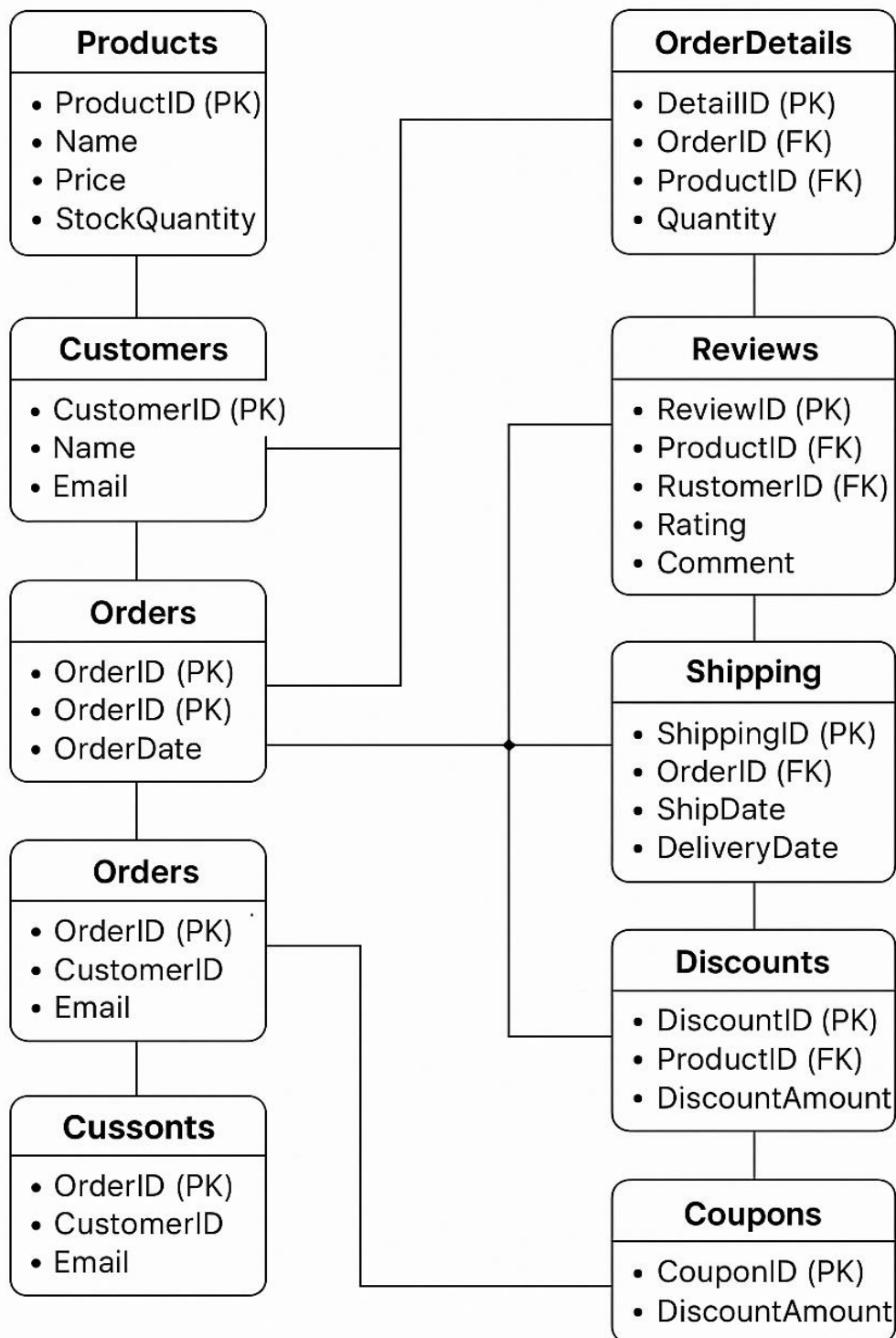


RIDDHI AGRAWAL

MYSQL

ECOMMERCE MANAGEMENT SYSTEM

E-commerce DB



Database Name: Riddhi

CREATE TABLE Categories (CategoryID INT auto_increment PRIMARY KEY, CategoryName VARCHAR(100) NOT NULL);	CREATE TABLE Products (ProductID INT PRIMARY KEY AUTO_INCREMENT, Name VARCHAR(100) NOT NULL, Price DECIMAL(10, 2) NOT NULL, StockQuantity INT NOT NULL, CategoryID INT, FOREIGN KEY (CategoryID) REFERENCES Categories(CategoryID));
CREATE TABLE Customers (CustomerID INT PRIMARY KEY AUTO_INCREMENT, Name VARCHAR(255) NOT NULL, Email VARCHAR(255) UNIQUE NOT NULL);	CREATE TABLE Shipping (ShippingID INT PRIMARY KEY AUTO_INCREMENT, OrderID INT, ShipDate DATE, DeliveryDate DATE, FOREIGN KEY (OrderID) REFERENCES Orders(OrderID));
CREATE TABLE Orders (OrderID INT PRIMARY KEY AUTO_INCREMENT, CustomerID INT, OrderDate DATE NOT NULL, FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID));	CREATE TABLE Discounts (DiscountID INT PRIMARY KEY AUTO_INCREMENT, ProductID INT, DiscountAmount DECIMAL(10, 2), FOREIGN KEY (ProductID) REFERENCES Products(ProductID));
CREATE TABLE OrderDetails (DetailID INT PRIMARY KEY AUTO_INCREMENT, OrderID INT, ProductID INT, Quantity INT NOT NULL, FOREIGN KEY (OrderID) REFERENCES Orders(OrderID), FOREIGN KEY (ProductID) REFERENCES Products(ProductID));	CREATE TABLE Reviews (ReviewID INT PRIMARY KEY AUTO_INCREMENT, ProductID INT, CustomerID INT, Rating INT CHECK (Rating >= 1 AND Rating <= 5), Comment TEXT, FOREIGN KEY (ProductID) REFERENCES Products(ProductID), FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID));
CREATE TABLE Coupons (CouponID INT PRIMARY KEY AUTO_INCREMENT, DiscountAmount DECIMAL(10, 2));	

Requirement:

1. Perform analytics and show at-least 50 queries
