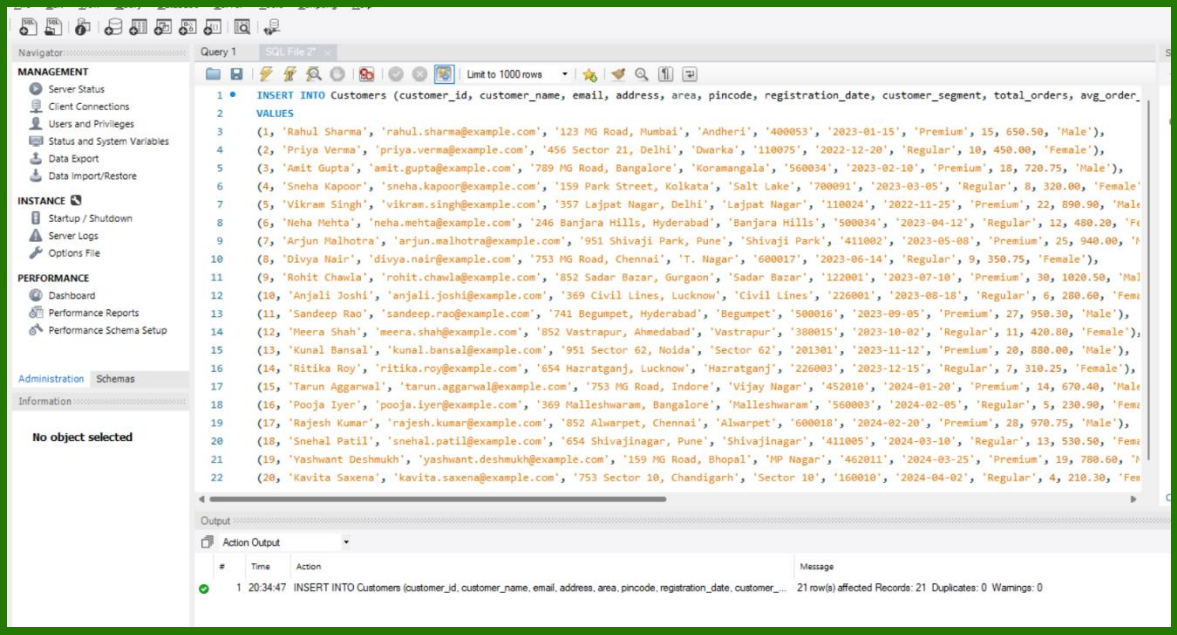


5) {Drop}

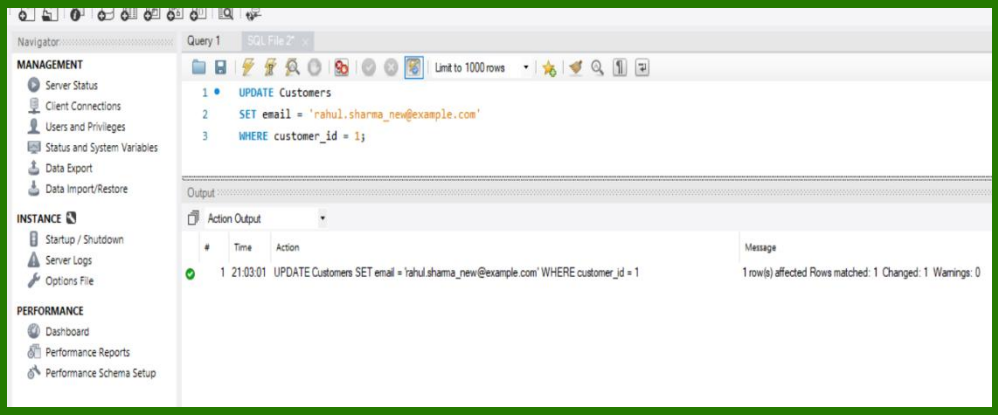


DATA MANIPULATION LANGUAGE (DML):

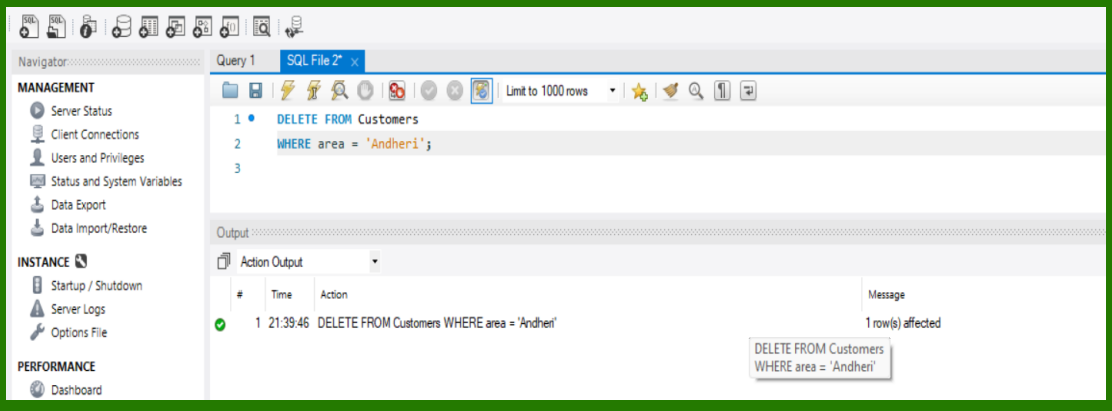
1) {Insert Into}



2) {Update} with SET & WHERE Clause:-



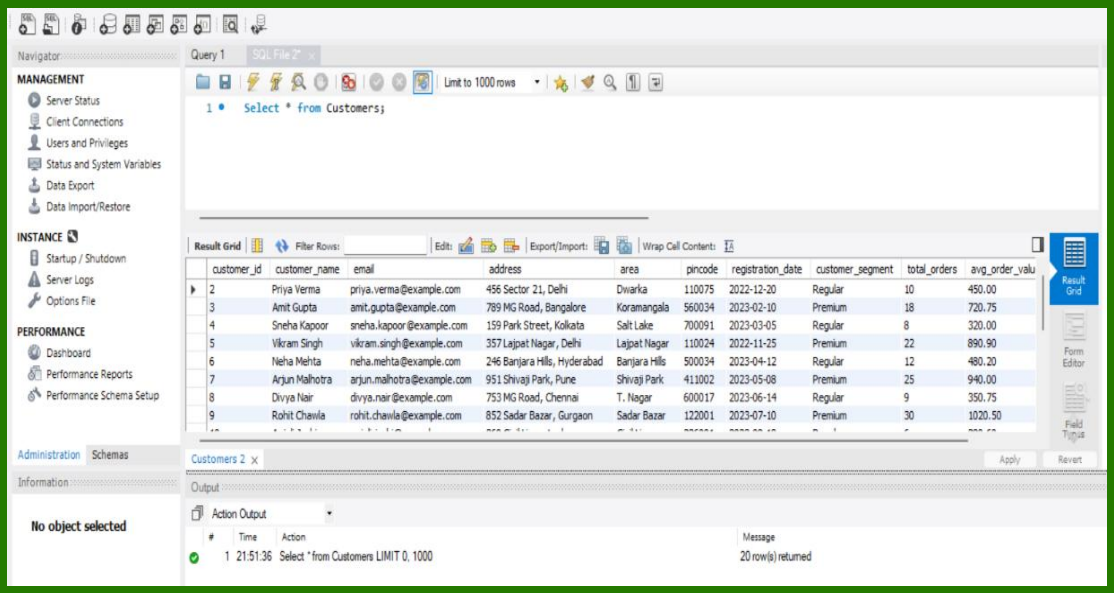
3) {Delete from} with Where clause:-



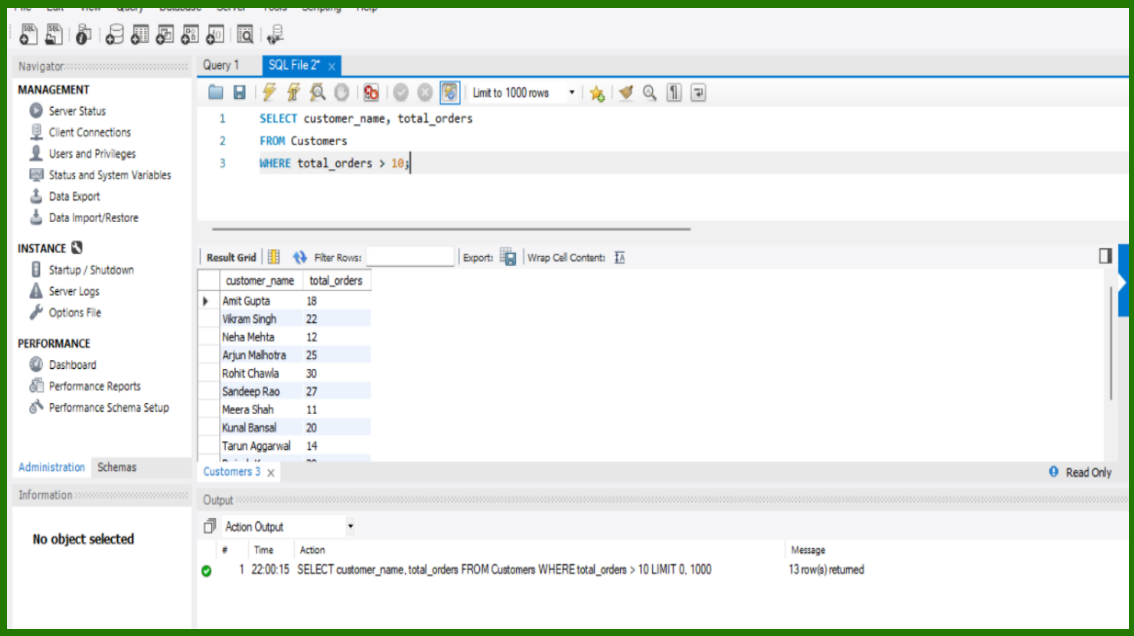
DATA QUERY LANGUAGE (DQL):

