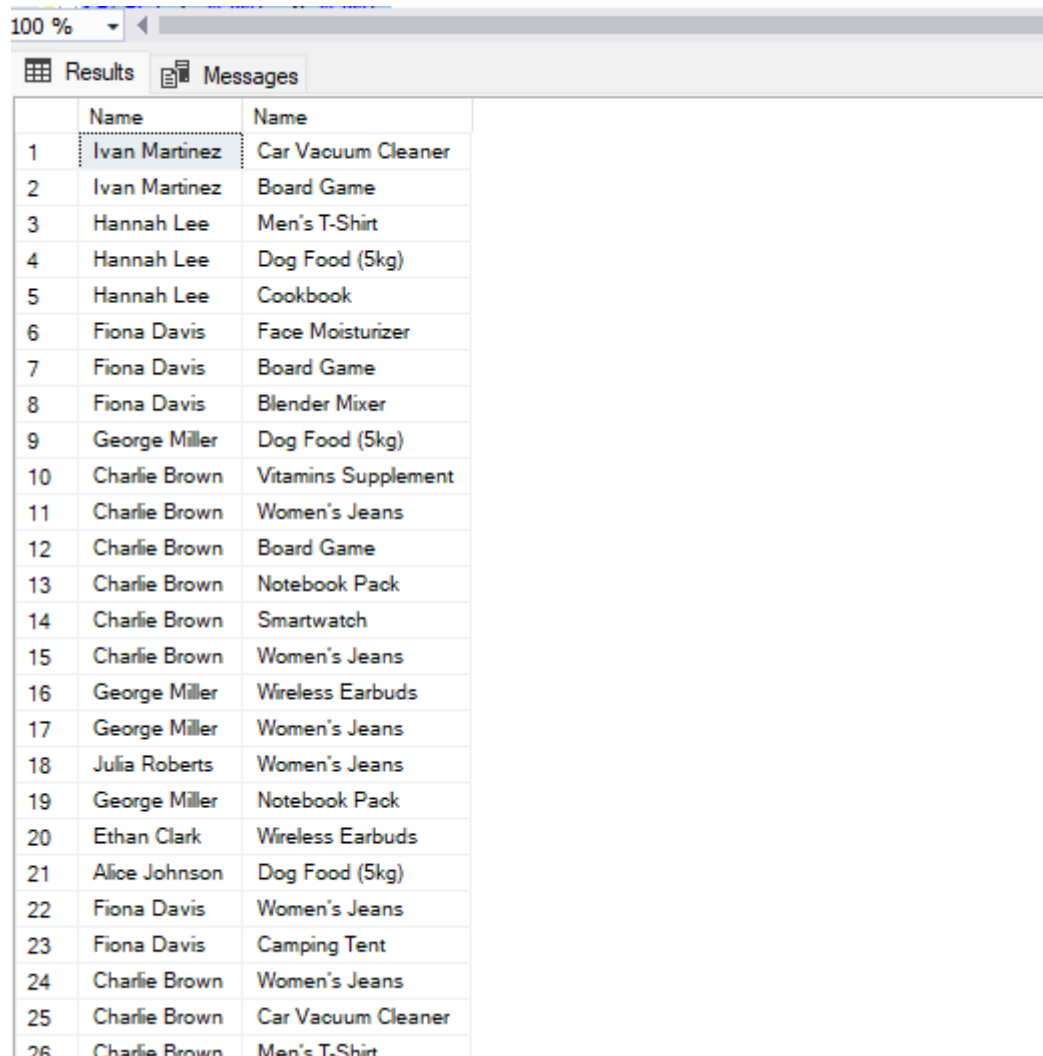


1. List all customer names along with the product names they purchased.

```
SELECT c.Name, p.Name
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
JOIN OrderDetails od ON o.OrderID = od.OrderID
JOIN Products p ON od.ProductID = p.ProductID;
```



The screenshot shows a database query results window with a zoom level of 100%. The window has two tabs: 'Results' and 'Messages'. The 'Results' tab is active, displaying a table with two columns: 'Name' and 'Name'. The table contains 26 rows of data, listing customers and the products they purchased.

	Name	Name
1	Ivan Martinez	Car Vacuum Cleaner
2	Ivan Martinez	Board Game
3	Hannah Lee	Men's T-Shirt
4	Hannah Lee	Dog Food (5kg)
5	Hannah Lee	Cookbook
6	Fiona Davis	Face Moisturizer
7	Fiona Davis	Board Game
8	Fiona Davis	Blender Mixer
9	George Miller	Dog Food (5kg)
10	Charlie Brown	Vitamins Supplement
11	Charlie Brown	Women's Jeans
12	Charlie Brown	Board Game
13	Charlie Brown	Notebook Pack
14	Charlie Brown	Smartwatch
15	Charlie Brown	Women's Jeans
16	George Miller	Wireless Earbuds
17	George Miller	Women's Jeans
18	Julia Roberts	Women's Jeans
19	George Miller	Notebook Pack
20	Ethan Clark	Wireless Earbuds
21	Alice Johnson	Dog Food (5kg)
22	Fiona Davis	Women's Jeans
23	Fiona Davis	Camping Tent
24	Charlie Brown	Women's Jeans
25	Charlie Brown	Car Vacuum Cleaner
26	Charlie Brown	Men's T-Shirt

