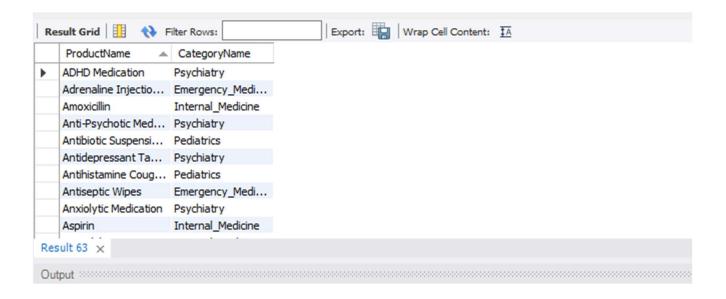
# Q1) List all products along with their categories.

SELECT Products.Name AS ProductName, Categories.CategoryName

**FROM Products** 

JOIN Categories ON Products.CategoryID = Categories.CategoryID;

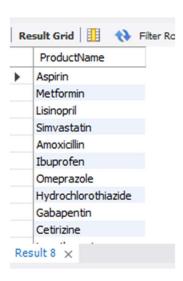


# Q2) List the names of the products for which orders have been received.

SELECT DISTINCT Products.Name AS ProductName

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID;



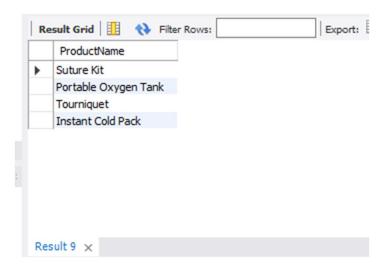
# Q3) List the names of the products for which orders have not been received.

SELECT Products.Name AS ProductName

**FROM Products** 

LEFT JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

WHERE OrderDetails.ProductID IS NULL;



# Q4) From the categories table, which categories have witnessed the maximum sales? Please show them in descending order.

SELECT Categories.CategoryName, SUM(OrderDetails.Quantity\*Products.Price) AS TotalSales

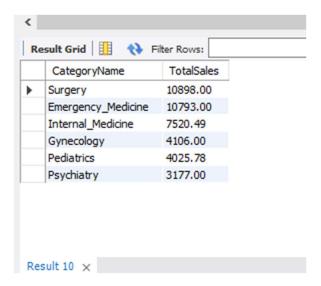
**FROM Categories** 

JOIN Products ON Products.CategoryID = Categories.CategoryID

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

**GROUP BY Categories. Category Name** 

ORDER BY TotalSales DESC;



# Q5) In terms of quantity, how many orders has each category received?

SELECT Categories.CategoryName, SUM(OrderDetails.Quantity) AS QtySold

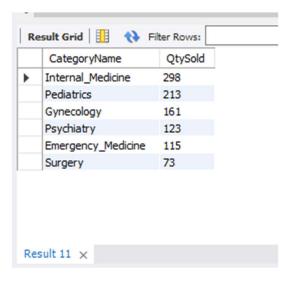
**FROM Categories** 

JOIN Products ON Products.CategoryID = Categories.CategoryID

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

**GROUP BY Categories. Category Name** 

ORDER BY QtySold DESC;



#### Q6) Now that the orders have been sold, find out the remaining stock of each product and its value.

SELECT p.Name AS ProductName,

p.StockQuantity - COALESCE(SUM(od.Quantity),0) AS RemainingStock,

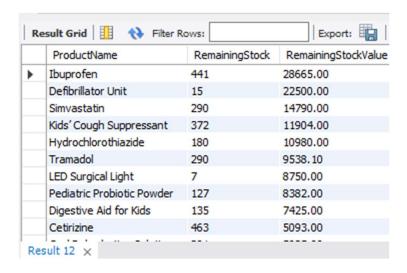
(p.StockQuantity - COALESCE(SUM(od.Quantity),0))\*p.Price AS RemainingStockValue

FROM Products p

LEFT JOIN OrderDetails od ON od.ProductID = p.ProductID

GROUP BY p.Name, p.StockQuantity, od.Quantity, p.price

ORDER BY RemainingStockValue DESC;



#### Q7) Find the details of orders placed by 'Priya Singh' including product names and quantities.

SELECT Orders.OrderID, Products.Name AS ProductName, OrderDetails.Quantity

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

WHERE Customers.Name = 'Priya Singh';



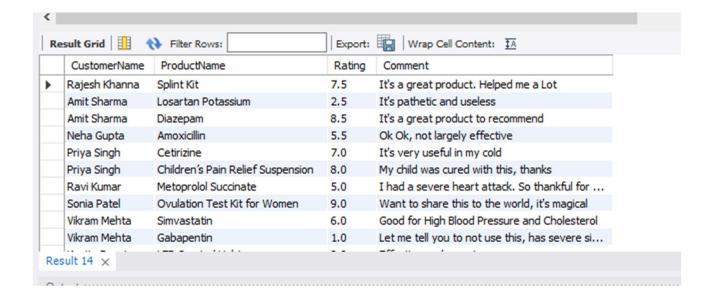
#### Q8) Get all reviews along with product names and customer names.

