1) List all products along with their category names.

Ans:

```
select P.Name ,C.CategoryName from products P
inner join Categories C
on P.CategoryID=C.CategoryID;
```

Name	CategoryName
Product1	Category1
Product2	Category2
Product3	Category3
Product4	Category4
Product5	Category5
Product6	Category6
Product7	Category7
Product8	Category8
Product9	Category9
Product10	Category10
Product11	Category11

2) Show the orders with customer names and order dates.
   Ans:

```
select  o.orderId,c.Name,o.OrderDate
from orders o
inner join Customers c
on o.CustomerID=c.CustomerID;
```

orderId	Name	OrderDate
1	Customer1	2023-01-01
2	Customer2	2023-01-02
3	Customer3	2023-01-03
4	Customer4	2023-01-04
5	Customer5	2023-01-05
6	Customer6	2023-01-06
7	Customer7	2023-01-07
8	Customer8	2023-01-08
9	Customer9	2023-01-09
10	Customer10	2023-01-10
11	Customer11	2023-01-11
12	Customer12	2023-01-12
13	Customer13	2023-01-13

3) Display all order details with product names and quantities.
   Ans:

```
select  o.DetailID,o.orderID,o.ProductID,o.quantity,P.Name,p.StockQuantity from
orderdetails o
inner join products p
on o.productID=p.productID;
```

DetailID	orderID	ProductID	quantity	Name	StockQuantity
1	1	1	2	Product1	50
2	2	2	1	Product2	40
3	3	3	4	Product3	30
4	4	4	3	Product4	20
5	5	5	2	Product5	10
6	6	6	5	Product6	60
7	7	7	1	Product7	70
8	8	8	2	Product8	80
9	9	9	3	Product9	90
10	10	10	4	Product10	100
11	11	11	2	Product11	55
12	12	12	3	Product12	45
13	13	13	5	Product13	35

4) Find all customers who have placed an order (with their order IDs).

Ans:

```
select c.Name ,o.OrderID from customers c

inner join orders o

on c.CustomerID=o.CustomerID;
```

Name	OrderID
Customer1	1
Customer2	2
Customer3	3
Customer4	4
Customer5	5
Customer6	6
Customer7	7
Customer8	8
Customer9	9
Customer10	10
Customer11	11
Customer12	12
Customer13	13

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

Ans:

```
select r.ReviewID,r.Rating,r.Comment,p.Name,c.Name from reviews r

inner join products p
```

on r.productID=p.productID

inner join customers c

on r.CustomerID=c.customerID ;

ReviewID	Rating	Comment	Name	Name
1	5	Good product	Product1	Customer 1
2	4	Nice quality	Product2	Customer 2
3	3	Average	Product3	Customer 3
4	2	Not great	Product4	Customer 4
5	1	Bad product	Product5	Customer 5
6	5	Excellent	Product6	Customer 6
7	4	Worth it	Product7	Customer 7
8	3	Okayish	Product8	Customer 8
9	2	Needs improvement	Product9	Customer 9
10	1	Disappointed	Product10	Customer 10
11	5	Loved it	Product11	Customer 11
12	4	Good deal	Product12	Customer 12
13	3	Fine	Product13	Customer 13

6) Show products with their discounts (if any).

Ans:

select p.name,d.DiscountAmount from products p

left join discounts d

on p.productID=d.productID;

name	DiscountAmount
Product1	10
Product2	15
Product3	20
Product4	25
Product5	30
Product6	5
Product7	12
Product8	18
Product9	22
Product10	8
Product11	11
Product12	13
Product13	14

7) Find all orders along with their shipping details (ship date & delivery date).

Ans:

select o.orderID,s.shipdate,s.deliverydate from orders o

left join shipping s

on o.orderID=s.orderID;

orderID	shipdate	deliverydate
1	2023-01-03	2023-01-06
2	2023-01-04	2023-01-07
3	2023-01-05	2023-01-08
4	2023-01-06	2023-01-09
5	2023-01-07	2023-01-10
6	2023-01-08	2023-01-11
7	2023-01-09	2023-01-12
8	2023-01-10	2023-01-13
9	2023-01-11	2023-01-14
10	2023-01-12	2023-01-15
11	2023-01-13	2023-01-16
12	2023-01-14	2023-01-17
13	2023-01-15	2023-01-18
14	2023-01-16	2023-01-19

8)Display customers who reviewed a product but never ordered it.

Ans:

```
select c.name,r.productID,r.Rating,r.Comment  from customers c
inner     join reviews r
on c.customerID=r.customerID
where c.customerId  not in (select o.orderID from orders o);
```

name	productID	Rating	Comment

9) List all products that appear in order details but do not have any discount.