2. Show order IDs with shipping status (date of delivery).

```
SELECT o.OrderID, s.ShipDate, s.DeliveryDate
FROM Orders o
LEFT JOIN Shipping s ON o.OrderID = s.OrderID;
```

Results		Messages	
	OrderID	ShipDate	DeliveryDate
1	1	2025-07-11	2025-07-16
2	2	2025-06-07	2025-06-09
3	3	2025-06-23	2025-06-28
4	4	2025-07-10	2025-07-12
5	5	2025-07-02	2025-07-08
6	6	2025-05-25	2025-06-01
7	7	2025-06-24	2025-06-28
8	8	2025-07-08	2025-07-11
9	9	2025-05-21	2025-05-25
10	10	2025-06-23	2025-06-27
11	11	2025-06-12	2025-06-18
12	12	2025-06-15	2025-06-21
13	13	2025-05-25	2025-06-01
14	14	2025-07-04	2025-07-08
15	15	2025-07-10	2025-07-13
16	16	2025-07-14	2025-07-21
17	17	2025-06-21	2025-06-23
18	18	2025-07-07	2025-07-12
19	19	2025-06-10	2025-06-13
20	20	2025-05-21	2025-05-25
21	21	2025-07-07	2025-07-09
22	22	2025-05-30	2025-06-04
23	23	2025-06-08	2025-06-11
24	24	2025-06-28	2025-07-02
25	25	2025-07-03	2025-07-07
26	26	2025-05-24	2025-05-29

✓ Query executed successfully.

- Get product names, prices, and associated category names.

```
SELECT p.Name AS ProductName, p.Price, c.CategoryName
```

```
FROM Products p
```

```
JOIN Categories c ON p.CategoryID = c.CategoryID;
```

	ProductName	Price	CategoryName
1	Wireless Earbuds	59.99	Electronics
2	Science Fiction ...	18.49	Books
3	Men's T-Shirt	12.99	Clothing
4	Blender Mixer	89.00	Home & Kitch...
5	Camping Tent	149.99	Sports & Outdoors
6	Face Moisturizer	22.00	Beauty & Personal Care
7	Board Game	35.99	Toys & Games
8	Organic Pasta	4.99	Grocery
9	Car Vacuum Cleaner	39.90	Automotive
10	Vitamins Supplement	19.99	Health & Wellness
11	Notebook Pack	8.99	Office Supplies
12	Dog Food (5kg)	26.50	Pet Supplies
13	Smartwatch	199.99	Electronics
14	Cookbook	25.00	Books
15	Women's Jeans	39.99	Clothing

4. Find all customers who bought a 'Smartwatch'.

```
SELECT DISTINCT cu.Name
FROM Customers cu
JOIN Orders o ON cu.CustomerID = o.CustomerID
JOIN OrderDetails od ON o.OrderID = od.OrderID
JOIN Products p ON od.ProductID = p.ProductID
WHERE p.Name = 'Smartwatch';
```

	Name
1	Alice Johnson
2	Charlie Brown
3	Fiona Davis
4	George Miller

5. List all reviews with customer names and product names.

```
SELECT cu.Name, p.Name, r.Rating, r.Comment
FROM Reviews r
JOIN Customers cu ON r.CustomerID = cu.CustomerID
JOIN Products p ON r.ProductID = p.ProductID;
```

	Name	Name	Rating	Comment
1	Hannah Lee	Men's T-Shirt	5	Not great, could be better.
2	Ivan Martinez	Cookbook	1	Not great, could be better.
3	Charlie Brown	Women's Jeans	4	Disappointed with the product.
4	Hannah Lee	Vitamins Supplement	2	It was okay, met expectations.
5	Ethan Clark	Blender Mixer	2	It was okay, met expectations.
6	George Miller	Women's Jeans	5	Disappointed with the product.
7	Bob Smith	Wireless Earbuds	2	It was okay, met expectations.
8	Ethan Clark	Smartwatch	5	It was okay, met expectations.
9	Charlie Brown	Smartwatch	2	Not great, could be better.
10	Ivan Martinez	Blender Mixer	2	Very good, satisfied.
11	Fiona Davis	Women's Jeans	1	Not great, could be better.
12	Ivan Martinez	Smartwatch	4	Disappointed with the product.
13	Julia Roberts	Smartwatch	5	It was okay, met expectations.
14	George Miller	Face Moisturizer	4	Disappointed with the product.
15	Hannah Lee	Women's Jeans	2	Not great, could be better.
16	Hannah Lee	Dog Food (5kg)	4	Disappointed with the product.
17	Ivan Martinez	Smartwatch	2	Not great, could be better.
18	Ethan Clark	Vitamins Supplement	4	Disappointed with the product.
19	Bob Smith	Board Game	4	Disappointed with the product.
20	Ethan Clark	Blender Mixer	3	It was okay, met expectations.