1) {Select Command}:-

A) To Display All records in a Table :-

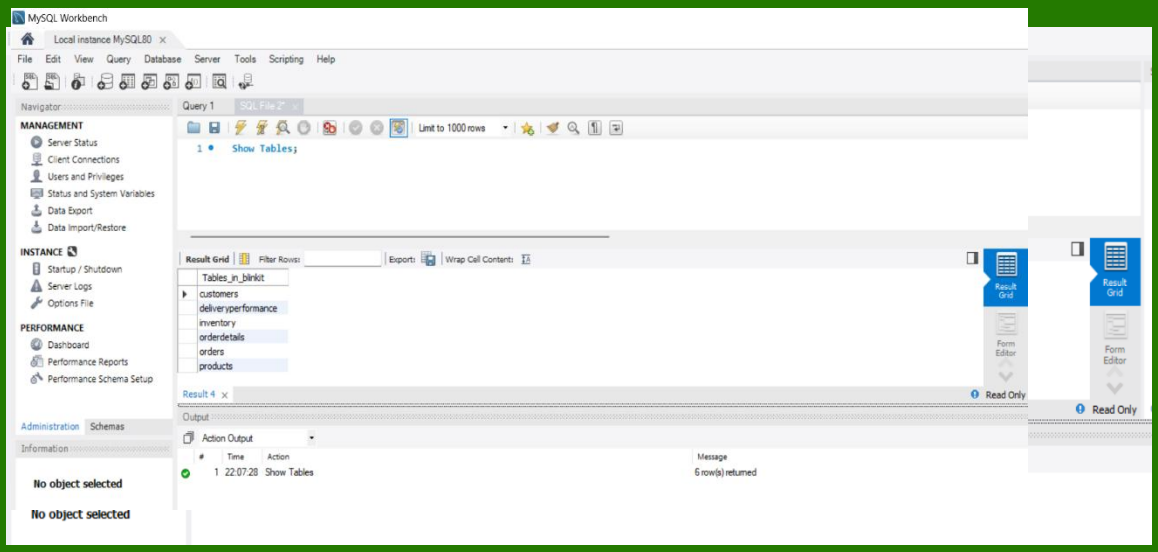


B) {Select} command with where clause:-

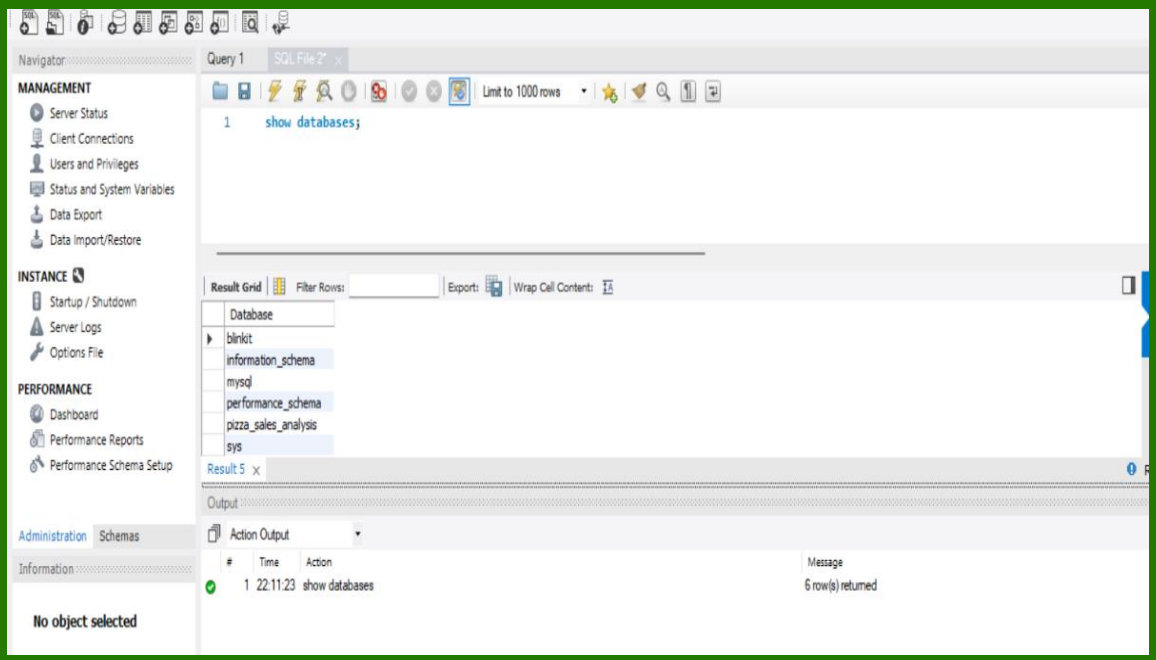


2) {Show command}:-

A) To display all tables in a database:-

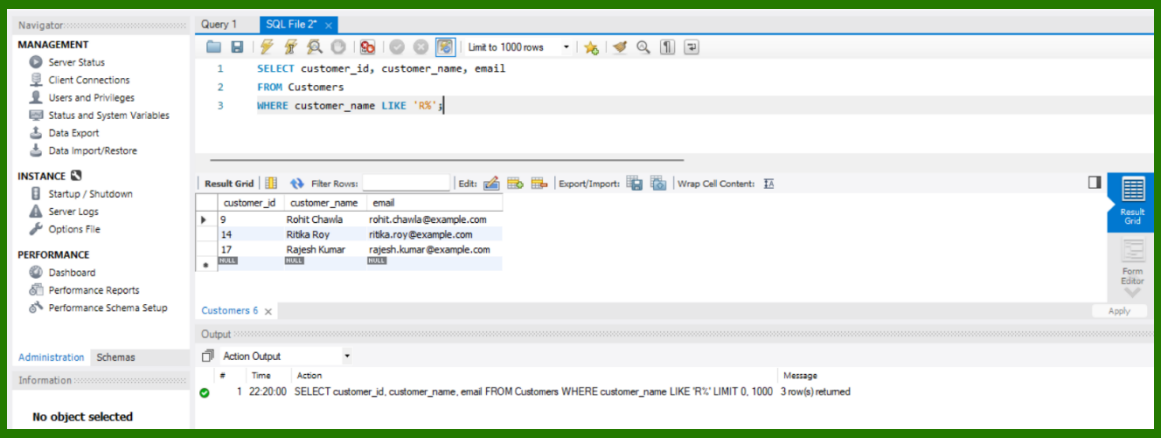


B) To Display database:-

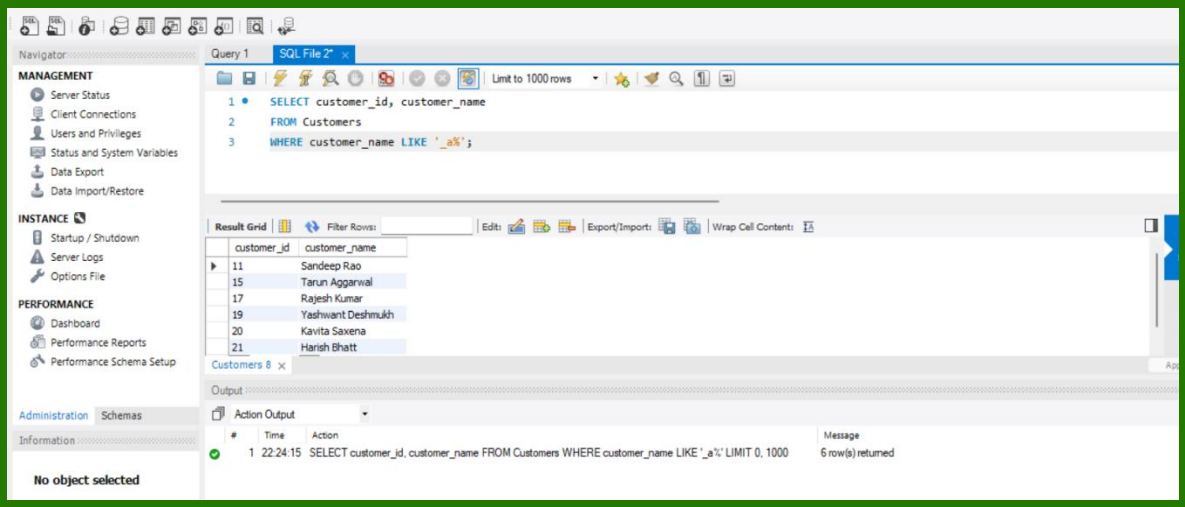


3) Like QUERY :