SELECT Customers.Name AS CustomerName, Products.Name AS ProductName, Reviews.Rating, Reviews.Comment

#### **FROM Reviews**

JOIN Customers ON Customers.CustomerID = Reviews.CustomerID

JOIN Products ON Products.ProductID = Reviews.ProductID;



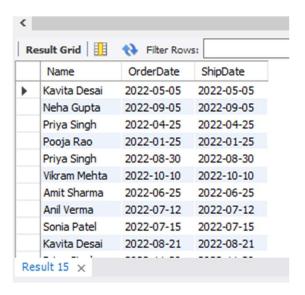
#### Q9) List all customers who have placed orders along with the order dates and shipping dates.

SELECT Customers.Name, Orders.OrderDate, Shipping.ShipDate

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN Shipping ON Shipping.OrderID = Orders.OrderID;



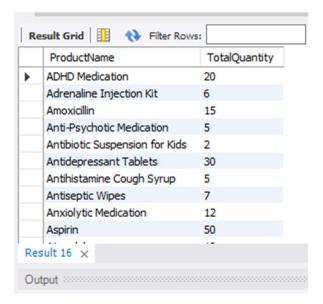
# Q10) Find the total quantity of each product ordered.

SELECT Products.Name AS ProductName, SUM(OrderDetails.Quantity) AS TotalQuantity

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

GROUP BY Products.Name;



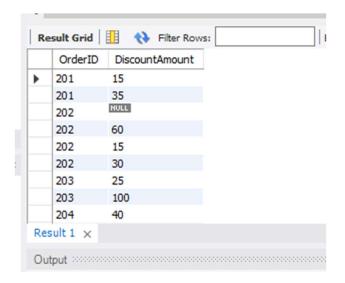
# Q11) Get all orders and their respective discount amounts if they have discounts.

SELECT Orders.OrderID, Discounts.DiscountAmount

**FROM Orders** 

LEFT JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

LEFT JOIN Discounts ON Discounts.ProductID = OrderDetails.ProductID;



#### Q12) What is the total discount amount applied to each order?

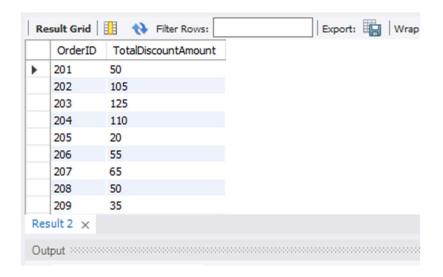
SELECT DISTINCT Orders.OrderID, COALESCE(SUM(Discounts.DiscountAmount),0) AS TotalDiscountAmount

#### **FROM Orders**

LEFT JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID

LEFT JOIN Discounts ON OrderDetails.ProductID = Discounts.ProductID

# GROUP BY Orders.OrderID;



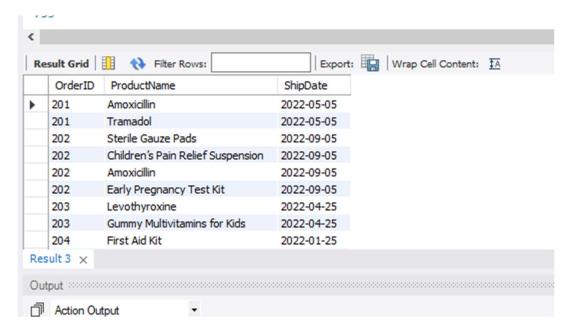
#### Q13) List all orders with products and their respective shipping dates.