6. Show all orders with their total quantity.

```
SELECT o.OrderID, SUM(od.Quantity) AS TotalQuantity
FROM Orders o
JOIN OrderDetails od ON o.OrderID = od.OrderID
GROUP BY o.OrderID;
```

	OrderID	TotalQuantity
1	1	9
2	2	5
3	3	11
4	4	4
5	5	10
6	6	9
7	7	7
8	8	2
9	9	1
10	10	2
11	11	3
12	12	9
13	13	9
14	14	5
15	15	3
16	16	8
17	17	5
18	18	6
19	19	4
20	20	4
21	21	3
22	22	6
23	23	5
24	24	7
25	25	9
26	26	5

7. List products and their discount types.

```
SELECT p.Name, d.DiscountType, d.DiscountAmount
FROM Products p
JOIN Discounts d ON p.ProductID = d.ProductID;
```

	Name	DiscountType	DiscountAmo
1	Click to select all grid cells		11.62
2	Cookbook	Percentage	15.19
3	Wireless Earbuds	Flat	34.13
4	Dog Food (5kg)	Flat	27.27
5	Notebook Pack	Flat	23.58
6	Face Moisturizer	Percentage	18.45
7	Board Game	Percentage	24.19
8	Blender Mixer	Flat	32.45
9	Women's Jeans	Flat	19.77
10	Organic Pasta	Flat	49.54

8. Show the top 5 most ordered products.

```
SELECT p.Name, SUM(od.Quantity) AS TotalOrdered
FROM OrderDetails od
JOIN Products p ON od.ProductID = p.ProductID
```

GROUP BY p.Name  
ORDER BY TotalOrdered DESC  
OFFSET 0 ROWS FETCH NEXT 5 ROWS ONLY;

	Name	TotalOrdered
1	Women's Jeans	41
2	Camping Tent	32
3	Board Game	32
4	Car Vacuum Cleaner	28
5	Face Moisturizer	27

9. List customers who placed more than 2 orders.  
SELECT c.Name, COUNT(o.OrderID) AS OrderCount  
FROM Customers c  
JOIN Orders o ON c.CustomerID = o.CustomerID  
GROUP BY c.Name  
HAVING COUNT(o.OrderID) > 2;

	Name	OrderCount
1	Alice Johnson	5
2	Bob Smith	5
3	Charlie Brown	4
4	Diana Prince	5
5	Fiona Davis	9
6	George Miller	7
7	Hannah Lee	5
8	Ivan Martinez	4
9	Julia Roberts	4

10. Find average rating for each product.  
SELECT p.Name, AVG(r.Rating) AS AvgRating  
FROM Products p  
JOIN Reviews r ON p.ProductID = r.ProductID  
GROUP BY p.Name;

	Name	AvgRating
1	Blender Mixer	2
2	Board Game	4
3	Cookbook	1
4	Dog Food (5kg)	4
5	Face Moisturizer	4
6	Men's T-Shirt	5
7	Smartwatch	3
8	Vitamins Supplement	3
9	Wireless Earbuds	2
10	Women's Jeans	3

11. List product names with active discounts today.

```
SELECT p.Name
FROM Products p
JOIN Discounts d ON p.ProductID = d.ProductID
WHERE GETDATE() BETWEEN d.StartDate AND d.EndDate;
```

	Name
1	Vitamins Supplement
2	Cookbook
3	Wireless Earbuds
4	Dog Food (5kg)
5	Notebook Pack
6	Face Moisturizer
7	Board Game
8	Blender Mixer
9	Women's Jeans
10	Organic Pasta

12. Get each customer's most recent order.

```
SELECT c.Name, MAX(o.OrderDate) AS LastOrder
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
GROUP BY c.Name;
```

	Name	LastOrder
1	Alice Johnson	2025-07-11
2	Bob Smith	2025-07-03
3	Charlie Brown	2025-06-16
4	Diana Prince	2025-07-06
5	Ethan Clark	2025-06-23
6	Fiona Davis	2025-07-11
7	George Miller	2025-07-12
8	Hannah Lee	2025-07-11
9	Ivan Martinez	2025-06-21
10	Julia Roberts	2025-07-12

13. List orders along with the shipping duration in days

```
SELECT o.OrderID, DATEDIFF(DAY, s.ShipDate, s.DeliveryDate) AS DeliveryTime
FROM Orders o
JOIN Shipping s ON o.OrderID = s.OrderID;
```

	OrderID	DeliveryTime
1	1	5
2	2	2
3	3	5
4	4	2
5	5	6
6	6	7
7	7	4
8	8	3
9	9	4
10	10	4
11	11	6
12	12	6
13	13	7
14	14	4
15	15	3
16	16	7
17	17	2
18	18	5
19	19	3
20	20	4
21	21	2
22	22	5
23	23	3
24	24	4
25	25	4
26	26	5

14. Show orders that include more than 3 products

```

SELECT o.OrderID, COUNT(od.ProductID) AS ProductCount
FROM Orders o
JOIN OrderDetails od ON o.OrderID = od.OrderID
GROUP BY o.OrderID
HAVING COUNT(od.ProductID) > 3;