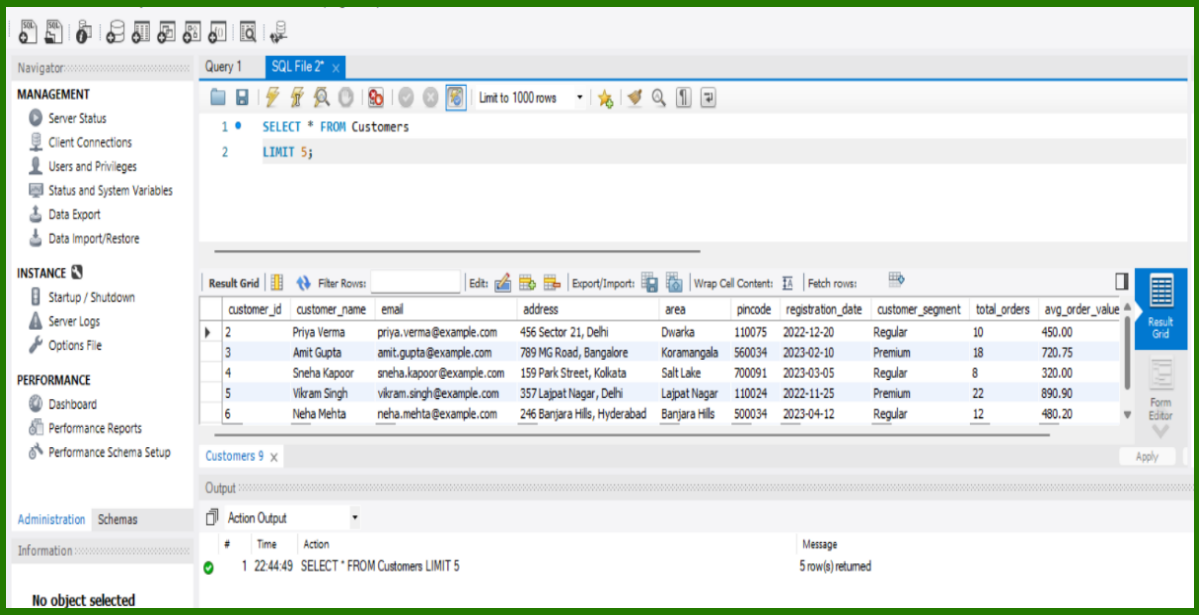
A) Using '%':-



B) Using '_' :-

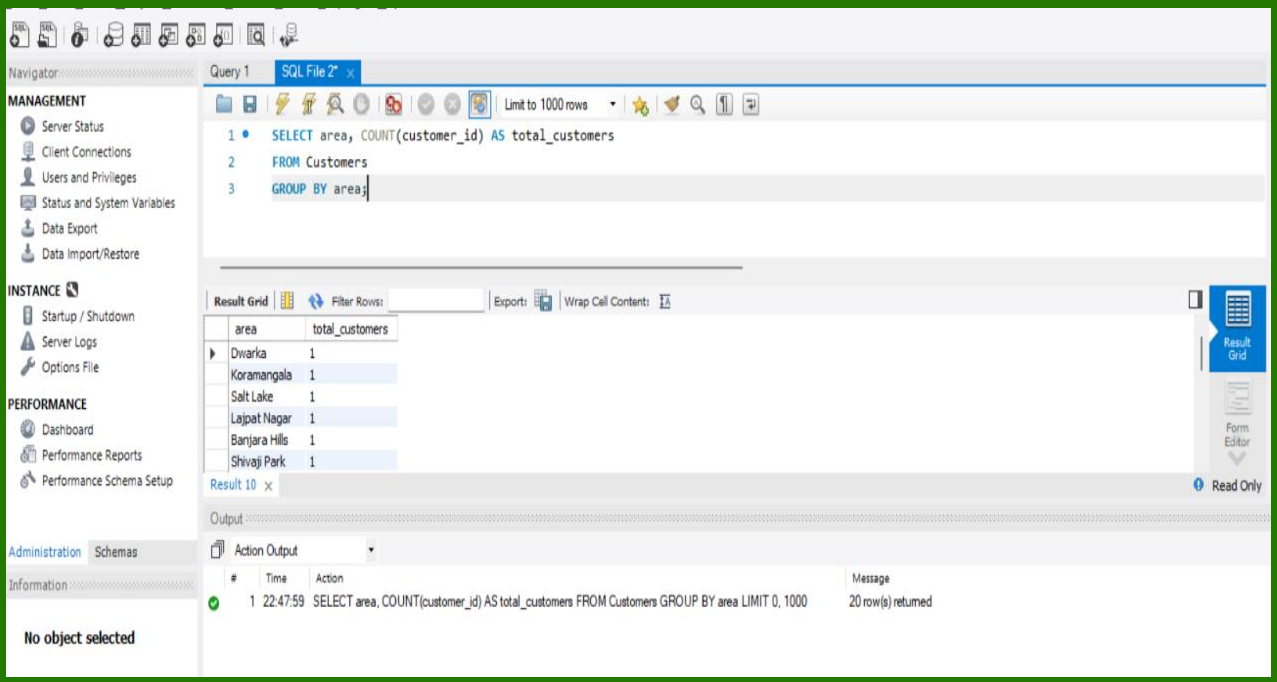


4) Limit Clause:-

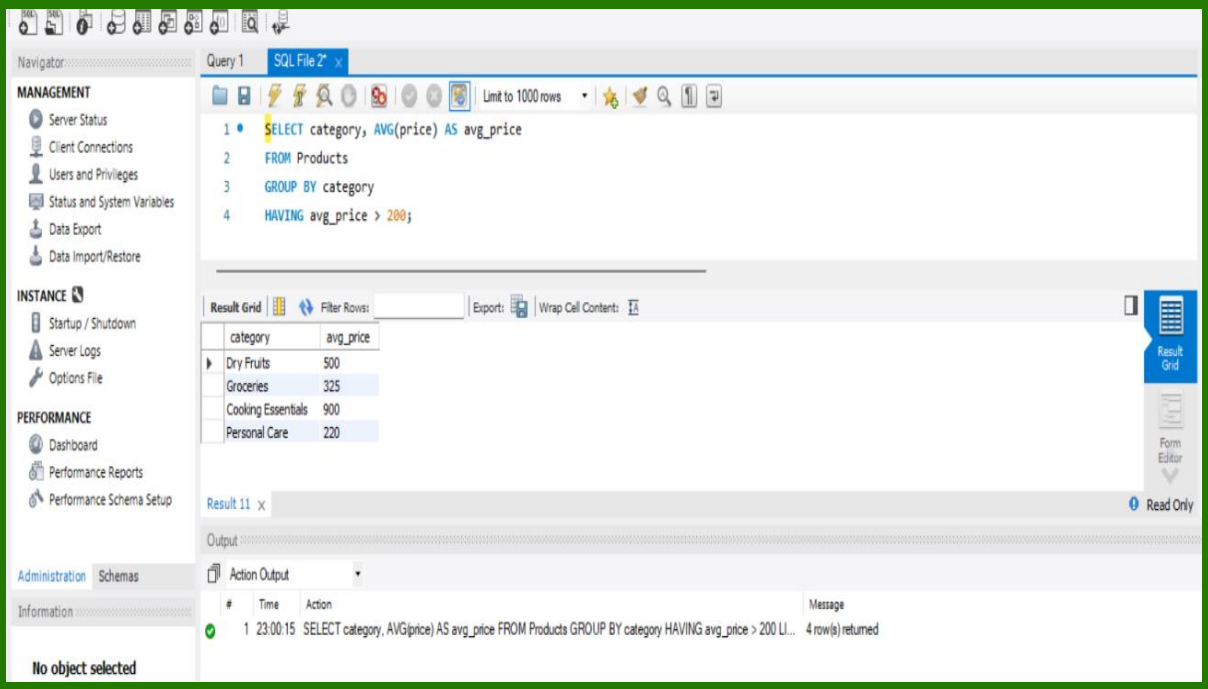


5) Group by clause:-

A) Group by:-

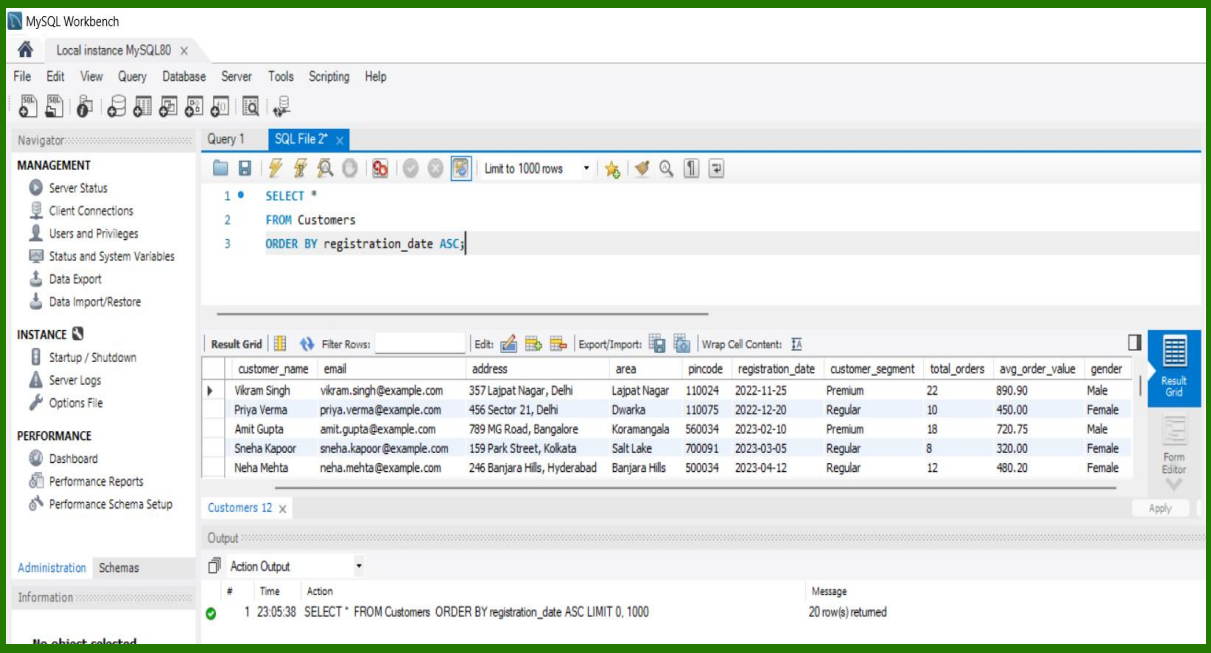


B) Group By with Having clause:-

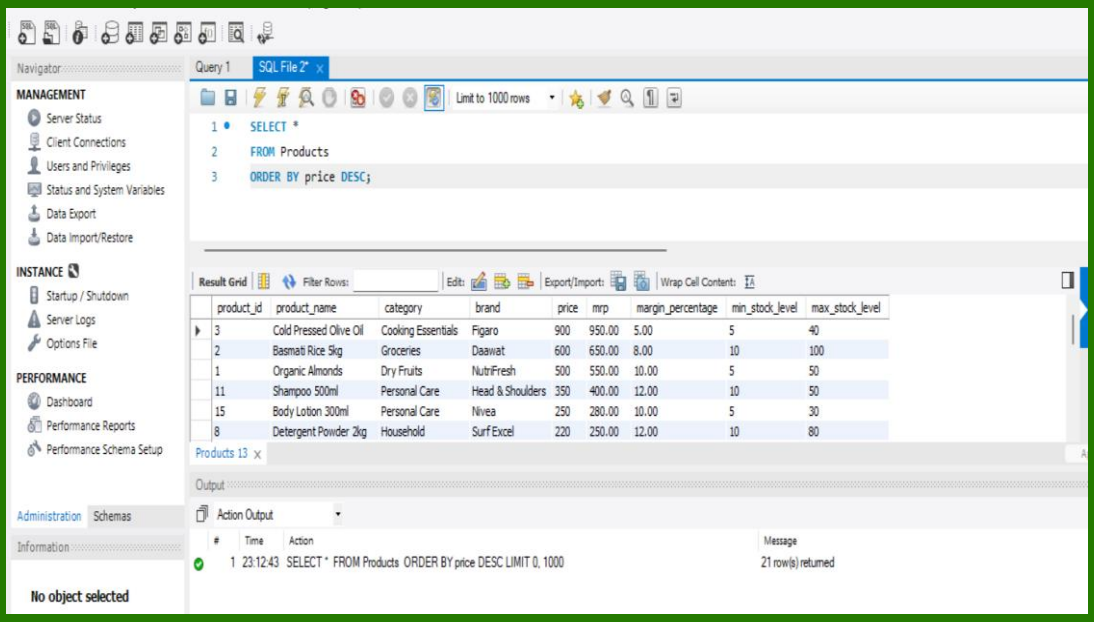


6) Order By clause:-

A) Order by ASC:-