SELECT OrderDetails.OrderID, Products.Name AS ProductName, Shipping.ShipDate

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

JOIN Shipping ON Shipping.OrderID = OrderDetails.OrderID;



# 14) Find customers who have not placed any orders.

SELECT Customers.Name

**FROM Customers** 

LEFT JOIN Orders ON Orders.CustomerID = Customers.CustomerID

WHERE Orders.OrderID IS NULL;

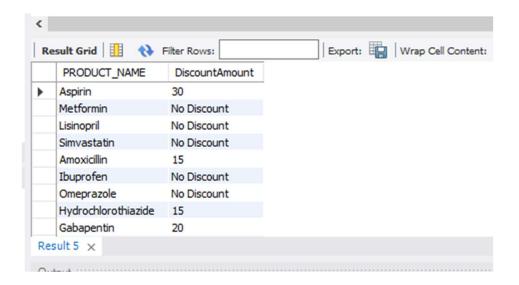


Result 76 ×

# Q15) Get products with their discounts if available.

SELECT Products.Name AS PRODUCT\_NAME, COALESCE(Discounts.DiscountAmount,"No Discount") AS DiscountAmount FROM Products

LEFT JOIN Discounts ON Discounts.ProductID = Products.ProductID;



#### Q16) List all products that have been reviewed along with their review details.

SELECT Products.Name AS ProductName, Reviews.Rating, Reviews.Comment

#### **FROM Products**

JOIN Reviews ON Reviews.ProductID = Products.ProductID;



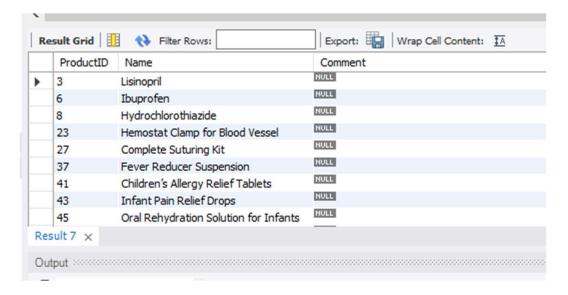
#### Q17) List products that have never been reviewed.

SELECT Products.ProductID, Products.Name, Reviews.Comment

**FROM Products** 

LEFT JOIN Reviews ON Reviews.ProductID = Products.ProductID

WHERE Reviews.ProductID IS NULL;



#### Q18) Find customers who have ordered products in the "Pediatrics" category.

SELECT DISTINCT Customers.Name AS CustomerName, Categories.CategoryName

**FROM Customers** 

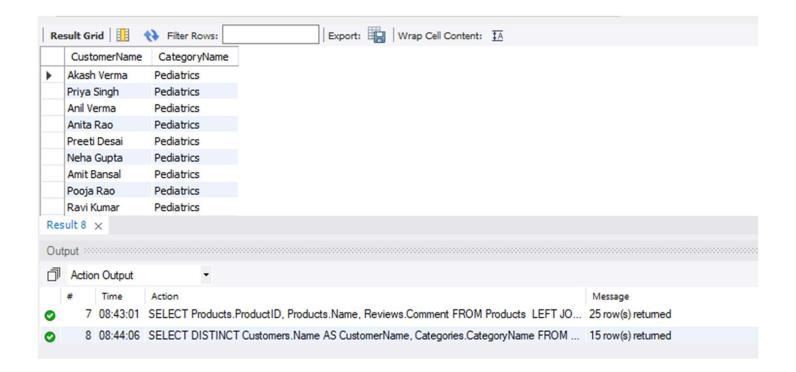
JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

JOIN Categories ON Categories.CategoryID = Products.CategoryID

WHERE Categories.CategoryName = "Pediatrics";



# Q19) List all customers who have reviewed a product they purchased.

SELECT DISTINCT Customers.Name AS CustomerName

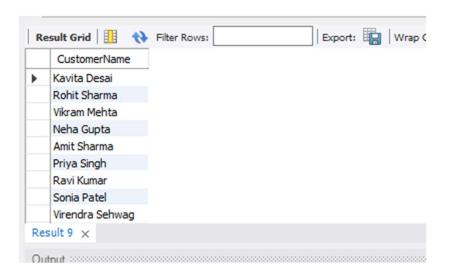
**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Reviews ON Reviews.ProductID = OrderDetails.ProductID

WHERE OrderDetails.ProductID = Reviews.ProductID;



#### Q20) Find the top 5 most expensive products and their categories.

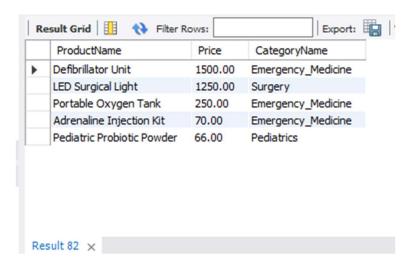
SELECT Products.Name AS ProductName, Products.Price, Categories.CategoryName