```





WHERE r.ProductID IS NULL;

	Name
1	Science Fiction Book
2	Camping Tent
3	Organic Pasta
4	Car Vacuum Cleaner
5	Notebook Pack

17. Get total sales value per category

```
SELECT c.CategoryName, SUM(p.Price * od.Quantity) AS TotalSales
FROM Categories c
JOIN Products p ON c.CategoryID = p.CategoryID
JOIN OrderDetails od ON p.ProductID = od.ProductID
GROUP BY c.CategoryName;
```

	CategoryName	TotalSales
1	Automotive	1117.20
2	Beauty & Personal Care	594.00
3	Books	477.35
4	Clothing	1808.46
5	Electronics	3139.71
6	Grocery	89.82
7	Health & Wellness	99.95
8	Home & Kitchen	890.00
9	Office Supplies	161.82
10	Pet Supplies	689.00
11	Sports & Outdoors	4799.68
12	Toys & Games	1151.68

18. Find customers who ordered from more than 3 different categories

```
SELECT c.Name
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
JOIN OrderDetails od ON o.OrderID = od.OrderID
JOIN Products p ON od.ProductID = p.ProductID
GROUP BY c.Name
HAVING COUNT(DISTINCT p.CategoryID) > 3;
```

	Name
1	Alice Johnson
2	Bob Smith
3	Charlie Brown
4	Diana Prince
5	Fiona Davis
6	George Miller
7	Hannah Lee
8	Ivan Martinez
9	Julia Roberts

19. List all orders that were delivered late (after 5 days of ship date).

```
SELECT o.OrderID, s.ShipDate, s.DeliveryDate
FROM Orders o
JOIN Shipping s ON o.OrderID = s.OrderID
WHERE DATEDIFF(DAY, s.ShipDate, s.DeliveryDate) > 5;
```

	OrderID	ShipDate	DeliveryDate
1	5	2025-07-02	2025-07-08
2	6	2025-05-25	2025-06-01
3	11	2025-06-12	2025-06-18
4	12	2025-06-15	2025-06-21
5	13	2025-05-25	2025-06-01
6	16	2025-07-14	2025-07-21
7	28	2025-06-01	2025-06-08
8	29	2025-06-08	2025-06-14
9	35	2025-06-16	2025-06-23
10	39	2025-07-14	2025-07-20
11	41	2025-06-22	2025-06-29
12	43	2025-07-10	2025-07-16
13	47	2025-05-27	2025-06-03
14	48	2025-06-06	2025-06-13

20. Show the most reviewed product.

```
SELECT TOP 1 p.Name, COUNT(r.ReviewID) AS ReviewCount
FROM Products p
JOIN Reviews r ON p.ProductID = r.ProductID
GROUP BY p.Name
ORDER BY ReviewCount DESC; SELECT TOP 1 p.Name, COUNT(r.ReviewID) AS
ReviewCount
FROM Products p
JOIN Reviews r ON p.ProductID = r.ProductID
GROUP BY p.Name
ORDER BY ReviewCount DESC;
```

	Name	ReviewCount
1	Smartwatch	5

21. Get orders with total order value.

```
SELECT o.OrderID, SUM(p.Price * od.Quantity) AS OrderTotal
FROM Orders o
JOIN OrderDetails od ON o.OrderID = od.OrderID
JOIN Products p ON od.ProductID = p.ProductID
GROUP BY o.OrderID;
```

	OrderID	OrderTotal
1	1	339.55
2	2	102.48
3	3	378.95
4	4	106.00
5	5	327.90
6	6	617.91
7	7	339.93
8	8	79.98
9	9	8.99
10	10	119.98
11	11	79.50
12	12	909.91
13	13	305.55
14	14	181.60
15	15	104.98
16	16	93.92
17	17	44.95

22. List orders with products having discounts.

```
SELECT DISTINCT o.OrderID
FROM Orders o
JOIN OrderDetails od ON o.OrderID = od.OrderID
JOIN Discounts d ON od.ProductID = d.ProductID;
```

	OrderID
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17

23. Find customers who purchased discounted products only.

```

SELECT DISTINCT c.Name
FROM Customers c
WHERE NOT EXISTS (
  SELECT 1
  FROM Orders o
  JOIN OrderDetails od ON o.OrderID = od.OrderID
  JOIN Products p ON od.ProductID = p.ProductID
  LEFT JOIN Discounts d ON p.ProductID = d.ProductID
  WHERE o.CustomerID = c.CustomerID AND d.ProductID IS NULL
);

```

	Name
1	Ethan Clark

24. Show top 3 highest discount amounts and their product names.

```

SELECT TOP 3 p.Name, d.DiscountAmount
FROM Discounts d
JOIN Products p ON d.ProductID = p.ProductID
ORDER BY d.DiscountAmount DESC;

```

	Name	DiscountAmount
1	Organic Pasta	49.54
2	Wireless Earbuds	34.13
3	Blender Mixer	32.45