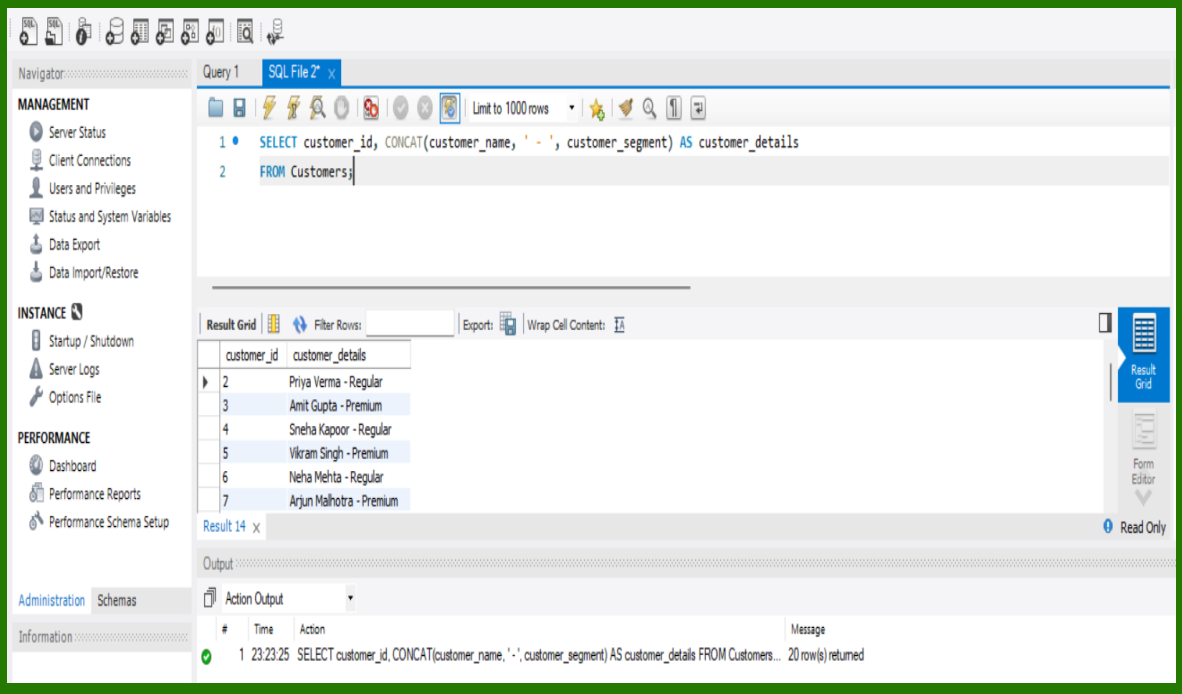


B) Order by DESC:-

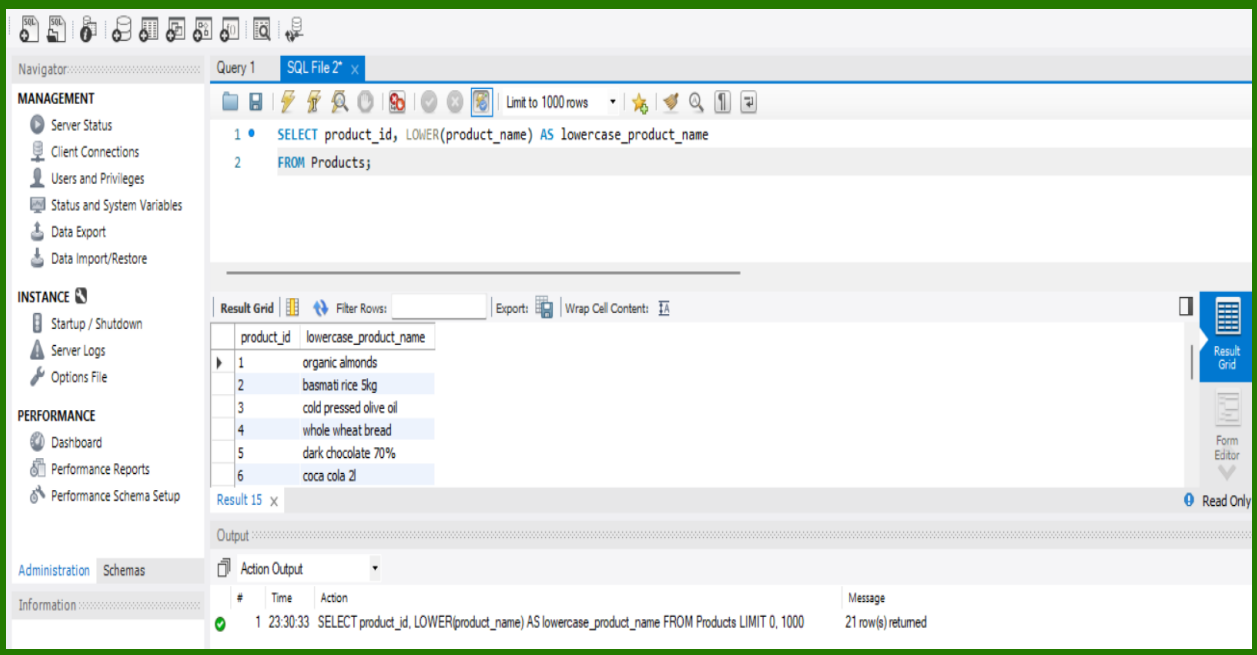


7) Built in Function:-

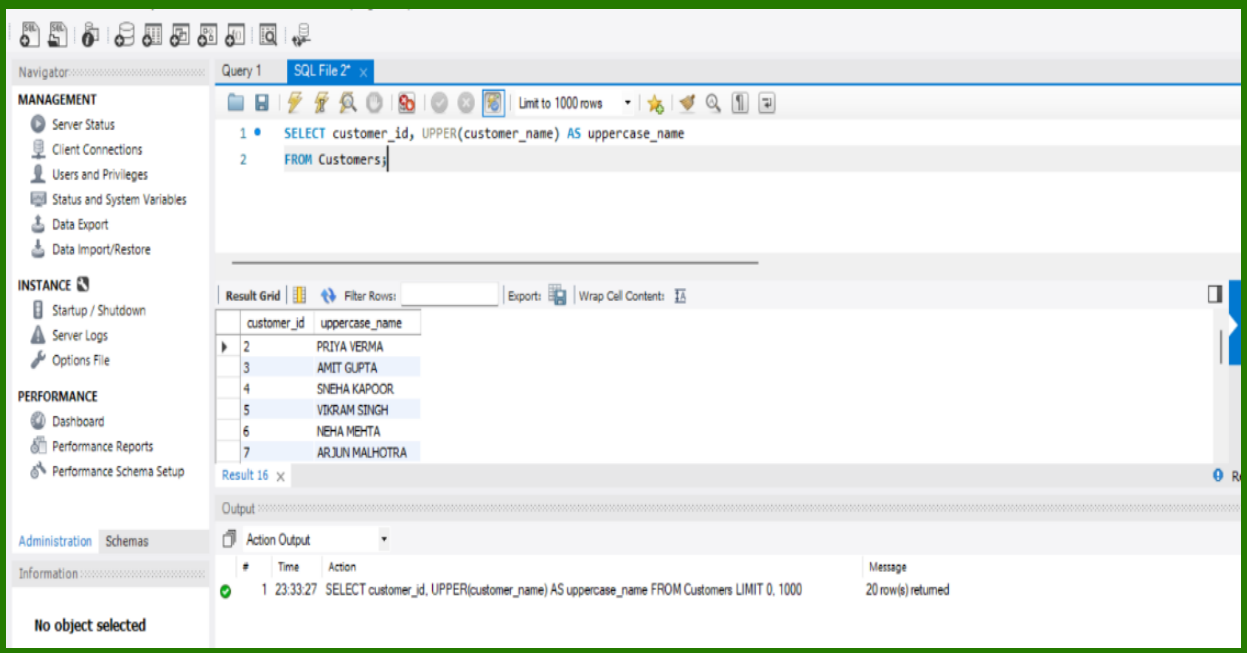
A) Concat:-



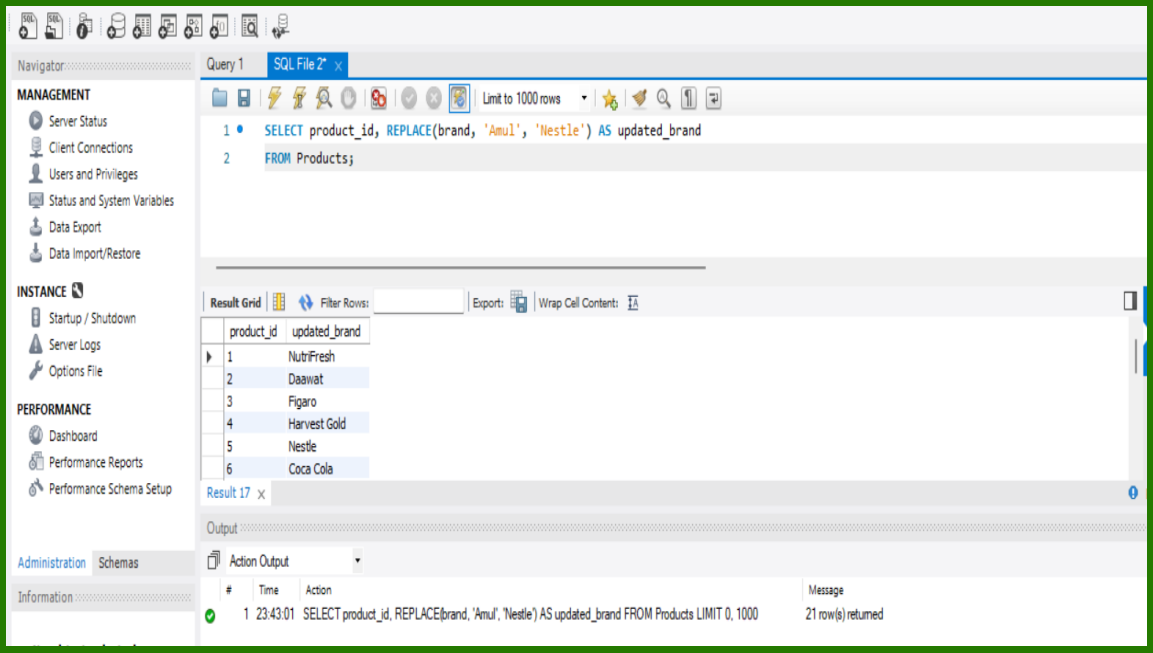
B) Lower:-



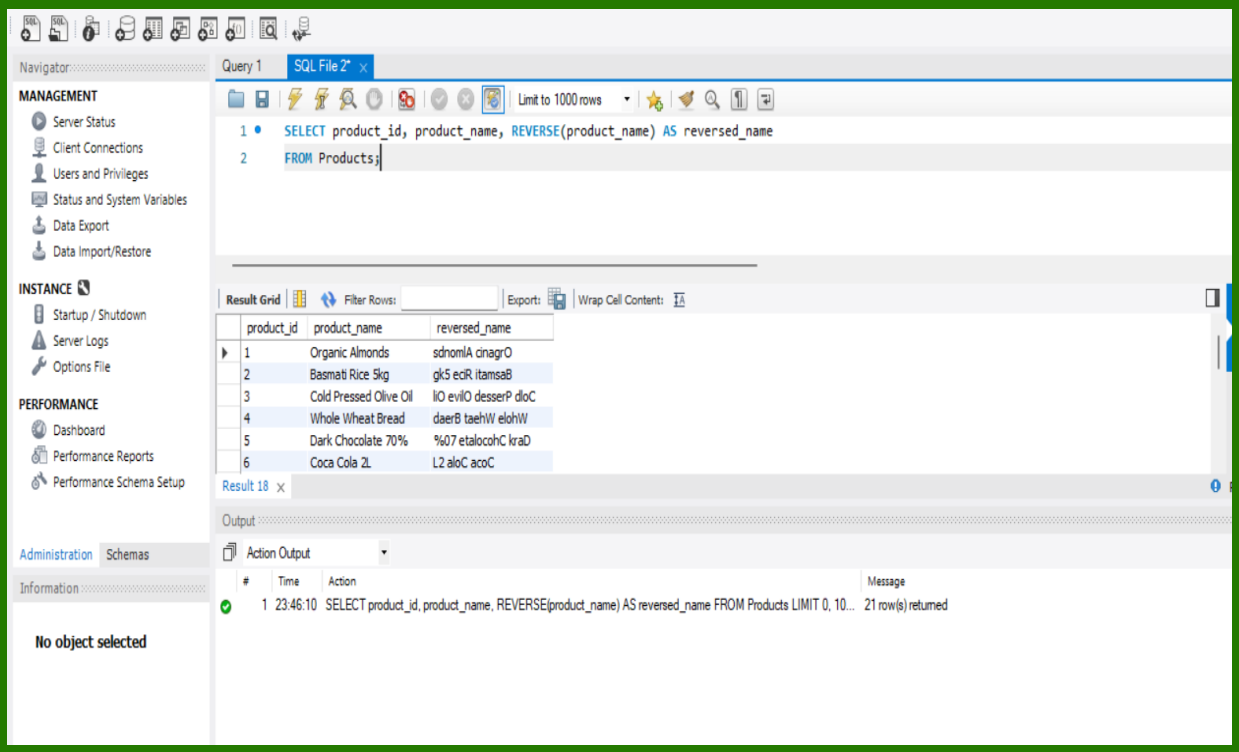
C) Upper:-



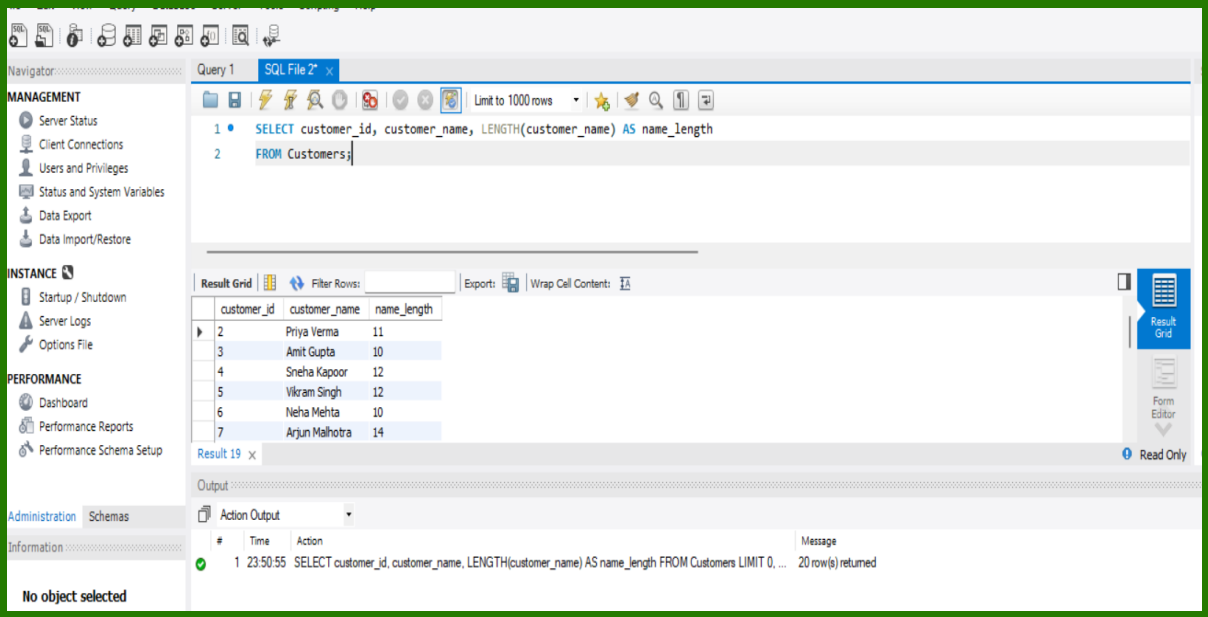
D) Replace:-



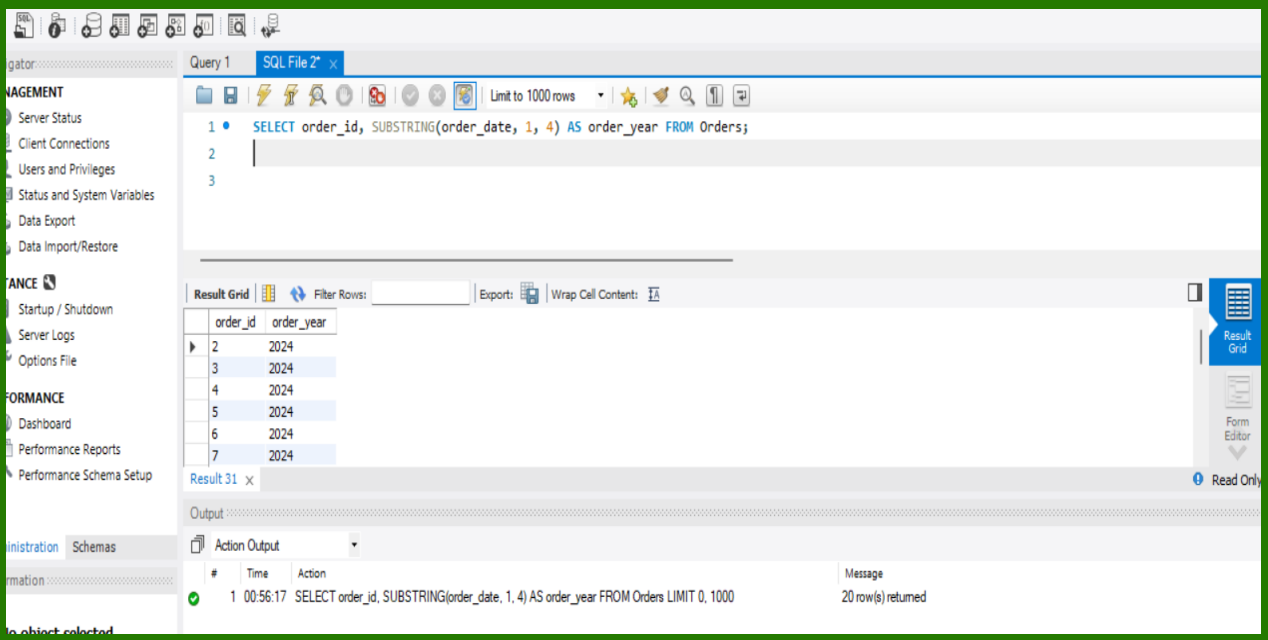