**FROM Products** 

JOIN Categories ON Categories.CategoryID = Products.CategoryID

**ORDER BY Products. Price DESC** 

#### LIMIT 5;



# Q21) List all orders where the total price exceeds Rs 500.

SELECT Orders.OrderID, SUM(Products.Price\*OrderDetails.Quantity) AS Total\_Price

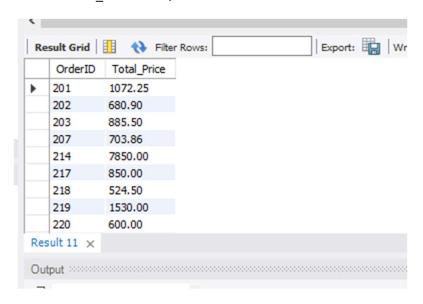
**FROM Orders** 

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

**GROUP BY Orders.OrderID** 

HAVING Total\_Price > 500;



# Q22) Find products in the "Gynecology" category with an average rating above 7.

SELECT Products.Name AS ProductName, AVG(Reviews.Rating) AS AverageRating

**FROM Products** 

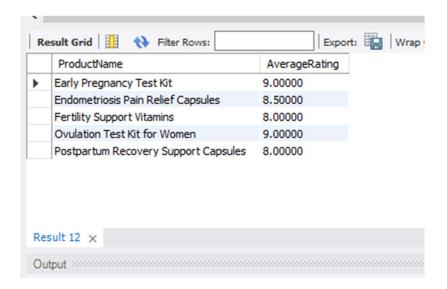
JOIN Reviews ON Reviews.ProductID = Products.ProductID

JOIN Categories ON Categories.CategoryID = Products.CategoryID

WHERE Categories.CategoryName = "Gynecology"

**GROUP BY Products.Name** 

HAVING AverageRating > 7;



# Q23) List customers who have placed more than 3 orders.

SELECT Customers.Name, COUNT(Orders.OrderID) AS OrderCount

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

**GROUP BY Customers.Name** 

HAVING OrderCount > 3;



Result 85 ×

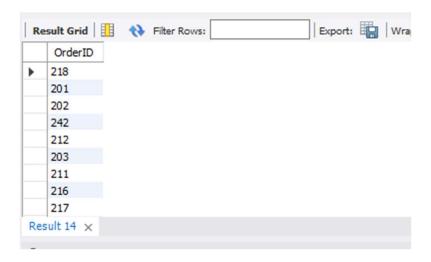
# Q24) Find all orders that include products with a discount.

SELECT DISTINCT Orders.OrderID

**FROM Orders** 

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Discounts ON Discounts.ProductID = OrderDetails.ProductID

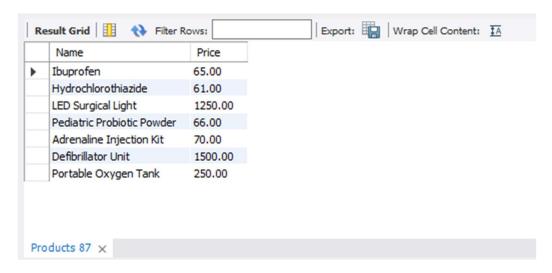


# Q25) List products with a price higher than the average price of all products.

SELECT Name, Price

**FROM Products** 

WHERE Price > (SELECT AVG(Price) FROM Products);



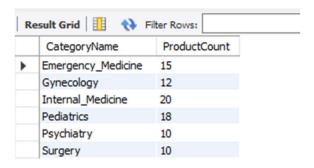
# Q26) Find the total number of products in each category.

SELECT Categories.CategoryName, COUNT(Products.Name) AS ProductCount

# **FROM Categories**

JOIN Products ON Products.CategoryID = Categories.CategoryID

# GROUP BY CategoryName;





# Q27) Find customers who have made purchases in multiple categories.

SELECT Customers.Name AS CustomerName, COUNT(DISTINCT Products.CategoryID) AS CategoriesCount

#### **FROM Customers**

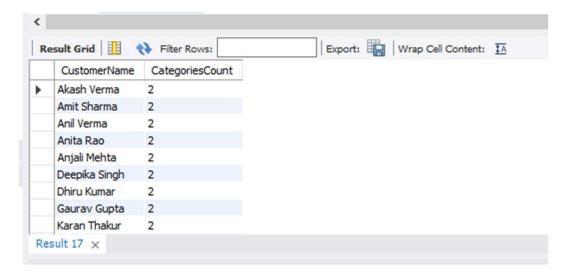
JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

**GROUP BY Customers.Name** 

HAVING CategoriesCount > 1;



#### Q28) List the total sales value of each customer.

SELECT Customers.Name AS CustomerName, SUM(OrderDetails.Quantity \* Products.Price) AS TotalSales