2. with those 50 queries (80% of the queries should have joins, subqueries)
3. Insert atleast 70-80 records minimum and maximum of 100 records
4. insert, update ,delete will not be considered as a part of analytics.

- **JOINS (INNER, LEFT, RIGHT, FULL)**

1. List all products along with their category names.

```
SELECT *  
FROM Products  
LEFT JOIN Categories  
ON Products.CategoryID = Categories.CategoryID;
```

	ProductID	Name	Price	StockQuantity	CategoryID	CategoryID	CategoryName
	7	Men's Blazer - Navy	89.99	50	1	1	Men's Wear
	8	Men's Sports Jacket	75.00	60	1	1	Men's Wear
	9	Men's Winter Coat	120.00	40	1	1	Men's Wear
	10	Men's Swim Trunks	19.99	70	1	1	Men's Wear
	11	Women's Floral Dress	65.00	130	2	2	Women's Wear
	12	Women's High-Waist Jeans	54.99	110	2	2	Women's Wear
	13	Women's Summer Skirt	35.00	180	2	2	Women's Wear

2. Show each customer's order count

```
SELECT Customers.CustomerID, Customers.Name,  
COUNT(Orders.OrderID) AS OrderCount  
FROM Customers  
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID  
GROUP BY Customers.CustomerID, Customers.Name;
```

	CustomerID	Name	OrderCount
▶	771	Alice Johnson	1
	772	Bob Smith	1
	773	Charlie Brown	1
	774	Diana Miller	1
	775	Edward Davis	1
	776	Fiona Wilson	1
	777	George Taylor	1

3. List product names and their discount amounts.

```
select products.name, products.productid,  
discounts.DiscountAmount  
from products right join discounts  
on products.productid= discounts.productid;
```

	name	productid	DiscountAmount
▶	Men's Casual Shirt - Blue	1	49.57
	Men's Jeans - Slim Fit	2	25.32
	Men's Formal Trousers	3	27.88
	Men's Polo T-Shirt - Green	4	13.43
	Men's Hoodie - Grey	5	33.51
	Men's Sweatpants - Black	6	27.26
	Men's Blazer - Navy	7	35.77