E) Reverse:-



F) Length:-

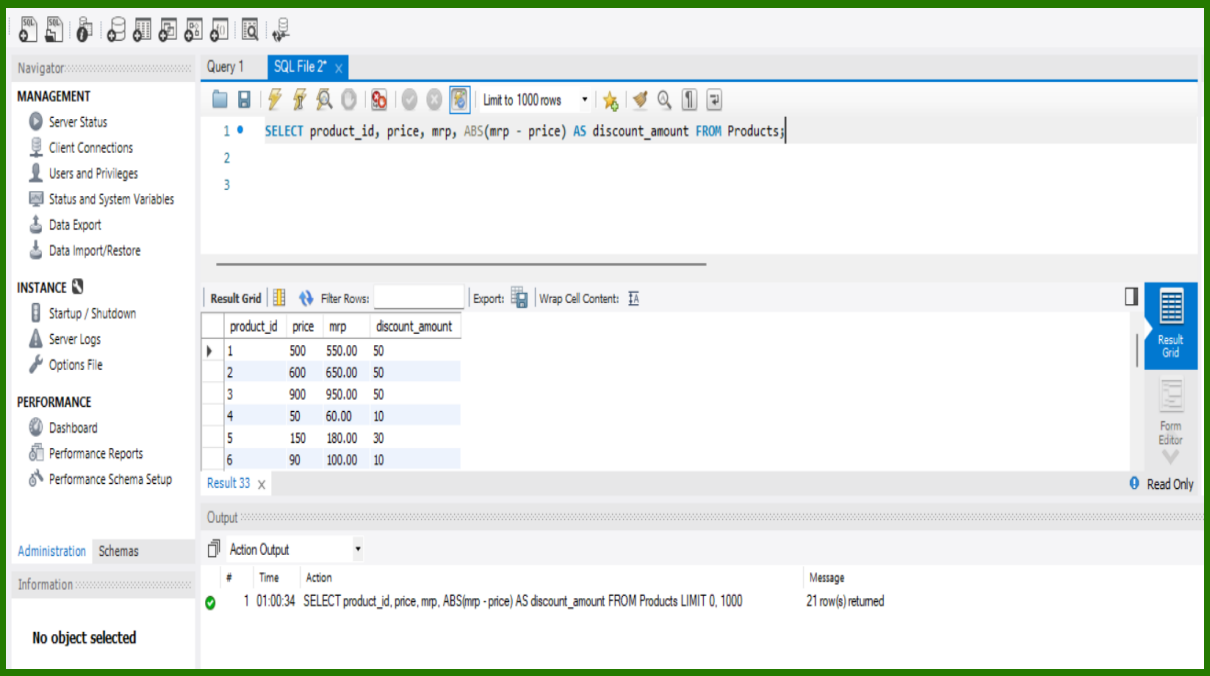


G) Substring:-

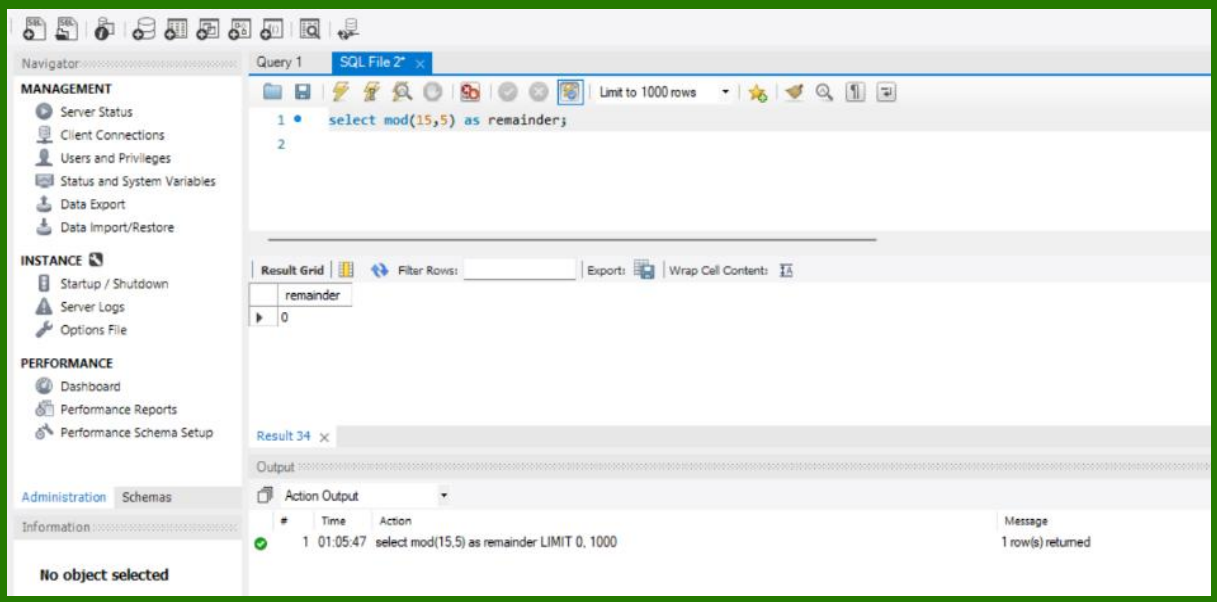


8) Math Function

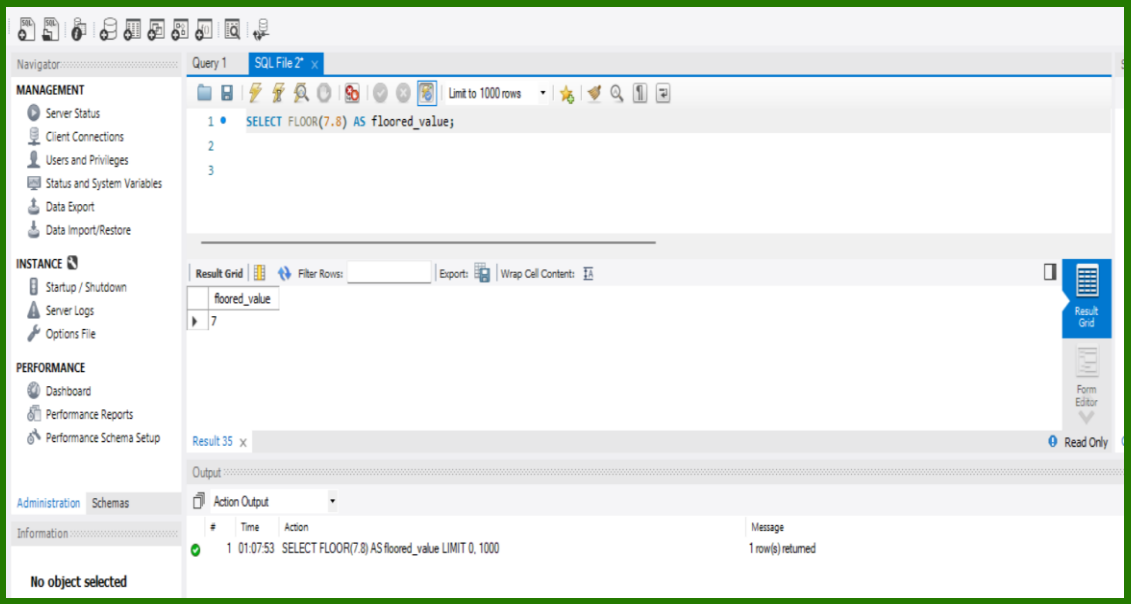
A) Absolute:-



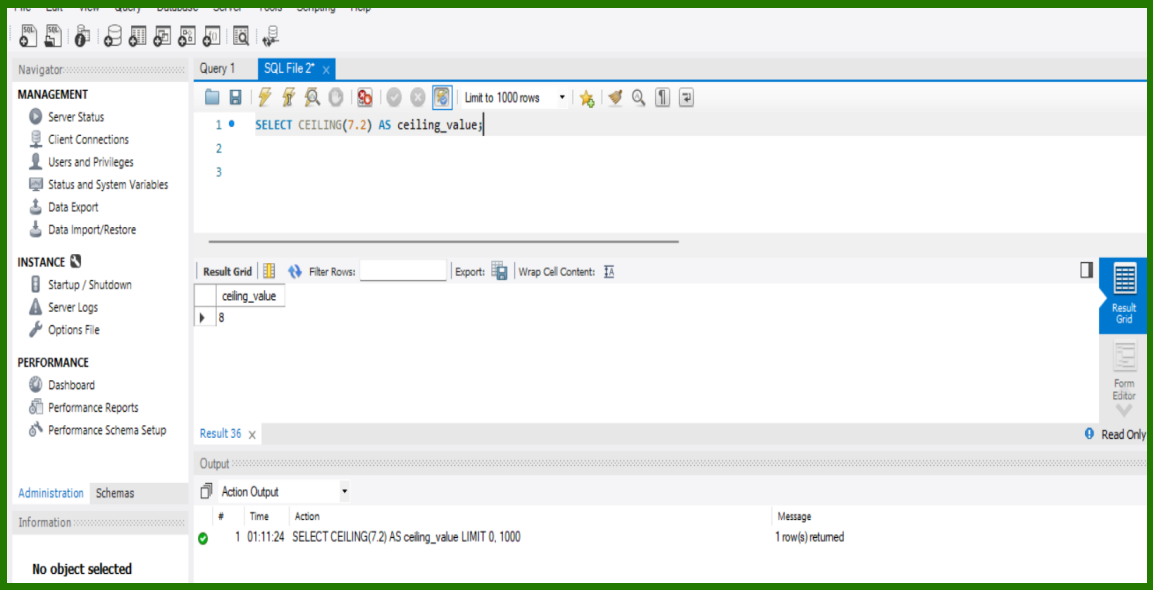
B) Mod():-



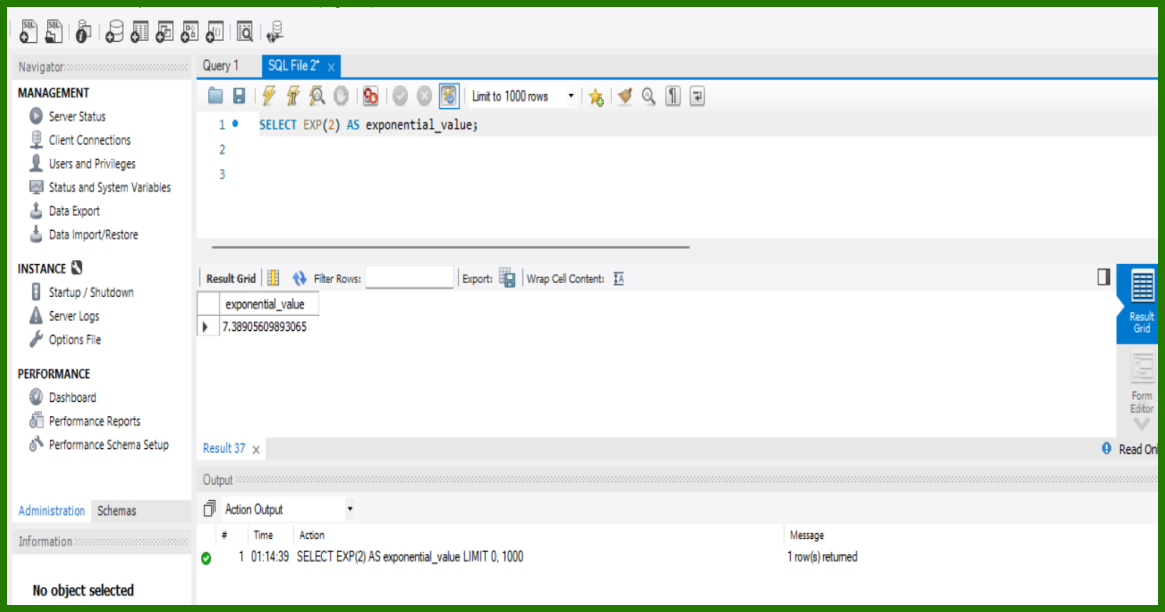
C) Floor():-



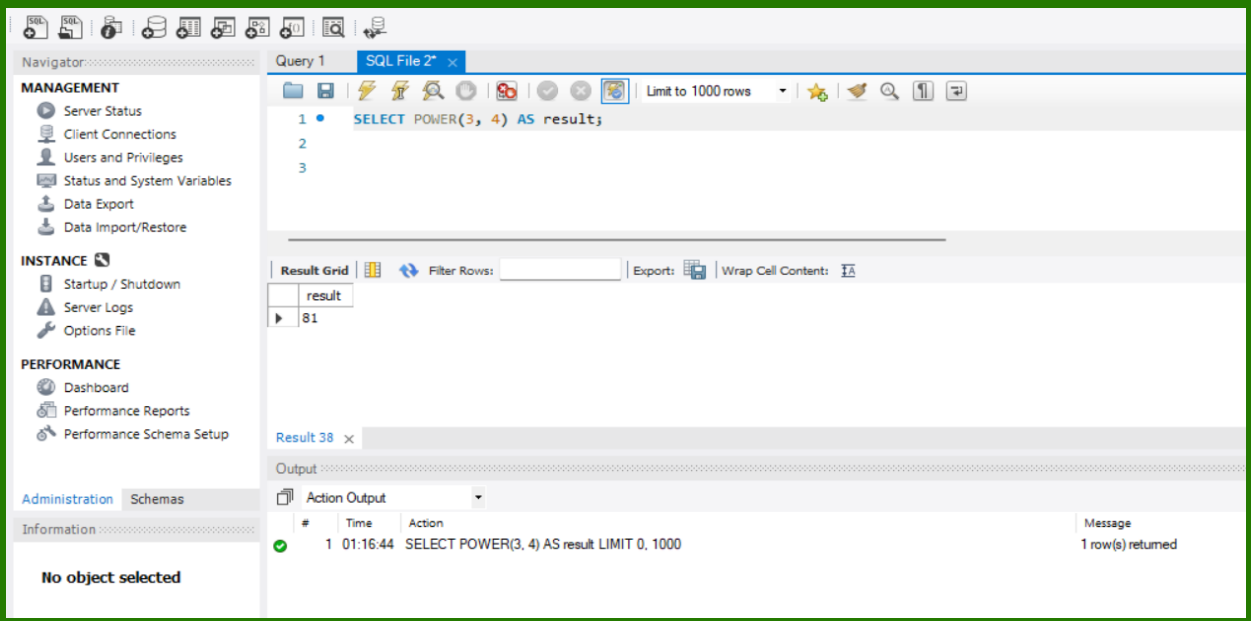
D) Ceiling():-