**FROM Customers** 

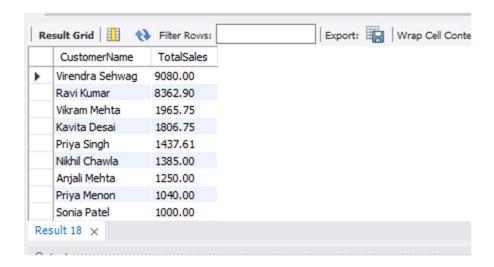
JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

**GROUP BY CustomerName** 

ORDER BY TotalSales DESC;



# Q29) Find the product that has been ordered the most by quantity.

SELECT Products.Name AS ProductName, SUM(OrderDetails.Quantity) AS TotalQuantity

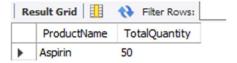
**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

**GROUP BY ProductName** 

ORDER BY TotalQuantity DESC

# LIMIT 1;



Result 91 ×

#### Q30) Identify customers who have purchased a product that they later reviewed poorly (rating < 5).

SELECT DISTINCT Customers.Name AS CustomerName, Products.Name AS ProductName, Reviews.Rating

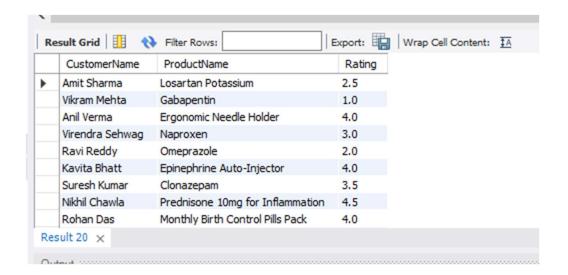
**FROM Customers** 

JOIN Reviews ON Reviews.CustomerID = Customers.CustomerID

JOIN Products ON Products.ProductID = Reviews.ProductID

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

WHERE Reviews.Rating < 5;



# Q31) List the orders that have the highest total discount applied.

SELECT Orders.OrderID, SUM(Discounts.DiscountAmount) AS Total\_Discount

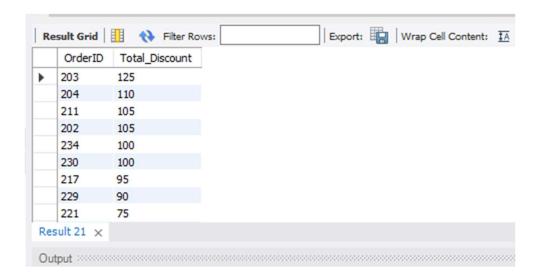
**FROM Orders** 

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Discounts ON Discounts.ProductID = OrderDetails.ProductID

**GROUP BY Orders.OrderID** 

ORDER BY Total\_Discount DESC;



# Q32) Find customers who have only placed one order.

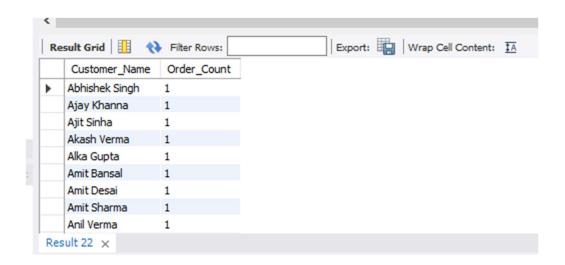
SELECT Customers.Name AS Customer\_Name, COUNT(Orders.OrderID) AS Order\_Count

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

GROUP BY Customer\_Name

HAVING Order\_Count = 1;



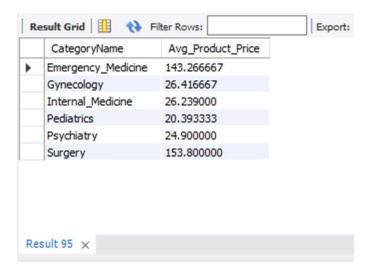
# Q33) Get the average price of products in each category.