**25. Show customers who ordered but never reviewed any product.**

```
SELECT DISTINCT c.Name
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
WHERE c.CustomerID NOT IN (
    SELECT DISTINCT CustomerID FROM Reviews
);
```

	Name
1	Alice Johnson
2	Diana Prince

**26. Check if all ratings fall between 1 and 5.**

```
SELECT * FROM Reviews WHERE Rating < 1 OR Rating > 5;
```

100 %

ReviewID	ProductID	CustomerID	Rating	Comment
----------	-----------	------------	--------	---------

27. List products with stock quantity < 0 (data anomaly check).

SELECT \* FROM Products WHERE StockQuantity < 0;

100 %

ReviewID	ProductID	CustomerID	Rating	Comment
----------	-----------	------------	--------	---------

28. Identify any Orders not in Shipping (violates uniqueness).

```
SELECT * FROM Orders
```

```
WHERE OrderID NOT IN (SELECT OrderID FROM Shipping);
```

OrderID	CustomerID	OrderDate

29. List duplicate emails in Customers (violates UNIQUE).

```
SELECT Email, COUNT(*) AS Count
```

```
FROM Customers
```

```
GROUP BY Email
```

```
HAVING COUNT(*) > 1;
```

100 %	
Results	Messages
Email	Count

30. Find discounts with EndDate earlier than StartDate.

```
SELECT * FROM Discounts
```

```
WHERE EndDate < StartDate;
```



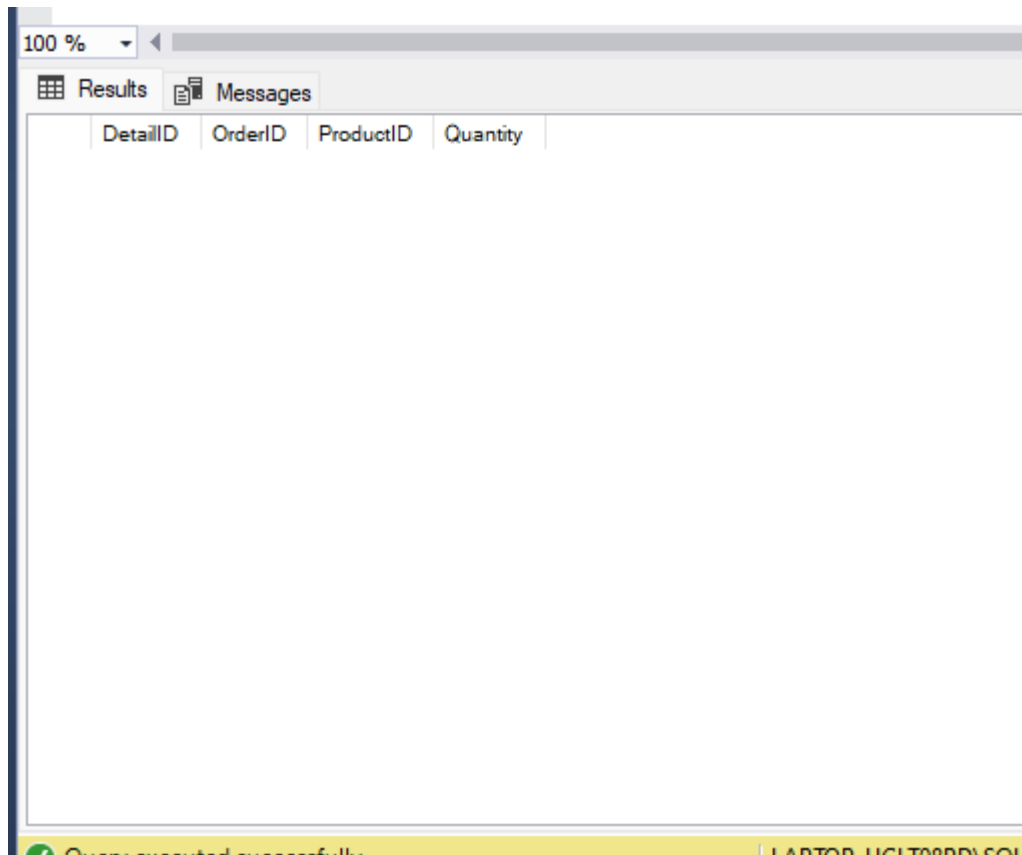
100 %

Results		Messages	
DiscountID	ProductID	DiscountAmount	DiscountType
StartDate	EndDate		

31. Detect foreign key orphan in OrderDetails (Product doesn't exist).

SELECT \* FROM OrderDetails

WHERE ProductID NOT IN (SELECT ProductID FROM Products);



32. Check for NULLs in NOT NULL columns in Customers.

```
SELECT * FROM Customers
```

```
WHERE Name IS NULL OR Email IS NULL;
```