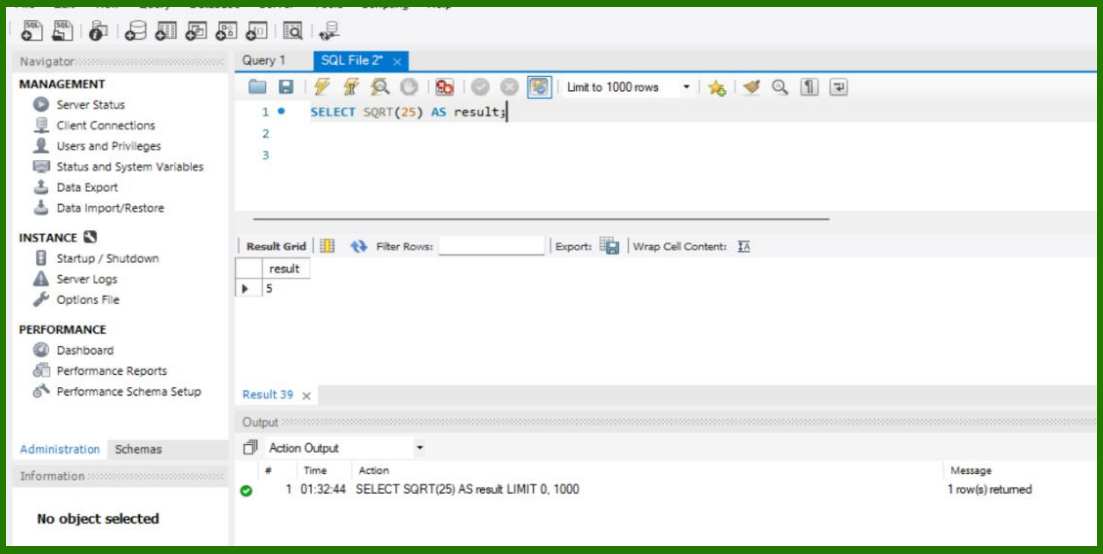
E) Exponential():-



F) Power():-

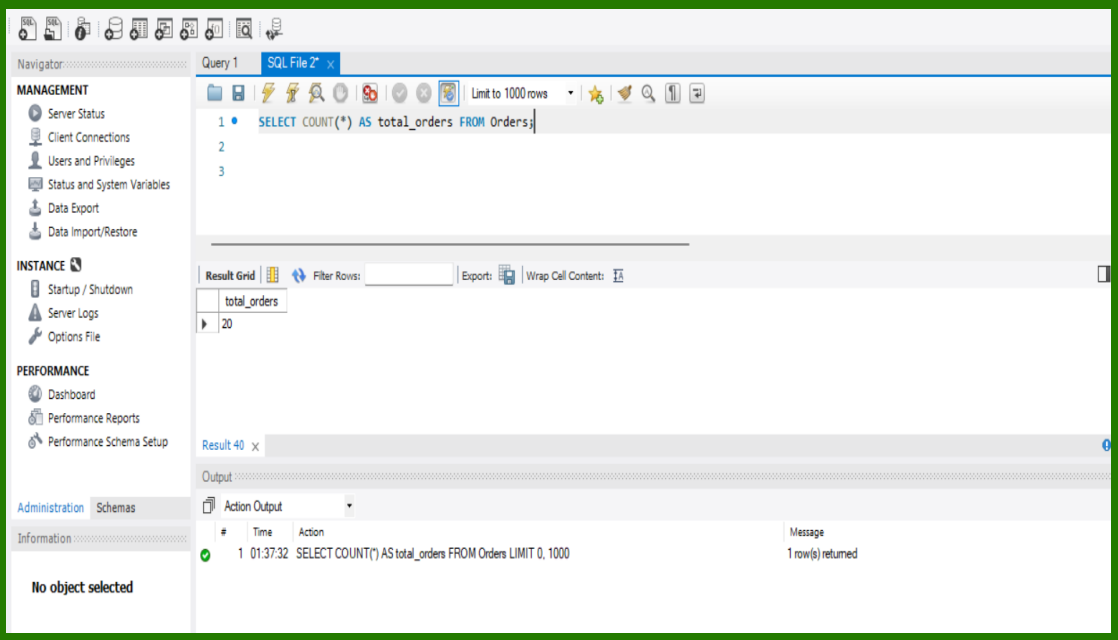


G) Square root():-

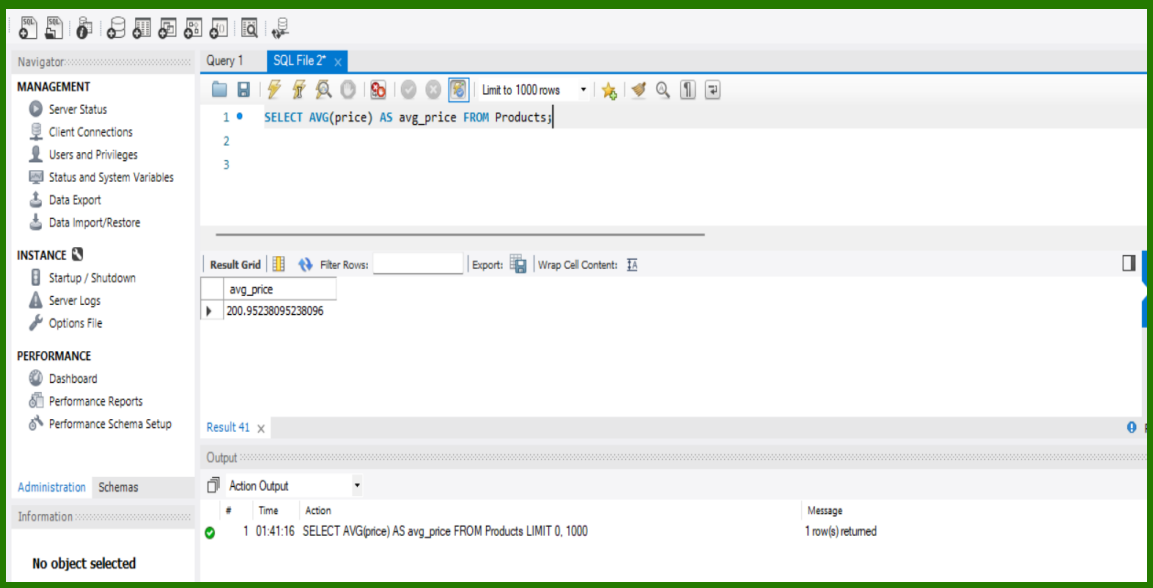


9) Aggregate function:-

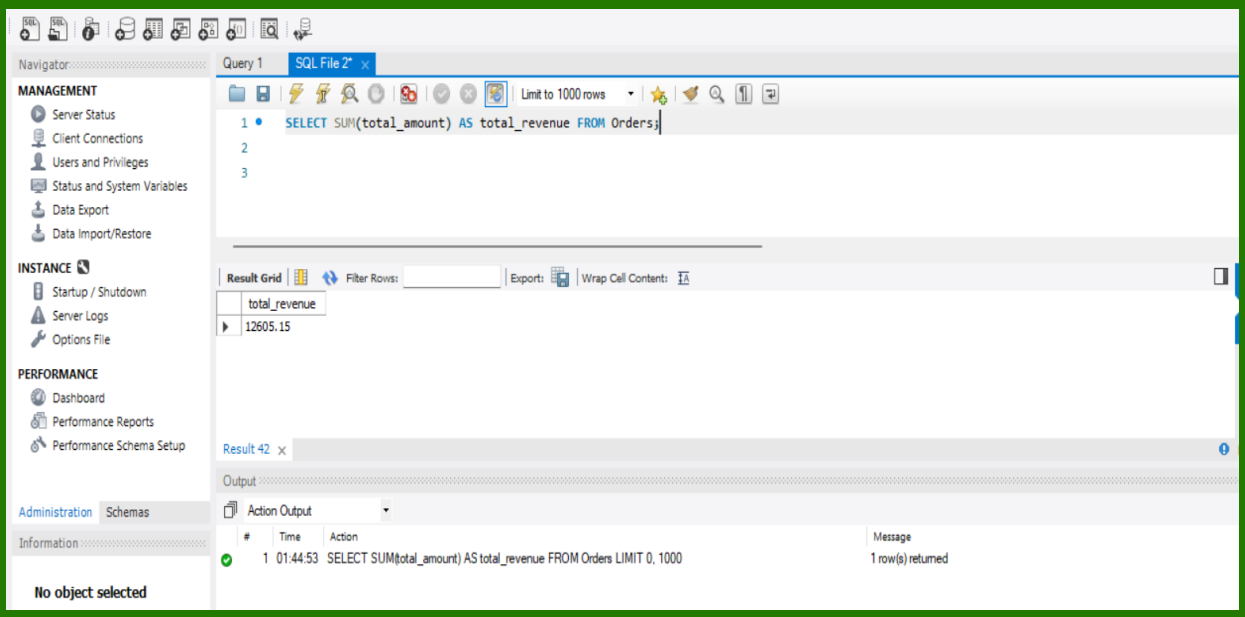
A) Count:-



B) Average:-

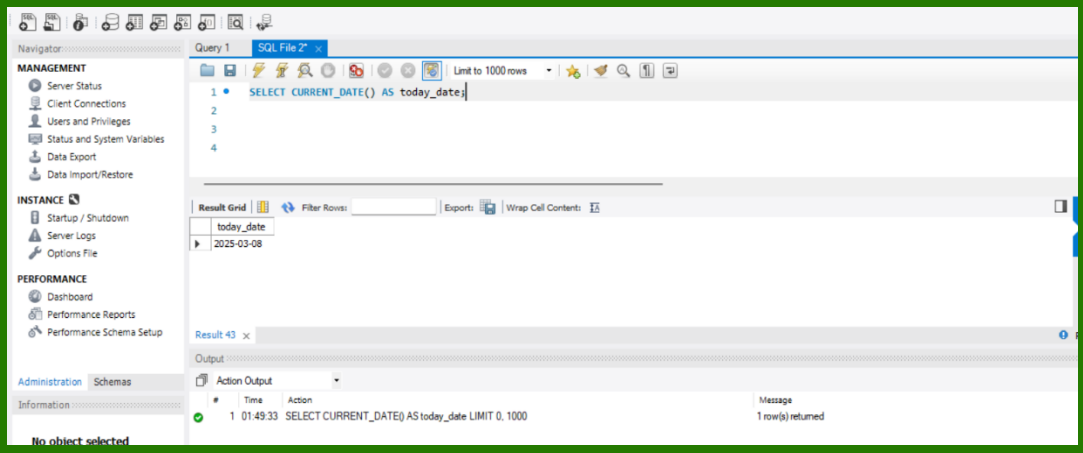


C) Sum():-

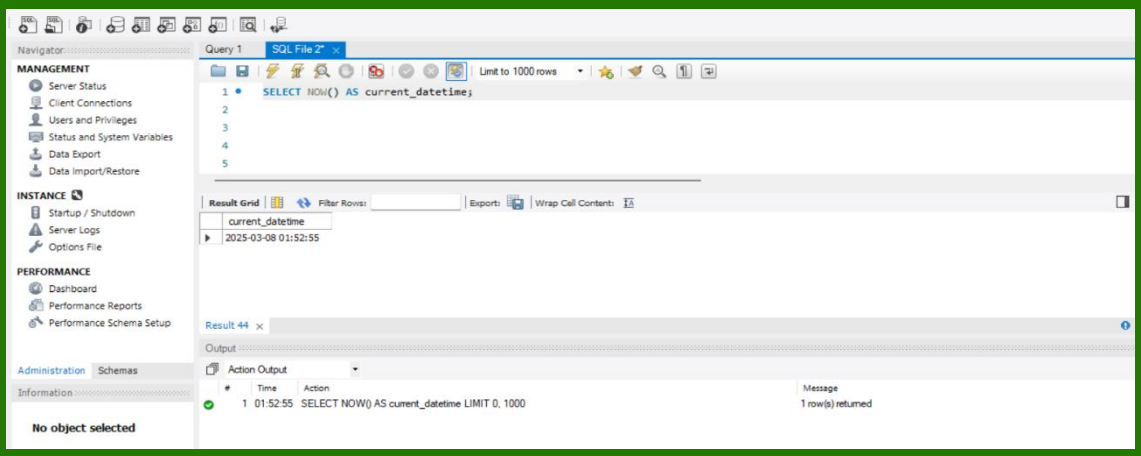