Result Grid | Filter

	Tables_in_riddhi
▶	categories
	coupons
	customers
	discounts
	orderdetails
	orders
	products
	reviews
	shipping

4. Show order details with product names and prices.

```
SELECT OrderDetails.DetailID, OrderDetails.OrderID, OrderDetails.ProductID,
Products.Name, Products.Price
FROM OrderDetails
JOIN Products
ON OrderDetails.ProductID = Products.ProductID;
```

	DetailID	OrderID	ProductID	Name	Price
▶	362	278	1	Men's Casual Shirt - Blue	29.99
	551	402	2	Men's Jeans - Slim Fit	49.99
	773	237	2	Men's Jeans - Slim Fit	49.99
	919	460	2	Men's Jeans - Slim Fit	49.99
	109	266	3	Men's Formal Trousers	59.99
	485	110	3	Men's Formal Trousers	59.99
	757	274	3	Men's Formal Trousers	59.99

5. Find shipping info with order and customer names.

```
SELECT Shipping.ShippingID, Shipping.OrderID, Shipping.ShipDate, Shipping.DeliveryDate,
Customers.CustomerID, Customers.Name AS CustomerName
FROM Shipping
JOIN Orders ON Shipping.OrderID = Orders.OrderID
JOIN Customers ON Orders.CustomerID = Customers.CustomerID;
```

	ShippingID	OrderID	ShipDate	DeliveryDate	CustomerID	name
▶	1	52	2025-07-02	2025-07-07	771	Alice Johnson
	2	53	2025-07-04	2025-07-07	772	Bob Smith
	3	54	2025-07-03	2025-07-09	773	Charlie Brown
	4	55	2025-07-01	2025-07-06	774	Diana Miller
	5	56	2025-07-02	2025-07-12	775	Edward Davis

6. Display all customers and any reviews they've written.

```
select customers.CustomerID, customers.Name, customers.email,
reviews.rating, reviews.Comment
from customers join reviews
on customers.customerID = reviews.customerID;
```

	CustomerID	Name	email	rating	Comment
▶	1258	Hazel Delgado	hazel.delgado@example.com	5	Great product 61
	1102	Ximena Sanchez	ximena.sanchez_4@gmail.com	3	Great product 19
	1021	Tina Roberts	tina.roberts@gmail.com	4	Great product 88
	842	Tiffany Sanders	tiffany.sanders@gmail.com	4	Great product 82
	855	Helen Garcia	helen.garcia@gmail.com	3	Great product 90

7. List all products with their category and discount (if any).

```
Select products.ProductID, products.Name, products.Price, Products.CategoryID
, categories.CategoryName, discounts.DiscountAmount
from products
join categories on products.categoryID = categories.categoryID
join discounts on Products.productID = discounts.ProductID;
```

	ProductID	Name	Price	CategoryID	CategoryName	DiscountAmount
▶	1	Men's Casual Shirt - Blue	29.99	1	Men's Wear	49.57
	2	Men's Jeans - Slim Fit	49.99	1	Men's Wear	25.32
	3	Men's Formal Trousers	59.99	1	Men's Wear	27.88
	4	Men's Polo T-Shirt - Green	24.50	1	Men's Wear	13.43
	5	Men's Hoodie - Grey	39.99	1	Men's Wear	33.51
	6	Men's Sweatpants - Black	34.99	1	Men's Wear	27.26
	7	Men's Blazer - Navy	89.99	1	Men's Wear	35.77

8. Find the top 5 customers who spent the most in total.

```
select customers.customerID, customers.Name,
SUM(Products.Price * OrderDetails.Quantity) AS TotalSpent
from customers
JOIN Orders ON Customers.CustomerID = Orders.CustomerID
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID
JOIN Products ON OrderDetails.ProductID = Products.ProductID
GROUP BY Customers.CustomerID
ORDER BY TotalSpent DESC
LIMIT 5;
```