100 %

Results

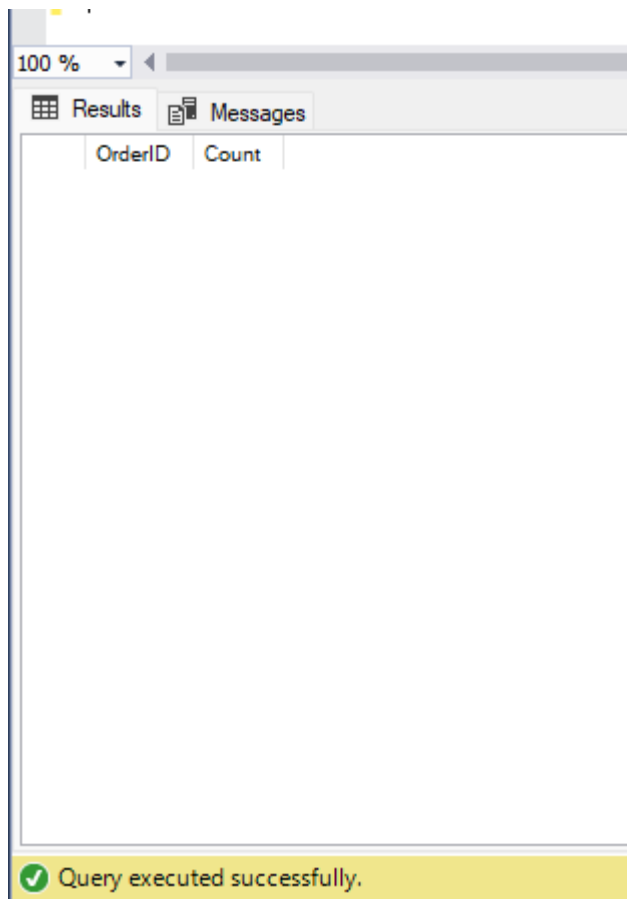
Messages

CustomerID	Name	Email
------------	------	-------

**33. Ensure no duplicate OrderDetails per order-product.**

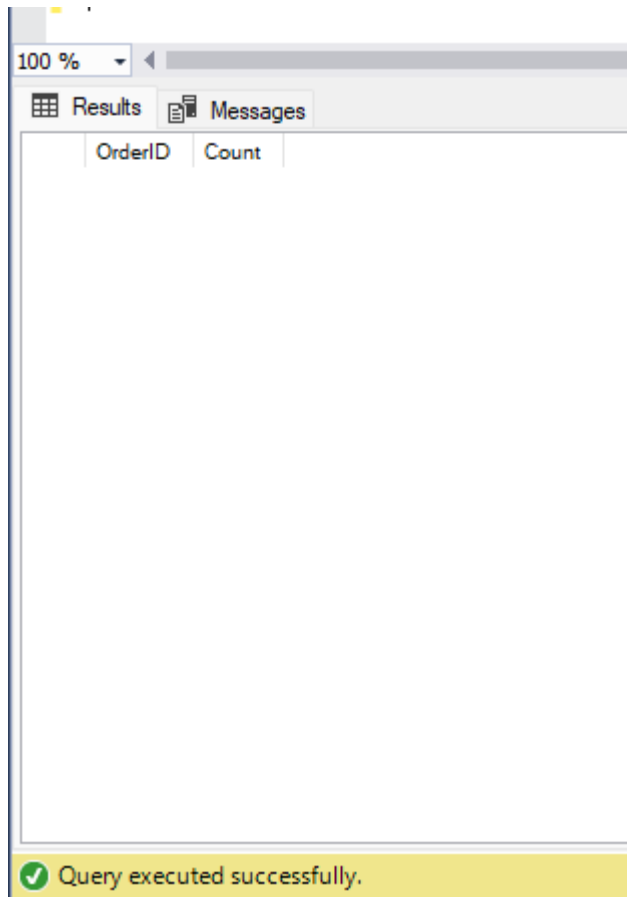
```
SELECT OrderID, ProductID, COUNT(*) AS Count
FROM OrderDetails
GROUP BY OrderID, ProductID
HAVING COUNT(*) > 1;
```





35. Check if any Review has NULL for Rating.

```
SELECT * FROM Reviews WHERE Rating IS NULL;
```



36. Find average price of products in each category.

```
SELECT c.CategoryName, AVG(p.Price) AS AvgPrice
FROM Categories c
JOIN Products p ON c.CategoryID = p.CategoryID
GROUP BY c.CategoryName;
```

Results Messages		
	CategoryName	AvgPrice
1	Automotive	39.900000
2	Beauty & Personal Care	22.000000
3	Books	21.745000
4	Clothing	26.490000
5	Electronics	129.990000
6	Grocery	4.990000
7	Health & Wellness	19.990000
8	Home & Kitchen	89.000000
9	Office Supplies	8.990000
10	Pet Supplies	26.500000
11	Sports & Outdoors	149.990000
12	Toys & Games	35.990000