10) Date () function :-

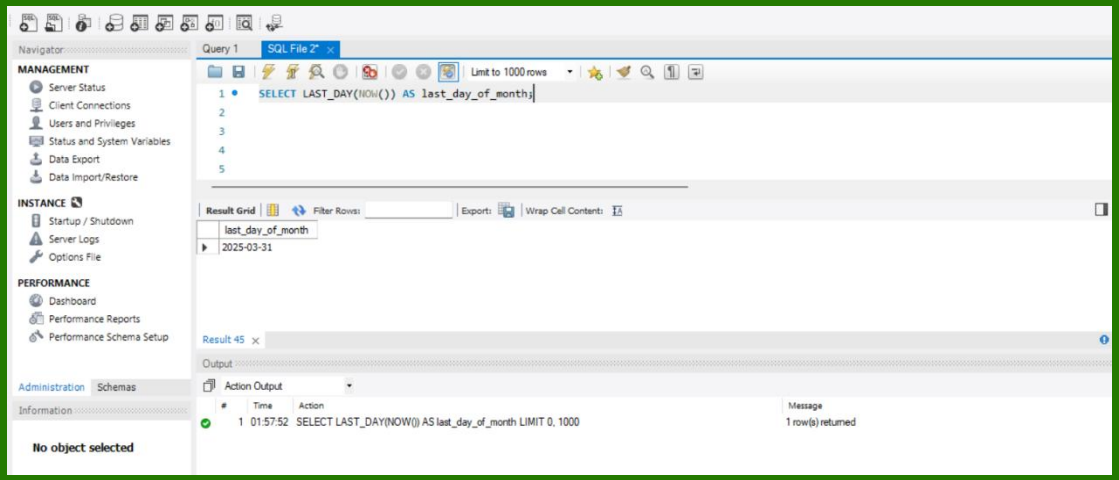
A) Currdate():-



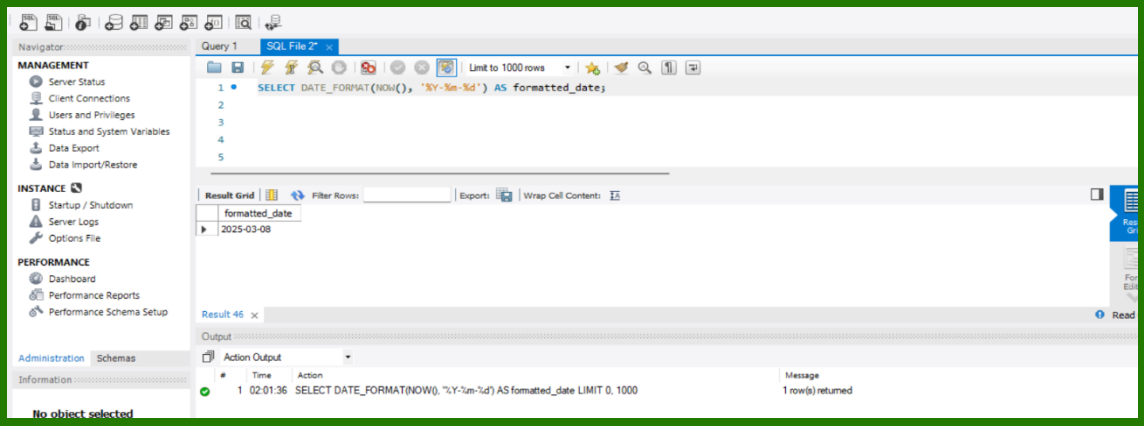
B) Now():-



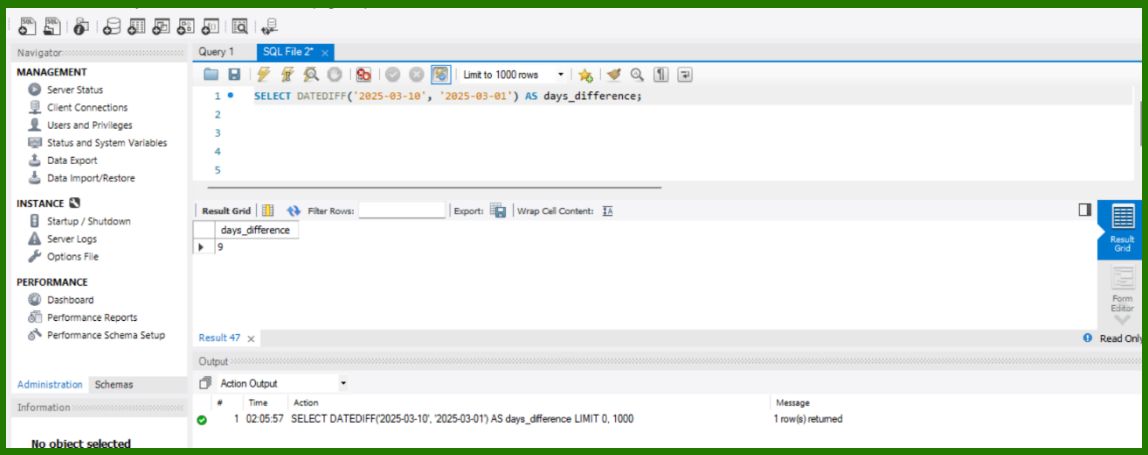
C) Last_Day:-



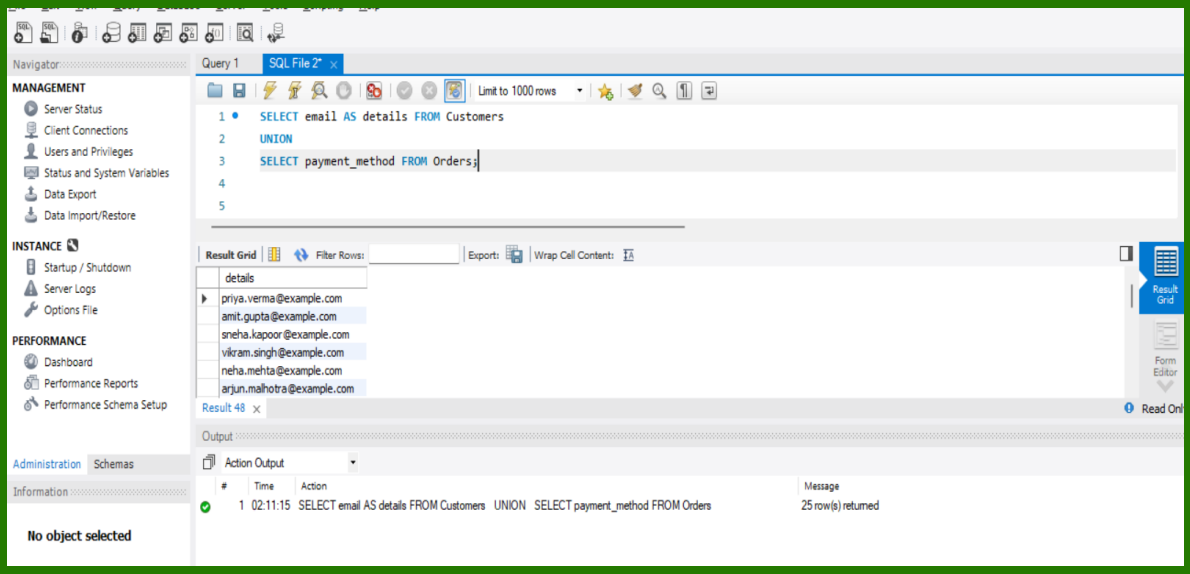
D) Date_Format():-



E) Datediff():-

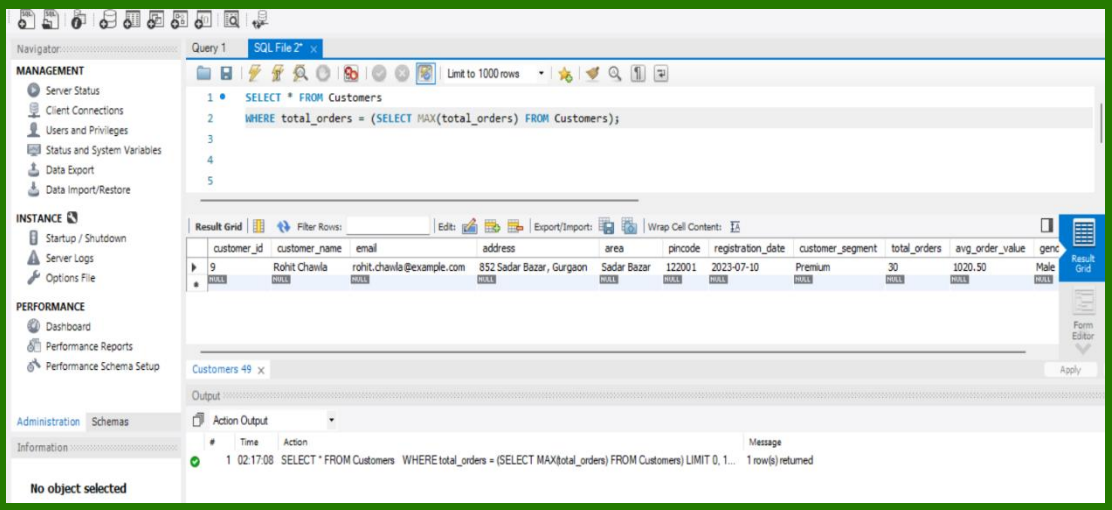


F) Union():-

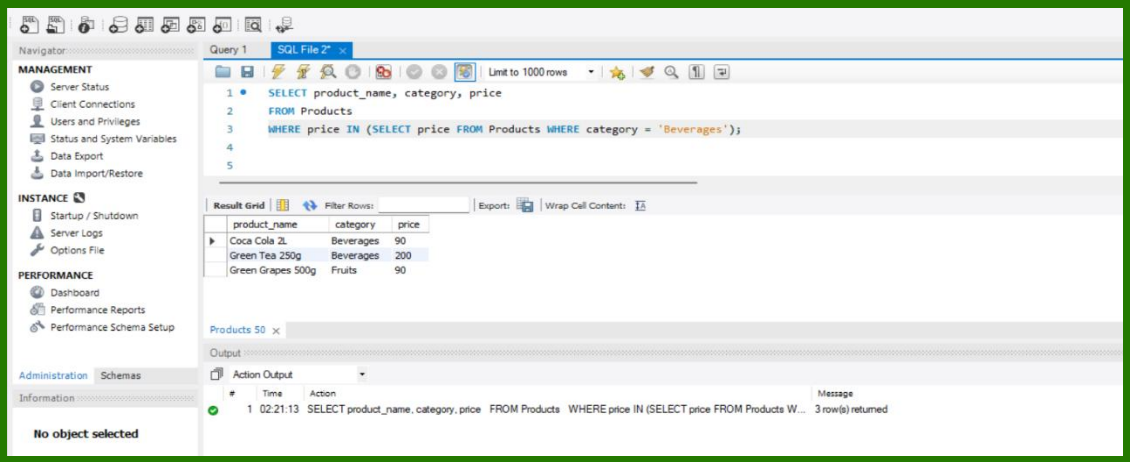


11) SUB-QUERY:

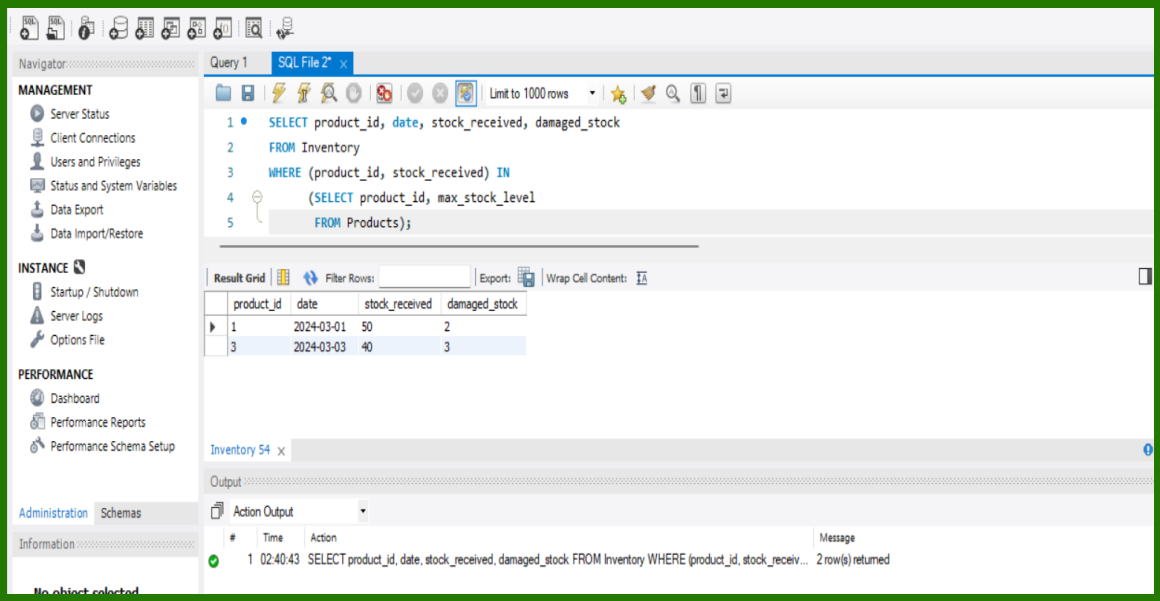
A) SINGLE ROW SUBQUERY():-



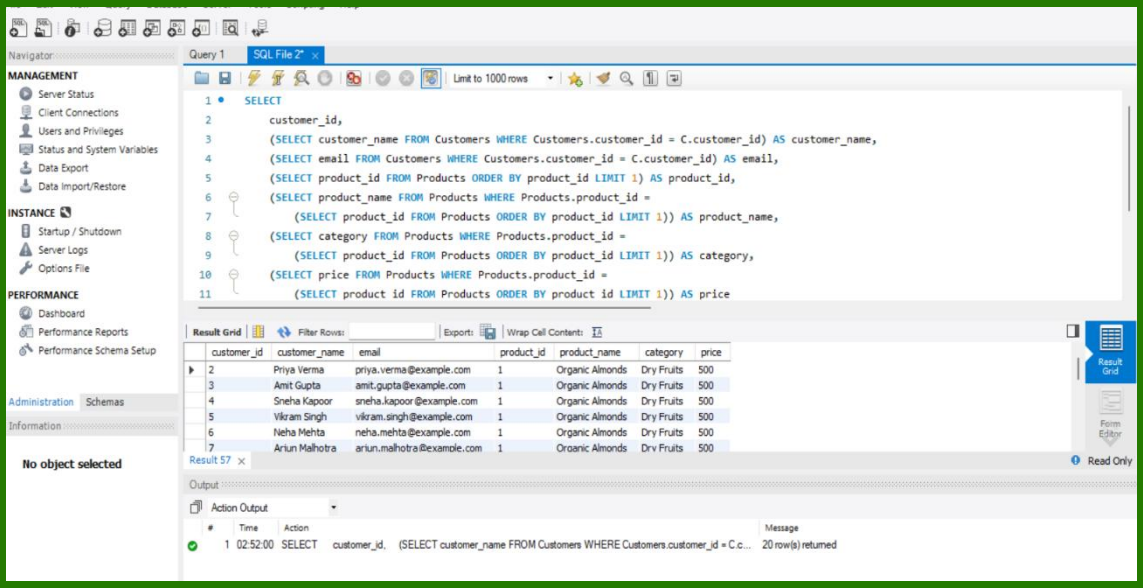
B) Multiple row Subquery:-



C) Multiple Column Subquery:-

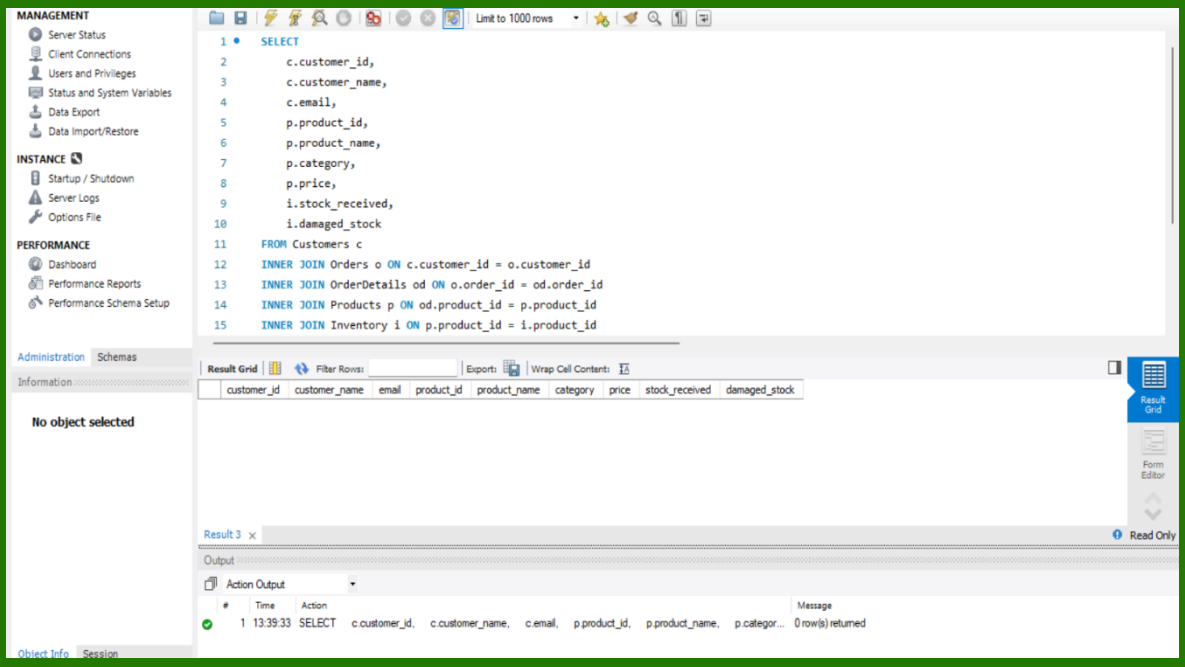


D) Multiple Table Query:-

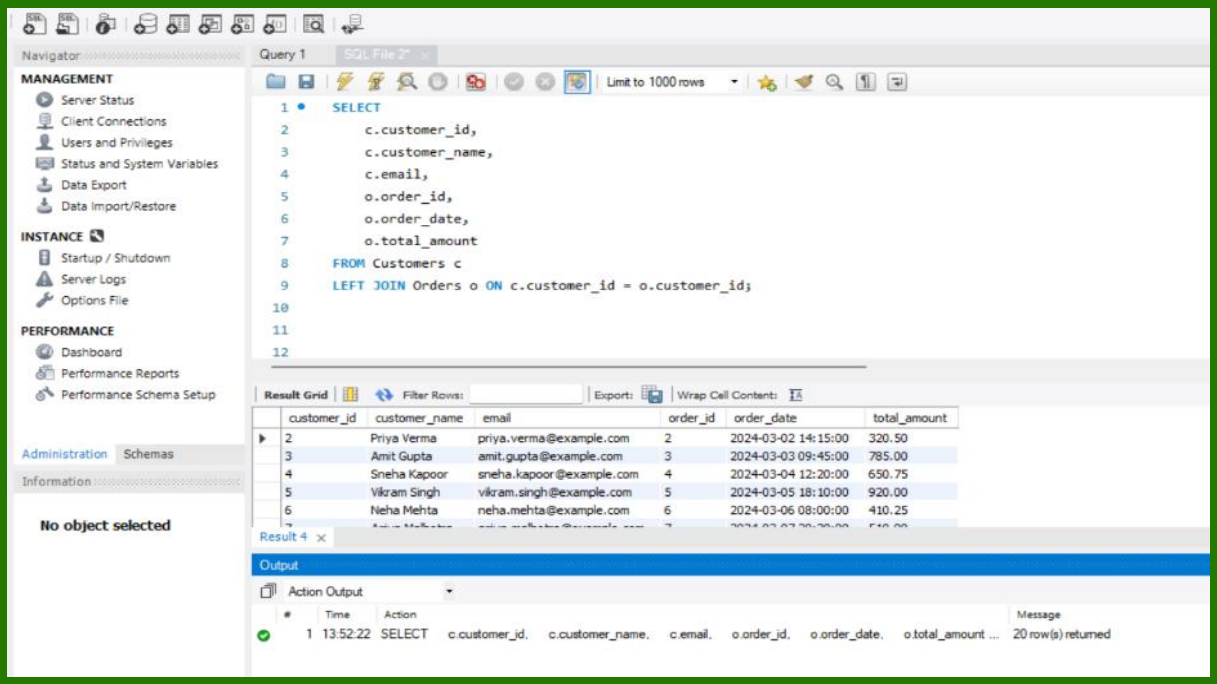


12) Joins

A) Inner join:-



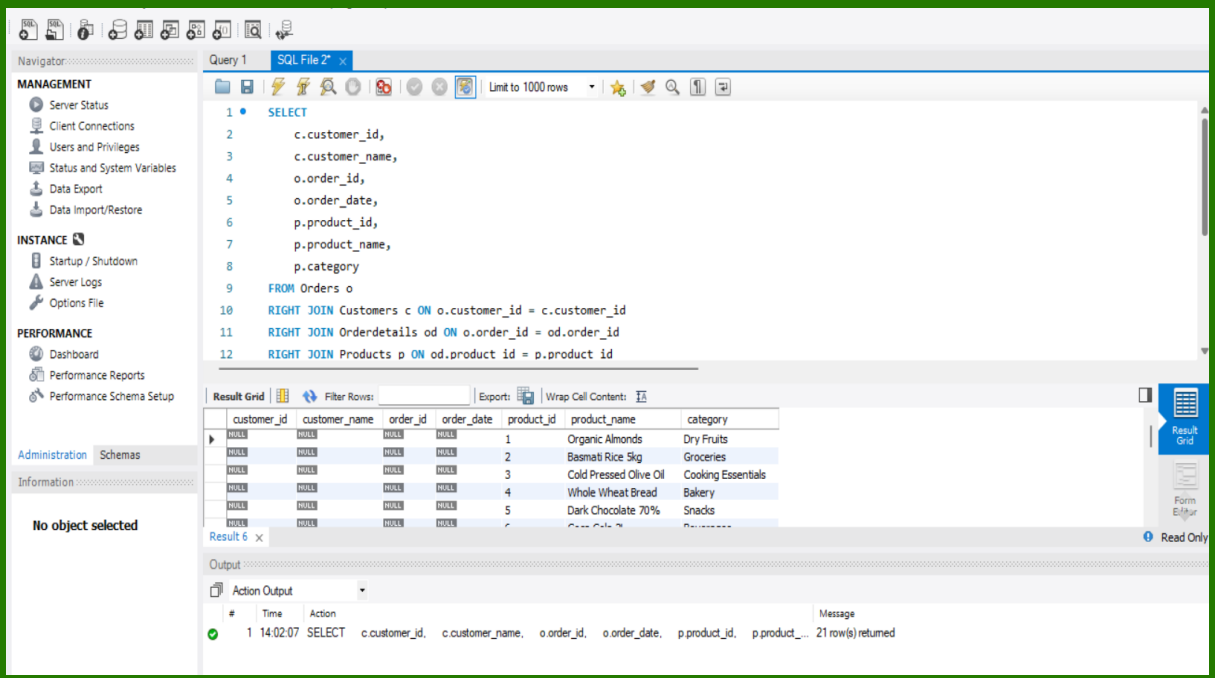
B) Left Join:-



```
SELECT
    c.customer_id,
    c.customer_name,
    c.email,
    o.order_id,
    o.order_date,
    o.total_amount
FROM Customers c
LEFT JOIN Orders o ON c.customer_id = o.customer_id;
```

customer_id	customer_name	email	order_id	order_date	total_amount
2	Priya Verma	priya.verma@example.com	2	2024-03-02 14:15:00	320.50
3	Amit Gupta	amit.gupta@example.com	3	2024-03-03 09:45:00	785.00
4	Sneha Kapoor	sneha.kapoor@example.com	4	2024-03-04 12:20:00	650.75
5	Vikram Singh	vikram.singh@example.com	5	2024-03-05 18:10:00	920.00
6	Neha Mehta	neha.mehta@example.com	6	2024-03-06 08:00:00	410.25

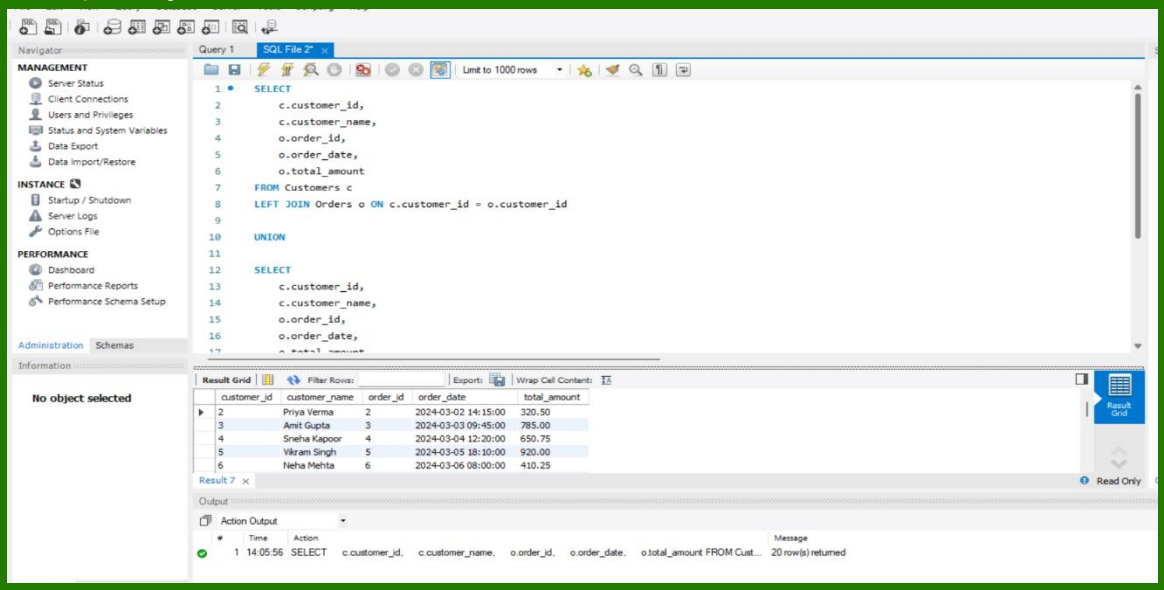
C) Right Join:-



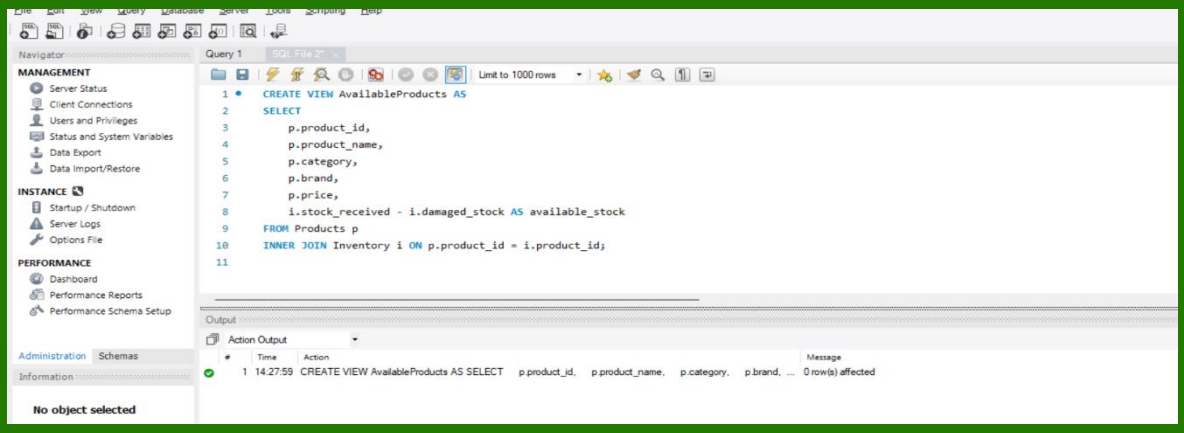
```
SELECT
    c.customer_id,
    c.customer_name,
    o.order_id,
    o.order_date,
    p.product_id,
    p.product_name,
    p.category
FROM Orders o
RIGHT JOIN Customers c ON o.customer_id = c.customer_id
RIGHT JOIN Orderdetails od ON o.order_id = od.order_id
RIGHT JOIN Products p ON od.product id = p.product id
```

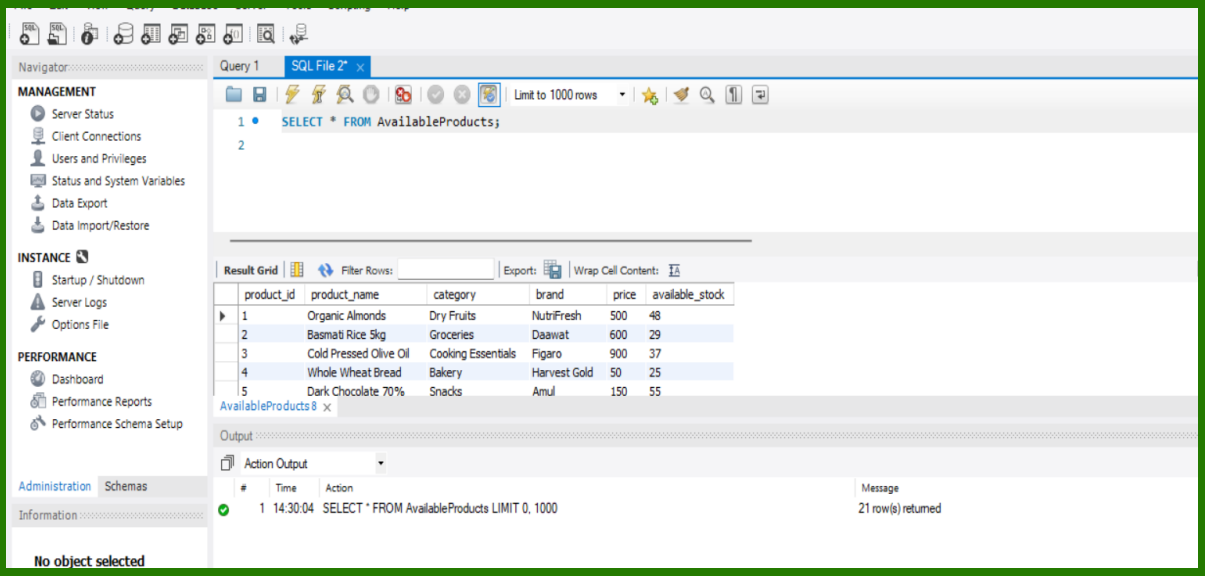
customer_id	customer_name	order_id	order_date	product_id	product_name	category
NULL	NULL	NULL	NULL	1	Organic Almonds	Dry Fruits
NULL	NULL	NULL	NULL	2	Basmati Rice 5kg	Groceries
NULL	NULL	NULL	NULL	3	Cold Pressed Olive Oil	Cooking Essentials
NULL	NULL	NULL	NULL	4	Whole Wheat Bread	Bakery
NULL	NULL	NULL	NULL	5	Dark Chocolate 70%	Snacks

D) Full join:-



E) Views:-





Conclusion

The project successfully demonstrated how **SQL can be leveraged to manage, analyze, and optimize business operations** in an e-commerce environment like Blinkit. The insights gained from this analysis can help improve **customer engagement, stock management, and delivery efficiency**, ultimately leading to better business decisions.

The SQL project on the **Blinkit dataset** provided valuable insights into customer behavior, order patterns, product inventory, and delivery performance. By designing and querying relational tables efficiently, we were able to analyze key aspects of the business operations.