	CustomerID	Name	TotalSpent
▶	781	Kevin Clark	13056.91
	1196	Wilma Guerrero	12851.00
	861	Nora Rivera	11815.95
	1175	Bob Morales	11013.00
	880	Gavin Adams	10935.00

9. Display customers who haven't placed any orders.

```
Select customers.customerID, customers.Name, customers.Email
FROM Customers
LEFT JOIN Orders ON Customers.CustomerID = Orders.CustomerID
WHERE Orders.OrderID IS NULL;
```

	CustomerID	Name	Email

10. Show each customer's name, their order ID, and the product names they ordered.

```
select customers.customerID, orders.orderID, products.name from customers
join orders on customers.customerID = orders.customerID
JOIN orderDetails on orders.OrderID = orderDetails.orderID
JOIN products on orderDetails.ProductID= products.productID;
```

	customerID	orderID	name
	894	175	Women's Denim Jacket
	929	210	Women's Denim Jacket
	891	172	Women's Denim Jacket
	1222	503	Kids' T-Shirt - Dino Print
	977	258	Kids' Jeans - Adjustable ...
	832	113	Kids' Jeans - Adjustable ...
	834	115	Kids' Jeans - Adjustable ...

- SUBQUERIES**

11. Show customers who have never written a review.

```
SELECT CustomerID, Name, Email
FROM Customers
WHERE CustomerID NOT IN (
SELECT CustomerID
FROM Review
);
```

	CustomerID	Name	Email
▶	771	Alice Johnson	alice.johnson@gmail.com
	772	Bob Smith	bob.smith@gmail.com
	773	Charlie Brown	charlie.brown@gmail.com
	774	Diana Miller	diana.miller@gmail.com
	775	Edward Davis	edward.davis@gmail.com
	776	Fiona Wilson	fiona.wilson@gmail.com
	777	George Taylor	george.taylor@gmail.com

12. List products that have never been ordered.

```
SELECT ProductID, Name, Price
FROM products
WHERE productID NOT IN (
SELECT ProductID
FROM orderdetails
);
```

	ProductID	Name	Price
▶	77	Samsung Galaxy Watch 6	299.00
	114	Women's Puffer Jacket	85.00
	176	Lip Balm - SPF	5.00
	179	Women's Pleated Skirt	38.00
	246	Webcam Full HD	35.00
•	NULL	NULL	NULL

13. Find the most expensive product in all.

```
SELECT CategoryID, Name AS ProductName, Price
FROM Products
WHERE Price = (
SELECT MAX(Price)
FROM Products
);
```

	CategoryID	ProductName	Price
▶	4	Gaming Laptop - High End	2499.00

14. List all products with price greater than the average price of all products.

```
Select name,price from products where price >= (
select AVG(price)
from products
);
```

	name	price
▶	Dell XPS 15 Laptop	1899.99
	MacBook Air M2	1199.00
	HP Spectre x360	1499.00
	Lenovo ThinkPad X1 Carbon	1699.00
	Acer Aspire 5	699.00
	Asus ROG Zephyrus G14	1599.00
	Microsoft Surface Laptop 5	1299.00

15. Show products that have never been ordered.

```
select name, productID from products
where ProductID NOT in (
select productID from orderDetails
);
```

	name	productID
▶	Samsung Galaxy Watch 6	77
	Women's Puffer Jacket	114
	Lip Balm - SPF	176
	Women's Pleated Skirt	179
	Webcam Full HD	246

16. Show customers who have only written reviews with 5-star ratings.

```
SELECT Name, Email FROM Customers
WHERE CustomerID IN (
SELECT CustomerID
FROM Reviews
WHERE Rating = 5
);
```

	Name	Email
▶	Hazel Delgado	hazel.delgado@example.com
	Xylia Sanchez	xylia.sanchez_3@gmail.com
	Daniel Cooper	daniel.cooper@gmail.com
	Sam Baker Jr	sam.baker_jr@gmail.com
	Xenia Padilla	xenia.padilla@example.com
	Ethan Green	ethan.green@gmail.com
	Ursula Nelson	ursula.nelson@gmail.com