37. Count total number of customers.

```
SELECT COUNT(*) AS TotalCustomers FROM Customers;
```

Results Messages	
	TotalCustomers
1	10

38. Calculate total number of orders.

```
SELECT COUNT(*) AS TotalOrders FROM Orders;
```

Results Messages	
	TotalOrders
1	50

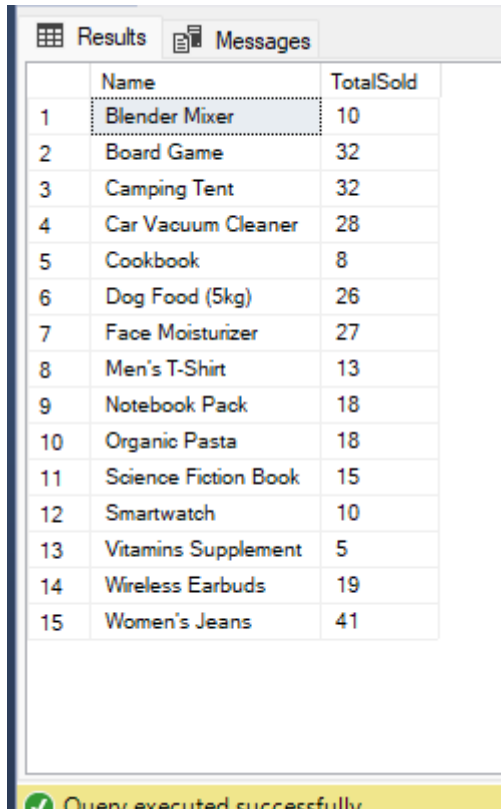
39. Total quantity of each product sold.

```
SELECT p.Name, SUM(od.Quantity) AS TotalSold
```

FROM Products p

JOIN OrderDetails od ON p.ProductID = od.ProductID

GROUP BY p.Name;



The screenshot shows a SQL Server query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is active, displaying a table with two columns: 'Name' and 'TotalSold'. The table contains 15 rows of data, numbered 1 through 15. At the bottom of the window, a yellow status bar indicates 'Query executed successfully.'

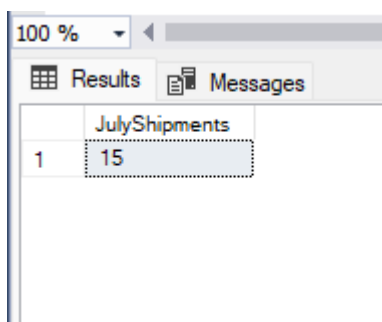
	Name	TotalSold
1	Blender Mixer	10
2	Board Game	32
3	Camping Tent	32
4	Car Vacuum Cleaner	28
5	Cookbook	8
6	Dog Food (5kg)	26
7	Face Moisturizer	27
8	Men's T-Shirt	13
9	Notebook Pack	18
10	Organic Pasta	18
11	Science Fiction Book	15
12	Smartwatch	10
13	Vitamins Supplement	5
14	Wireless Earbuds	19
15	Women's Jeans	41

40. Number of orders shipped in July 2025.

SELECT COUNT(\*) AS JulyShipments

FROM Shipping

WHERE MONTH(ShipDate) = 7 AND YEAR(ShipDate) = 2025;



The screenshot shows a SQL Server query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is active, displaying a table with one column: 'JulyShipments'. The table contains one row with the value '15'. The window title bar shows '100 %' and a scroll bar.

	JulyShipments
1	15

41. Find most common product in reviews.

SELECT TOP 1 p.Name, COUNT(\*) AS Reviews

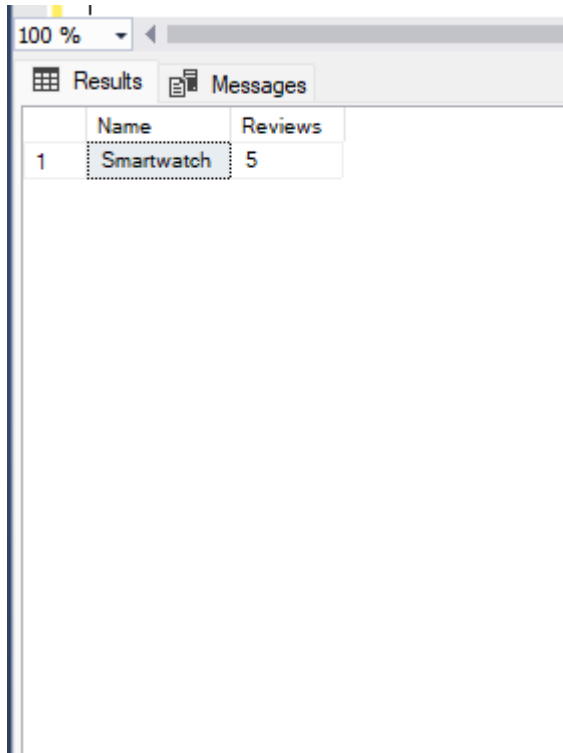
FROM Reviews r



JOIN Products p ON r.ProductID = p.ProductID

GROUP BY p.Name

ORDER BY Reviews DESC;



The screenshot shows a SQL query results window. At the top, there is a zoom level of 100% and a scroll bar. Below the zoom level are two tabs: 'Results' (active) and 'Messages'. The 'Results' tab displays a table with two columns: 'Name' and 'Reviews'. The first row of the table shows the product name 'Smartwatch' and the number of reviews '5'. The row is highlighted with a dashed border.