SELECT Categories.CategoryName, AVG(Products.Price) AS Avg\_Product\_Price

#### **FROM Products**

JOIN Categories ON Categories.CategoryID = Products.CategoryID

#### GROUP BY CategoryName;



#### Q34) List the products that have been ordered but never reviewed.

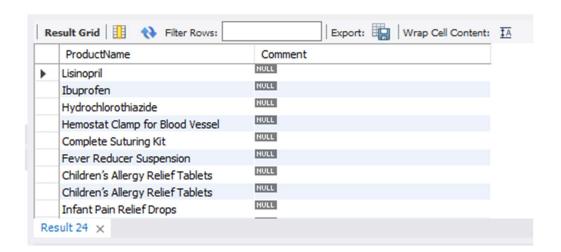
SELECT Products.Name AS ProductName, Reviews.Comment

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

LEFT JOIN Reviews ON Reviews.ProductID = OrderDetails.ProductID

WHERE Reviews. ProductID IS NULL;



#### Q35) List all products with their categories that have a price higher than the average price in their category.

SELECT Products.Name AS ProductName, Products.Price, Categories.CategoryName

**FROM Products** 

JOIN Categories ON Categories.CategoryID = Products.CategoryID

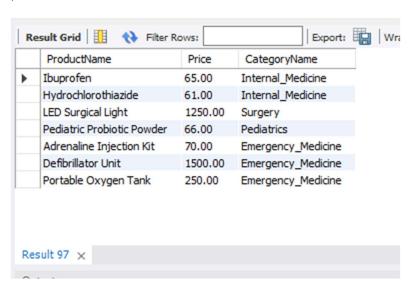
WHERE Products.Price > (

SELECT AVG(Price)

**FROM Products** 

WHERE CategoryID = Products.CategoryID

);



#### Q36) Find the customer who has spent the most money in total.

SELECT Customers.Name AS CustomerName, SUM(OrderDetails.Quantity\*Products.Price) AS Amount\_Spent

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

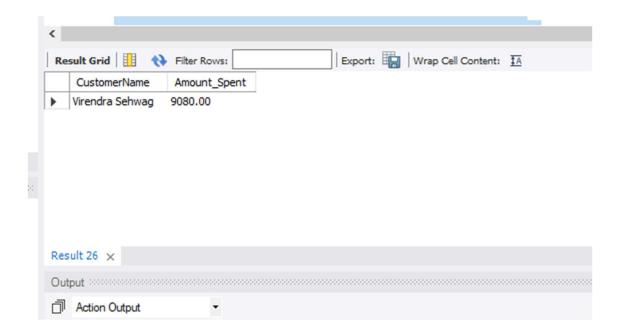
JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

**GROUP BY CustomerName** 

ORDER BY Amount\_Spent DESC

LIMIT 1;



## Q37) Find all products with a rating below the average rating across all products.

SELECT Products.ProductID, Products.Name AS ProductName, Reviews.Rating

**FROM Products** 

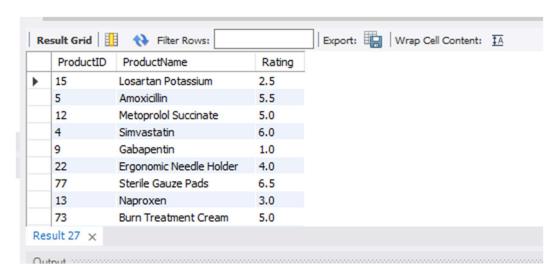
JOIN Reviews ON Reviews.ProductID = Products.ProductID

WHERE Reviews.Rating < (

SELECT AVG(Reviews.Rating)

**FROM Reviews** 

);



## Q38) Get the total number of orders each customer has placed in each year.

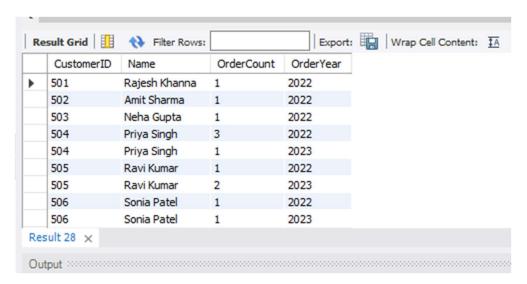
SELECT Customers.CustomerID, Customers.Name, COUNT(Orders.OrderID) AS OrderCount, YEAR(Orders.OrderDate) AS OrderYear

#### **FROM Customers**

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

GROUP BY Customers.CustomerID, OrderYear

ORDER BY Customers.CustomerID;



# Q39) Find the category with the lowest average product price.

SELECT Categories.CategoryID, Categories.CategoryName, AVG(Products.Price) AS Avg\_Price