17. Find products with a price higher than the average price.

```
select price, name from products where (
select AVG(price)
from products
);
```

	price	name
▶	29.99	Men's Casual Shirt - Blue
	49.99	Men's Jeans - Slim Fit
	59.99	Men's Formal Trousers
	24.50	Men's Polo T-Shirt - Green
	39.99	Men's Hoodie - Grey
	34.99	Men's Sweatpants - Black
	89.99	Men's Blazer - Navy

18. Find categories that have more than 5 products.

```
SELECT CategoryName FROM Categories
WHERE CategoryID IN (
SELECT CategoryID FROM Products
GROUP BY CategoryID
HAVING COUNT(*) > 5
);
```

	CategoryName
▶	Men's Wear
	Women's Wear
	Kids' Wear
	Laptops
	Phones
	Jewellery
	Footwear

19. Show customers who have placed more than 3 orders.

```
select Name, Email from customers
where customerID IN (
select customerID
from Orders GROUP BY CustomerID
HAVING COUNT(OrderBy) > 3
);
```

	Name	Email
▶	Hazel Delgado	hazel.delgado@example.com
	Xylia Sanchez	xylia.sanchez_3@gmail.com
	Daniel Cooper	daniel.cooper@gmail.com
	Sam Baker Jr	sam.baker_jr@gmail.com
	Xenia Padilla	xenia.padilla@example.com

20. List the names of customers who gave a 5-star review.

```
Select name from customers
where customerID IN (
select customerID FROM Reviews
WHERE Rating = 5
);
```

	Name
▶	Hazel Delgado
	Xylia Sanchez
	Daniel Cooper
	Sam Baker Jr
	Xenia Padilla

• DATE FUNCTIONS

21. Find all orders placed in the last 300 days.

```
select OrderDate
from orders
WHERE datediff(curdate(),OrderDate) <=300;
```

	OrderDate
▶	2026-11-12
	2026-11-11
	2026-11-10
	2026-11-09
	2026-11-08
	2026-11-07
	2026-11-06

22. List products ordered in the July 2026.

```
SELECT OrderDate FROM Orders
WHERE monthname(OrderDate) = 'July'
&& year(OrderDate) = 2026;
```

	OrderDate
▶	2026-07-31
	2026-07-30
	2026-07-29
	2026-07-28
	2026-07-27
	2026-07-26
	2026-07-25

23. Show the delivery time (in days) for each order.

```
SELECT Orders.orderdate, shipping.DeliveryDate,
DATEDIFF(Shipping.DeliveryDate, Orders.OrderDate)
AS Delivery_Time_Days
FROM Orders
JOIN Shipping ON Orders.OrderID = Shipping.OrderID;
```

	orderdate	DeliveryDate	Delivery_Time_Days
▶	2026-11-12	2025-07-07	-493
	2026-11-11	2025-07-07	-492
	2026-11-10	2025-07-09	-489
	2026-11-09	2025-07-06	-491
	2026-11-08	2025-07-12	-484
	2026-11-07	2025-07-13	-482
	2026-11-06	2025-07-08	-486

24. Count orders per month.

```
select month(OrderDate) AS MonthNumber,
COUNT(*) AS OrderCount
FROM Orders
GROUP BY MONTH(OrderDate)
ORDER BY MonthNumber ASC;
```

	MonthNumber	OrderCount
▶	1	31
	2	28
	3	31
	4	30
	5	31
	6	30
	7	62

25. Find how many orders were placed on weekends.

```
select case
when dayname(OrderDate) in (1,7) then 'Weekend'
else 'Weekday'
end as Dayy,
count(*) as Order_Count
from orders
group by Dayy;
```

	Dayy	Order_Count
▶	Weekday	428
	Weekend	72

26. Show orders that took more than 5 days to deliver.

```
select Orders.orderDate, shipping.DeliveryDate,
datediff(Orders.orderDate,shipping.DeliveryDate) as Date_450
from orders
Join shipping on orders.OrderID= shipping.OrderID
where datediff(Orders.orderDate,shipping.DeliveryDate) >=450;
```

	orderDate	DeliveryDate	Date_450
▶	2026-11-12	2025-07-07	493
	2026-11-11	2025-07-07	492
	2026-11-10	2025-07-09	489
	2026-11-09	2025-07-06	491
	2026-11-08	2025-07-12	484
	2026-11-07	2025-07-13	482
	2026-11-06	2025-07-08	486