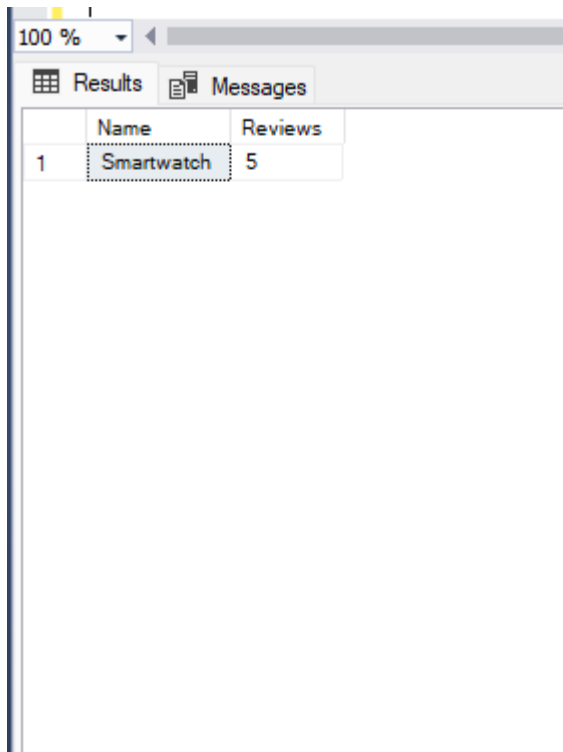
	Name	Reviews
1	Smartwatch	5

42. Display product with max stock available.

SELECT TOP 1 Name, StockQuantity

FROM Products

ORDER BY StockQuantity DESC;



100 %

Results Messages

	Name	Reviews
1	Smartwatch	5

43. Find orders placed in June 2025.

```
SELECT * FROM Orders
```

```
WHERE MONTH(OrderDate) = 6 AND YEAR(OrderDate) = 2025;
```

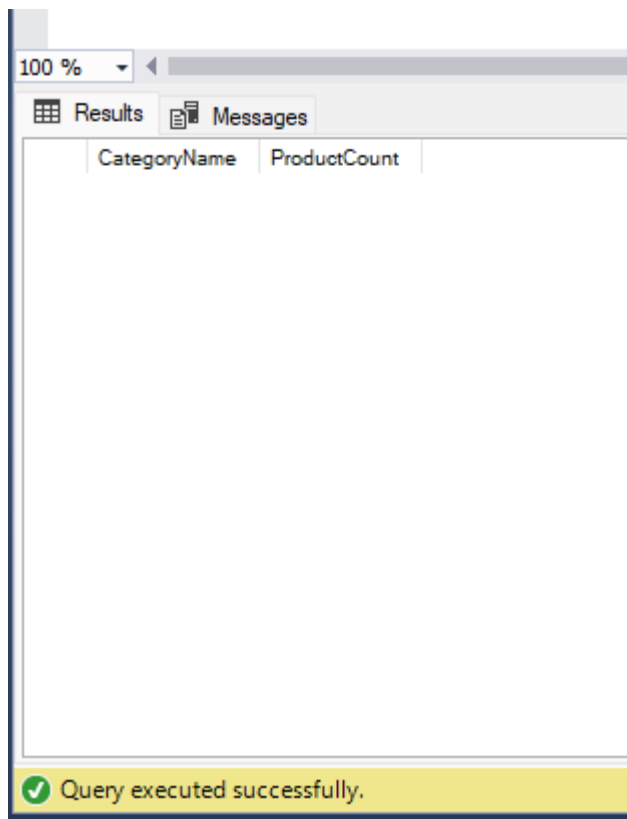
Results		Messages	
	OrderID	CustomerID	OrderDate
1	2	8	2025-06-03
2	3	6	2025-06-24
3	4	7	2025-06-25
4	8	10	2025-06-02
5	13	3	2025-06-13
6	15	1	2025-06-21
7	18	7	2025-06-11
8	19	2	2025-06-03
9	21	4	2025-06-04
10	24	9	2025-06-21
11	29	5	2025-06-23
12	30	6	2025-06-12
13	31	9	2025-06-19
14	32	8	2025-06-18
15	33	4	2025-06-28
16	35	1	2025-06-30
17	36	10	2025-06-06
18	38	2	2025-06-16
19	39	1	2025-06-21
20	40	3	2025-06-16
21	41	9	2025-06-12
22	43	10	2025-06-12
23	46	8	2025-06-10
24	47	4	2025-06-17
25	50	6	2025-06-03

44. List categories that have more than 2 products.

```

SELECT c.CategoryName, COUNT(p.ProductID) AS ProductCount
FROM Categories c
JOIN Products p ON c.CategoryID = p.CategoryID
GROUP BY c.CategoryName
HAVING COUNT(p.ProductID) > 2;

```



45. Get products with discounts greater than 20.

```
SELECT p.Name, d.DiscountAmount  
FROM Discounts d  
JOIN Products p ON d.ProductID = p.ProductID  
WHERE d.DiscountAmount > 20;
```

100 %

Results

Messages

CategoryName	ProductCount
--------------	--------------

✓

Query executed successfully.