Ans:

```
select p.name from products p
inner join orderdetails o
on p.productID=o.productID
where p.productID not in (select d.productID from discounts d );
```

name

10) Find customers who placed multiple orders.

Ans:

```
select c.name from customers c
inner join orders o
on c.customerID=o.customerID
 GROUP BY c.CustomerID, c.Name
HAVING COUNT(o.OrderID) > 1;
```

name

11)Show the products with their stock quantity and total ordered quantity.

Ans:

```
select p.Name,p.stockQuantity,sum(o.Quantity) from products p
inner join orderdetails o
on p.ProductID=o.ProductID
group by p.productID,p.Name,p.stockQuantity;
```

Name	stockQuantity	sum(o.Quantity)
Product1	50	2
Product2	40	1
Product3	30	4
Product4	20	3
Product5	10	2
Product6	60	5
Product7	70	1
Product8	80	2
Product9	90	3
Product10	100	4
Product11	55	2
Product12	45	3
Product13	35	5
Product14	25	2

12) Find all orders where the shipping delivery date is later than 7 days after the order date.

Ans:

```
select o.orderID from orders o
inner join shipping s
on o.OrderID=s.OrderID
where s.DeliveryDate >o.OrderDate + INTERVAL 7 DAY;
```

orderID

13) Show all reviews with customer names and product categories.

Ans:

```
select r.ReviewID,r.Rating,c.name from reviews r
inner join customers  c
on r.CustomerID=c.CustomerID
inner join products p
on r.ProductID=p.ProductID
inner join  categories ca
on p.CategoryID=ca.CategoryID;
```

ReviewID	Rating	name
1	5	Customer1
2	4	Customer2
3	3	Customer3
4	2	Customer4
5	1	Customer5
6	5	Customer6
7	4	Customer7
8	3	Customer8
9	2	Customer9
10	1	Customer10
11	5	Customer11
12	4	Customer12
13	3	Customer13
14	2	Customer14

14) Find the total number of orders placed by each customer.

Ans:

```
select c.name,c.CustomerID,count(o.CustomerID) from customers c
left join orders o
on c.CustomerID=o.CustomerID
group by c.CustomerID,c.name;
```

name	CustomerID	count(o.CustomerID)
Customer1	1	1
Customer2	2	1
Customer3	3	1
Customer4	4	1
Customer5	5	1
Customer6	6	1
Customer7	7	1
Customer8	8	1
Customer9	9	1
Customer10	10	1
Customer11	11	1
Customer12	12	1
Customer13	13	1
Customer14	14	1

15)Display customers who ordered products from more than 1 category.

Ans:

```
select c.name,c.CustomerID from customers c
inner join orders o
on c.CustomerID=o.CustomerID
inner join orderdetails R
on o.OrderID=r.OrderID
inner join products p
on r.ProductID=p.ProductID
inner join categories ca
on p.CategoryID=ca.CategoryID
group by c.CustomerID,c.name
having count(DISTINCT ca.CategoryID)>1;
```

name	CustomerID

16) Find orders that contain discounted products.

Ans:

```
select o.OrderID,p.name,d.DiscountAmount from orderdetails o
inner join products p
on o.ProductID=p.ProductID
```

inner join discounts d

on p.ProductID=d.ProductID;

OrderID	name	DiscountAmount
1	Product1	10
2	Product2	15
3	Product3	20
4	Product4	25
5	Product5	30
6	Product6	5
7	Product7	12
8	Product8	18
9	Product9	22
10	Product10	8
11	Product11	11
12	Product12	13
13	Product13	14
14	Product14	16

17)List the customers and the products they ordered, including quantity.

Ans:

select c.name,p.name,d.Quantity from customers c

inner join orders o

on c.CustomerID=o.CustomerID

inner join orderdetails d

on o.OrderID=d.OrderID

inner join products p

on d.ProductID=p.ProductID;

name	name	Quantity
Customer1	Product1	2
Customer2	Product2	1
Customer3	Product3	4
Customer4	Product4	3
Customer5	Product5	2
Customer6	Product6	5
Customer7	Product7	1
Customer8	Product8	2
Customer9	Product9	3
Customer10	Product10	4
Customer11	Product11	2
Customer12	Product12	3
Customer13	Product13	5
Customer14	Product14	2

18) Show the highest rated product (with average rating) and its category.