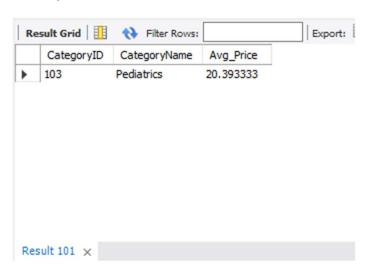
**FROM Categories** 

JOIN Products ON Products.CategoryID = Categories.CategoryID

**GROUP BY Categories.CategoryID** 

ORDER BY Avg\_Price ASC

## LIMIT 1;



## Q40) List all products that have not been ordered in the year 2022.

SELECT Products.Name AS ProductName, Orders.OrderDate

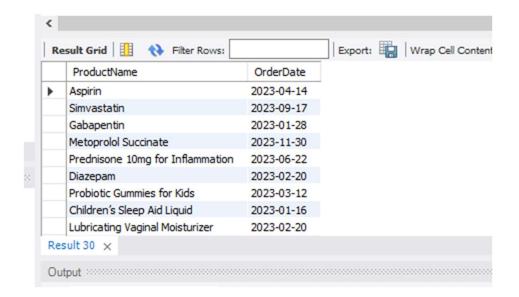
**FROM Products** 

LEFT JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

LEFT JOIN Orders ON Orders.OrderID = OrderDetails.OrderID

WHERE Orders.OrderDate IS NULL

OR YEAR(Orders.OrderDate) <> 2022;



## Q41) Identify the products that have the most reviews.

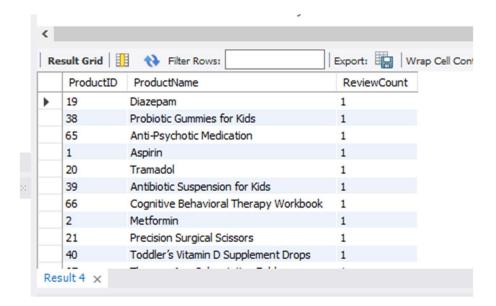
SELECT Products.ProductID, Products.Name AS ProductName, COUNT(Reviews.ReviewID) AS ReviewCount

#### **FROM Products**

JOIN Reviews ON Reviews.ProductID = Products.ProductID

**GROUP BY Products. ProductID** 

ORDER BY ReviewCount DESC;



## Q42) List customers along with the number of products they have reviewed.

```
SELECT Customers.CustomerID,

Customers.Name,

(

SELECT COUNT(*)

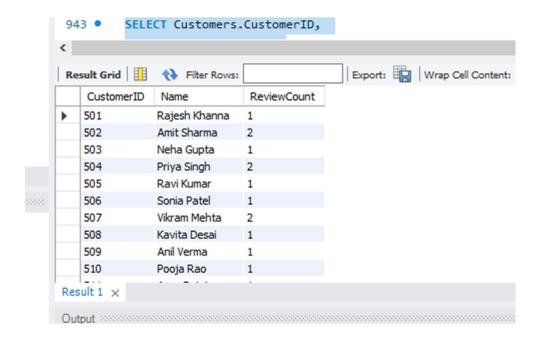
FROM Reviews

WHERE Reviews.CustomerID = Customers.CustomerID

) AS ReviewCount

FROM

Customers;
```



## Q43) Get the details of the most expensive product in each category.

SELECT p.ProductID, p.Name AS ProductName, p.Price, p.StockQuantity, p.CategoryID

FROM Products p

WHERE p.Price = (

SELECT MAX(p2.Price)

FROM Products p2

WHERE p2.CategoryID = p.CategoryID

);



Products 2 ×

## Q44) List the top 5 customers who have placed the most orders.

SELECT Customers.Name, COUNT(Orders.OrderID) AS OrderCount

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

**GROUP BY Customers.Name** 

**ORDER BY OrderCount DESC** 

LIMIT 5;





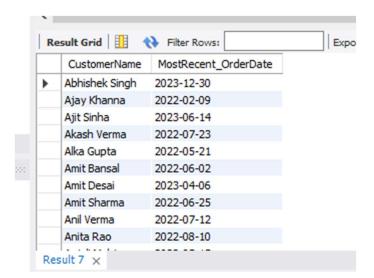
## Q45) Find the most recent order date for each customer.

SELECT Customers.Name AS CustomerName, MAX(Orders.OrderDate) AS MostRecent\_OrderDate

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

GROUP BY CustomerName;



## Q46) List products that have been ordered more than 10 times and have a price greater than Rs 50.

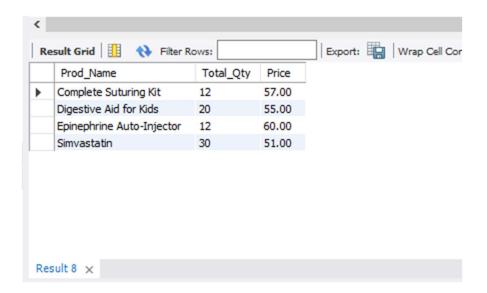
SELECT Products.Name AS Prod\_Name, SUM(OrderDetails.Quantity) AS Total\_Qty, Products.Price