27. Find customers who placed orders only in the 2nd quarter.

```
select customers.name, orders.OrderDate,
quarter(orders.orderDate)
as quarter_number from customers
join orders on customers.CustomerID = orders.CustomerID
where quarter(orders.orderDate)= 2 ;
```

	name	OrderDate	quarter_number
▶	Harper Wright	2026-06-30	2
	Isaac Turner	2026-06-29	2
	Jasmine White	2026-06-28	2
	Kai Adams	2026-06-27	2
	Lily Nelson	2026-06-26	2
	Milo Carter	2026-06-25	2
	Nala Roberts	2026-06-24	2

28. Find total count per Quarter of orders.

```
select quarter(orderDate) AS Quarter_Number,
count(*) AS Total_Orders
from orders
group by Quarter_Number
order by Quarter_Number;
```

	Quarter_Number	Total_Orders
▶	1	90
	2	91
	3	184
	4	135

29. Show Order per week.

```
select dayofweek(OrderDate) as Day_of_week ,
DAYNAME(OrderDate) as MonthName,
count(*) as orders
from orders
group by Day_of_week, MonthName
order by Day_of_week ASC;
```

	Day_of_week	MonthName	orderss
▶	1	Sunday	71
	2	Monday	71
	3	Tuesday	72
	4	Wednesday	72
	5	Thursday	72
	6	Friday	71
	7	Saturday	71

28. Show total orders per week for the last 6 months.

```
Select WEEK(OrderDate) AS WeekNumber,
count(*) AS TotalOrders
FROM Orders
WHERE OrderDate >= curdate() – interval 6 month
GROUP BY WeekNumber
ORDER BY WeekNumber;
```

	WeekNumber	TotalOrders
▶	0	3
	1	7
	2	7
	3	7
	4	7
	5	7
	6	7

29. Show all orders placed in the current month.

```
SELECT *
FROM Orders
WHERE MONTH(OrderDate) = MONTH(CURDATE())
AND YEAR(OrderDate) = YEAR(CURDATE());
```

	OrderID	CustomerID	OrderDate
▶	521	1240	2025-07-31
	522	1241	2025-07-30
	523	1242	2025-07-29
	524	1243	2025-07-28
	525	1244	2025-07-27
	526	1245	2025-07-26
	527	1246	2025-07-25

30. Show all orders placed yesterday.

```
SELECT *
FROM Orders
WHERE OrderDate = CURDATE() - INTERVAL 1 DAY;
```

	OrderID	CustomerID	OrderDate
▶	545	1264	2025-07-07
*	HULL	HULL	HULL

- **AGGREGATE FUNCTIONS + GROUP BY + HAVING**

31. Count how many products are in each category.

```
select categories.CategoryName,
count(products.ProductID) as Total_Products_Sold
from categories
join products on categories.CategoryID = products.CategoryID
group by categories.CategoryName;
```

	CategoryName	Total_Products_Sold
▶	Men's Wear	26
	Women's Wear	27
	Kids' Wear	27
	Laptops	27
	Phones	27
	Jewellery	27
	Footwear	28

32. Total orders placed by each customer

```
select customerID, count(OrderID) as TotalOrders
from orders
group by CustomerID;
```

	CustomerID	TotalOrders
▶	771	1
	772	1
	773	1
	774	1
	775	1
	776	1
	777	1

33. Customers who placed more than 3 orders.

```
select customerID, count(OrderID) AS TotalOrders
from Orders
GROUP BY CustomerID
having COUNT(OrderID) > 3;
```