Ans:

```
SELECT p.Name AS ProductName,c.CategoryName,AVG(r.Rating) AS AvgRating FROM
products p

INNER JOIN categories c

ON p.CategoryID = c.CategoryID

INNER JOIN reviews r

ON p.ProductID = r.ProductID

GROUP BY p.ProductID, p.Name, c.CategoryName

ORDER BY AvgRating DESC

LIMIT 1;
```

	ProductName	CategoryName	AvgRating
▶	Product1	Category1	5.0000

19) Find customers who placed an order but did not leave any review.

Ans:

```
select c.name from customers c

left join orders o

on c.customerID = o.customerID

left join reviews r

on o.CustomerID = r.CustomerID

where r.customerID is null;
```

	name

20) List all products never ordered by any customer.

Ans:

```
select p.productID,p.name from products p

left join orderdetails o

on p.ProductID = o.ProductID

where o.ProductID is null;
```

	productID	name

21)Find the most expensive product in each category.

Ans:

```
select p.name,p.price from products p
where  price = (select max(p2.price) from products p2 where p.CategoryID=p2.CategoryID);
```

	name	price
▶	Product1	100
	Product2	200
	Product3	300
	Product4	400
	Product5	500
	Product6	150
	Product7	250
	Product8	350
	Product9	450
	Product10	550
	Product11	120
	Product12	220
	Product13	320
	Product14	420

22) Display customers who ordered the cheapest product.

Ans:

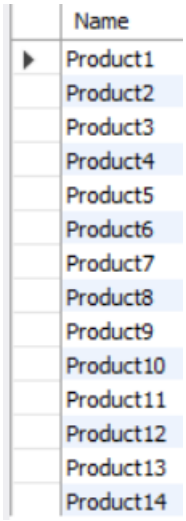
```
select c.name from customers c
where c.customerID in(
 select o.customerID from orders o
where o.orderID in (
select d.orderID from orderdetails d
where d.productID in (
select p.productID from products p
where price=(select min(p.price) from products p))));
```

	name
▶	Customer 1

23)Find the product(s) with the maximum discount.

Ans:

```
select p.Name from products p
where p.productID in (
select d.productID from discounts d
where d.discountAmount =(
select max(d.DiscountAmount) from discounts));
```

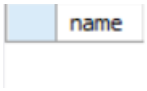


Name
Product1
Product2
Product3
Product4
Product5
Product6
Product7
Product8
Product9
Product10
Product11
Product12
Product13
Product14

24)List customers who have not placed any order.

Ans:

```
select c.name from customers c
where c.customerID  not in (
select o.customerID from orders o
);
```



name

25)Show all products whose price is higher than the average product price.

Ans:

```
select name from products
where price  > (select avg(price)from products);
```

name
Product4
Product5
Product8
Product9
Product10
Product14
Product15
Product18
Product19
Product20
Product24
Product25
Product28
Product29

26)Find customers who placed more than 3 orders.

Ans:

```
select c.name from customers c
where 3 < (
select count(*) from orders o
where c.customerID=o.customerID
);
```

name

27)Display products that received a rating higher than the average rating of all products.

Ans:

```
select p.name from products p
where p.productID in (
select r.productID from reviews r
where r.Rating >(select avg(r2.rating) from reviews r2 )
);
```

	name
▶	Product1
	Product2
	Product6
	Product7
	Product11
	Product12
	Product16
	Product17
	Product21
	Product22
	Product26
	Product27
	Product31
	Product32

28)Find customers who ordered all products from Category 1.

Ans:

```
select c.name from customers c
where CustomerID in (
select o.CustomerID from orders o
where o.orderID in (
select d.OrderID from orderdetails d
where d.ProductID in (
select p.ProductID from products p
where p.CategoryID =1)));
```

	name
▶	Customer1

29) Show products whose stock quantity is less than the total quantity ordered.

Ans:

```
select p.Name from products p
where stockQuantity < (select sum(o.Quantity) from orderdetails o
 where p.productID = o.ProductID);
```

	Name

30)List customers who ordered at least one product but never received a discount.

Ans:

```
select c.name from  customers c
where CustomerID in (
select o.customerID from orders o
where o.orderID in (
select d.orderID from orderdetails d
where d.productID not in (
select ProductID from discounts i
where DiscountAmount is not Null)));
```

	name

31)Find orders that contain more than 3 products.

Ans:

```
select o.OrderID from orders o
where o.OrderID in (
select d.OrderID from orderdetails d
group by d.OrderID
having count(d.ProductID) > 3);
```

	OrderID
*	NULL

32) Show customers who have placed an order but their shipping has not been done yet.

Ans:

```
select c.Name from customers c
where c.customerID in (
select o.customerID from orders o
where o.orderID  not in (
select s.orderID from shipping s where s.ShipDate is not NULL) );
```

Name

33)Find the first product with the lowest average rating.