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

GROUP BY Products.Name, Products.Price

HAVING Total\_Qty > 10 AND Price > 50;



## Q47) List products that have a discount applied and are priced above Rs 30.

SELECT Products.Name, Products.Price, Discounts.DiscountAmount

**FROM Products** 

JOIN Discounts ON Discounts.ProductID = Products.ProductID

WHERE Products.Price > 30;



## Q48) Find customers who have placed orders across multiple years.

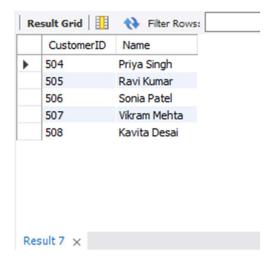
SELECT Orders.CustomerID, Customers.Name

**FROM Orders** 

JOIN Customers ON Customers.CustomerID = Orders.CustomerID

**GROUP BY Orders.CustomerID** 

HAVING COUNT(DISTINCT YEAR(OrderDate)) > 1;



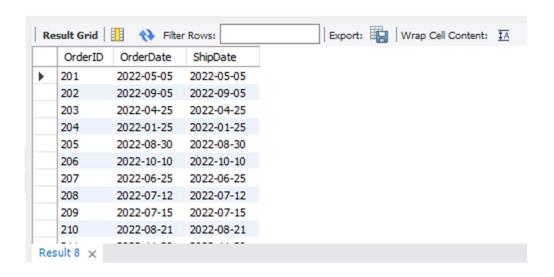
## Q49) Find orders that were shipped on the same day they were placed.

SELECT Orders.OrderID, Orders.OrderDate, Shipping.ShipDate

**FROM Orders** 

JOIN Shipping ON Shipping.OrderID = Orders.OrderID

WHERE Shipping.ShipDate = Orders.OrderDate;



## Q50) List customers who have made purchases in more than one category.

SELECT Customers.Name AS CustomerName, COUNT(DISTINCT Products.CategoryID) AS CategoryCount

**FROM Customers** 

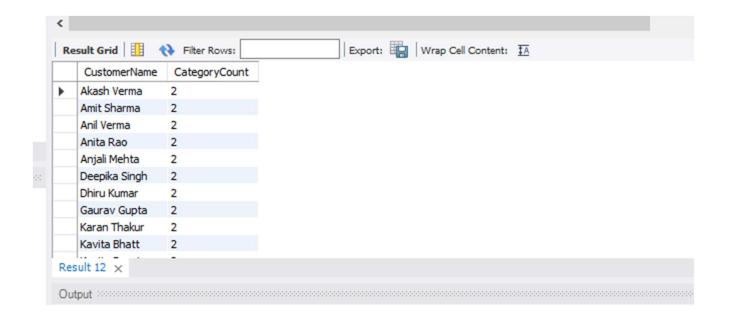
JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

**GROUP BY CustomerName** 

HAVING CategoryCount > 1;



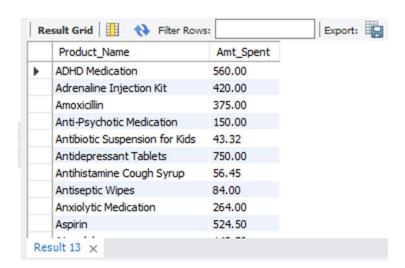
## Q51) List all products along with the total amount spent on them.

SELECT Products.Name AS Product\_Name, SUM(OrderDetails.Quantity\*Products.Price)

**FROM Products** 

JOIN OrderDetails ON OrderDetails.ProductID = Products.ProductID

GROUP BY Products.Name;



## Q52) Classify customers based on the total amount they have spent into three categories:

'Low Spender', 'Medium Spender', and 'High Spender'.

SELECT Customers.Name AS Person\_Name, SUM(OrderDetails.Quantity\*Products.Price) AS Money\_Spent,

**CASE** 

WHEN SUM(OrderDetails.Quantity\*Products.Price) > 2000 THEN "High\_Spender"

WHEN SUM(OrderDetails.Quantity\*Products.Price) BETWEEN 500 AND 2000 THEN "Medium\_Spender"

ELSE "Low\_Spender"

END AS Spending\_Category

**FROM Customers** 

JOIN Orders ON Orders.CustomerID = Customers.CustomerID

JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID

JOIN Products ON Products.ProductID = OrderDetails.ProductID

GROUP BY Customers.Name;