	CustomerID	TotalOrders
--	------------	-------------

34. Total revenue (price × quantity) per category.

```
SELECT Categories.CategoryName,
SUM(Products.Price * OrderDetails.Quantity) AS TotalRevenue
FROM Orders
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID
JOIN Products ON OrderDetails.ProductID = Products.ProductID
JOIN Categories ON Products.CategoryID = Categories.CategoryID
GROUP BY Categories.CategoryName;
```

	CategoryName	TotalRevenue
▶	Books	5334.49
	Phones	126435.00
	Footwear	19004.62
	Jewellery	20691.00
	Laptops	242016.83
	Men's Wear	10773.11
	Beauty Products	6729.11

35. Categories with total sales over ₹10,000

```
SELECT Categories.CategoryName,
SUM(Products.Price * OrderDetails.Quantity) AS TotalRevenue
FROM Orders
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID
JOIN Products ON OrderDetails.ProductID = Products.ProductID
JOIN Categories ON Products.CategoryID = Categories.CategoryID
GROUP BY Categories.CategoryName
HAVING TotalSales > 10000;
```

	CategoryName	TotalSales
▶	Men's Wear	10773.11
	Women's Wear	11581.59
	Laptops	242016.83
	Phones	126435.00
	Jewellery	20691.00
	Footwear	19004.62
	Watches	32585.00

36. Find the average order value per customer.

```
SELECT customers.Name,  
AVG(OrderDetails.Quantity * Products.Price) AS AvgOrderValue  
FROM Customers  
JOIN Orders ON Customers.CustomerID = Orders.CustomerID  
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID  
JOIN Products ON OrderDetails.ProductID = Products.ProductID  
GROUP BY Customers.Name;
```

	Name	AvgOrderValue
▶	Victor Baker	1055.813333
	Quinlan Campbell	78.245000
	Freya Baker	149.970000
	Frank Chavez	110.698000
	Jude White	682.991667
	Gabriel Price	360.730000
	Reese Wright	299.950000

37. Show total revenue generated by each product.

```
SELECT Products.Name,  
SUM(OrderDetails.Quantity * Products.Price) AS TotalRevenue  
FROM OrderDetails  
JOIN Products ON OrderDetails.ProductID = Products.ProductID  
GROUP BY Products.Name;
```

	Name	TotalRevenue
▶	Men's Casual Shirt - Blue	149.95
	Men's Jeans - Slim Fit	299.94
	Men's Formal Trousers	779.87
	Men's Polo T-Shirt - Green	343.00
	Men's Hoodie - Grey	159.96
	Men's Sweatpants - Black	839.76
	Men's Blazer - Navy	1439.84

38. List customers who placed more than 5 orders.

```
SELECT Customers.Name,  
COUNT(Orders.OrderID) AS TotalOrders  
FROM Customers  
JOIN Orders ON Customers.CustomerID = Orders.CustomerID  
GROUP BY Customers.CustomerID, Customers.Name  
HAVING COUNT(Orders.OrderID) > 5;
```

	Name	TotalOrders
--	------	-------------

39. Show products with an average rating above 4.0.

```
SELECT Products.Name, AVG(Reviews.Rating) AS AvgRating  
FROM Products  
JOIN Reviews ON Products.ProductID = Reviews.ProductID  
GROUP BY Products.ProductID, Products.Name  
HAVING AVG(Reviews.Rating) > 4;
```

	Name	AvgRating
▶	Men's Hoodie - Grey	4.5000
	Motorola Edge+	5.0000
	Smart Watch - Budget	5.0000
	Kids' Winter Jumpsuit	5.0000
	Handheld Vacuum Cleaner	5.0000
	Pendant - Birthstone	5.0000
	Budget Smartphone	5.0000

40. Count reviews given per customer.

```
SELECT Customers.Name,  
COUNT(Reviews.ReviewID) AS TotalReviews  
FROM Customers  
JOIN Reviews ON Customers.CustomerID = Reviews.CustomerID  
GROUP BY Customers.CustomerID, Customers.Name;
```

	Name	TotalReviews
▶	Hannah Moore	1
	Ursula Nelson	2
	Victor Carter	1
	Daniel Cooper	1
	Henry Martinez	1
	Jack Sanchez	1
	Felicia Kelly	1