Ans:

```
SELECT p.Name
FROM products p
WHERE p.ProductID = (
select r.ProductID from reviews r
group by r.productID
order by avg(r.rating) asc
limit 1
);
```

Name
Product5

34)Display customers who gave the maximum rating to any product.

Ans:

```
select c.name from customers c
where c.CustomerID in (
select r.CustomerID from reviews r
where r.Rating =(
select max(r2.Rating) from reviews r2));
```

name
Customer1
Customer6
Customer11
Customer16
Customer21
Customer26
Customer31
Customer36
Customer41
Customer46
Customer51
Customer56
Customer61
Customer66

35) Find all orders where the order total (price × quantity − discount) exceeds 10,000.

Ans:

```
select o.orderID from Orders o
where o.orderID in (
select s.orderID from orderdetails s
inner join  products p
on s.ProductID=p.ProductID
left join discounts d
on p.ProductID=d.ProductID
group by s.OrderID
having sum((p.Price * s.Quantity)-d.DiscountAmount) >10000
);
```

orderID

36)Find the product with the highest price.

Ans:

```
select p.name from products p
where p.price =(select max(p2.price) from products p2);
```

name
Product70

37)List customers who have never placed an order.

Ans:

```
select c.Name from customers c
where c.CustomerID  in (select o.customerID from orders o  where  o.orderID is null );
```

Name

38) Find products that are cheaper than the average product price.

```
select p.name from products p
```

where price < (select avg(p2.price) from products p2);

name
Product1
Product2
Product3
Product6
Product7
Product11
Product12
Product13
Product16
Product17
Product21
Product22
Product23
Product26

39)List products that have never been ordered.

Ans:

select p.Name from products p

where p.ProductID not in (select o.ProductID from orderdetails o);

Name

40) Find the orders placed on the latest order date.

Ans:

select o.OrderID from orders o where o.orderDate =(

select MAX(o2.OrderDate) from orders o2);

OrderID
80
NULL

41) String To Date

Ans:

select str_to_date('22-JULY-2025','%d-%M-%Y') as C;

C
2025-07-22

42)Find the lowest stock product

Ans:

```
SELECT ProductID, Name, StockQuantity
FROM Products
ORDER BY StockQuantity ASC
LIMIT 1;
```

ProductID	Name	StockQuantity
5	Product5	10
NULL	NULL	NULL

43)Find the top 3 selling products

Ans:

```
SELECT ProductID, SUM(Quantity) AS TotalSold
FROM OrderDetails
GROUP BY ProductID
ORDER BY TotalSold DESC
LIMIT 3;
```

ProductID	TotalSold
19	5
6	5
80	5

44) Print current date and order date

Ans:

```
select current_date(),o.OrderDate from orders o ;
```

	current_date()	OrderDate
▶	2025-08-28	2023-01-01
	2025-08-28	2023-01-02
	2025-08-28	2023-01-03
	2025-08-28	2023-01-04
	2025-08-28	2023-01-05
	2025-08-28	2023-01-06
	2025-08-28	2023-01-07
	2025-08-28	2023-01-08
	2025-08-28	2023-01-09
	2025-08-28	2023-01-10
	2025-08-28	2023-01-11
	2025-08-28	2023-01-12
	2025-08-28	2023-01-13
	2025-08-28	2023-01-14

45)Find the minimum stock quantity among products.

Ans:

```
select p.productID,p.StockQuantity from products p
group by p.productID
order by p.StockQuantity asc
limit 1
;
```

	productID	StockQuantity
▶	5	10

46) Display the total sales amount (Price × Quantity) from OrderDetails.

Ans:

```
select sum(p.price*o.Quantity) as totalsales from orderDetails o
inner join products p
on o.ProductID=p.ProductID;
```

	totalsales
▶	79630

47)Find the total number of products

Ans:

```
SELECT COUNT(*) AS TotalProducts
```

FROM Products;

TotalProducts
80

48)Count how many products have price greater than 500.

Ans:

```
select ProductID,Price from products
where price >500;
```

ProductID	Price
10	550
15	520
20	580
25	510
30	560
35	530
40	570
45	515
50	565
55	535
60	575
65	545
70	585
75	525

49) Show the earliest order date from Orders table.

Ans:

```
select max(orderdate) from orders;
```

max(orderdate)
2023-03-21

50) Show top 5 most expensive products.

Ans:

```
select productID,price from products
 order by price desc
 limit 5;
```

	productID	price
▶	70	585
	20	580
	60	575
	40	570
	50	565