SQL Assignment Courier Management System

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Task1:

Database Design Design a SQL schema for a Courier Management System with tables for Customers, Couriers, Orders, and Parcels. Define the relationships between these tables using appropriate foreign keys.

```
CREATE TABLE Users (
    UserID INT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255) UNIQUE,
    Password VARCHAR(255),
    ContactNumber VARCHAR(20),
    Address TEXT
);
CREATE TABLE CourierServices (
    ServiceID INT PRIMARY KEY,
    ServiceName VARCHAR(100),
    Cost DECIMAL(8, 2)
);
CREATE TABLE Employees (
    EmployeeID INT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255) UNIQUE,
    ContactNumber VARCHAR(20),
    Role VARCHAR(50),
    Salary DECIMAL(10, 2)
);
CREATE TABLE Locations (
    LocationID INT PRIMARY KEY,
    LocationName VARCHAR(100),
    Address TEXT
);
CREATE TABLE Couriers (
    CourierID INT PRIMARY KEY,
    SenderName VARCHAR(255),
    SenderAddress TEXT,
    ReceiverName VARCHAR(255),
    ReceiverAddress TEXT,
    Weight DECIMAL(5, 2),
    Status VARCHAR(50),
    TrackingNumber VARCHAR(20) UNIQUE,
    DeliveryDate DATE
       LocationID INT,
       EmployeeID INT,
       ServiceID INT,
       CONSTRAINT FK_Couriers_Location FOREIGN KEY (LocationID) REFERENCES Locations(LocationID),
       CONSTRAINT FK_Couriers_Employee FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID),
       CONSTRAINT FK_Couriers_Service FOREIGN KEY (ServiceID) REFERENCES CourierServices(ServiceID)
);
```

```
CREATE TABLE Payments (
   PaymentID INT PRIMARY KEY,
   CourierID INT,
   LocationID INT,
   Amount DECIMAL(10, 2),
   PaymentDate DATE,
       EmployeeID INT,
    FOREIGN KEY (CourierID) REFERENCES Couriers(CourierID),
    FOREIGN KEY (LocationID) REFERENCES Locations(LocationID),
       FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID),
);
CREATE TABLE Orders (
   OrderID INT PRIMARY KEY,
    CustomerID INT,
   OrderDate DATE.
    CONSTRAINT FK Orders Customers FOREIGN KEY (CustomerID) REFERENCES Users(UserID)
);
CREATE TABLE Parcels (
    ParcelID INT PRIMARY KEY,
    OrderID INT,
    CourierID INT,
    ServiceID INT,
    Weight DECIMAL(5, 2),
    Status VARCHAR(50),
    TrackingNumber VARCHAR(20) UNIQUE,
   DeliveryDate DATE,
       EmployeeID INT,
    CONSTRAINT FK_Parcels_Orders FOREIGN KEY (OrderID) REFERENCES Orders(OrderID),
    CONSTRAINT FK_Parcels_Couriers FOREIGN KEY (CourierID) REFERENCES Couriers(CourierID),
    CONSTRAINT FK_Parcels_Services FOREIGN KEY (ServiceID) REFERENCES CourierServices(ServiceID),
       CONSTRAINT FK_Parcels_Employee FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID)
);
Messages
   Commands completed successfully.
   Completion time: 2024-03-05T10:03:29.9539297+05:30
INSERT INTO Users (UserID, Name, Email, Password, ContactNumber, Address)
VALUES(1, 'Rajesh Kumar', 'rajesh.kumar@email.com', 'password123', '9876543210', '12 Gandhi Nagar,
Chennai'),
(2, 'Priya Sharma', 'priya.sharma@email.com', 'password456', '8765432109', '34 Kaveri Street,
Bangalore'),
(3, 'Amit Patel', 'amit.patel@email.com', 'password789', '7654321098', '56 Krishna Lane, Hyderabad'),
(4, 'Ananya Singh', 'ananya.singh@email.com', 'passwordabc', '6543210987', '78 Vindhya Nagar,
Coimbatore');
INSERT INTO CourierServices (ServiceID, ServiceName, Cost)
VALUES(1, 'Standard', 10.00),
(2, 'Express', 15.00);
INSERT INTO Employees (EmployeeID, Name, Email, ContactNumber, Role, Salary)
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VALUES(1, 'Manager1', 'manager1@email.com', '1112223333', 'Manager', 50000.00),
(2, 'DeliveryPerson1', 'delivery1@email.com', '4445556666', 'Delivery Person', 30000.00),
(3, 'DeliveryPerson2', 'delivery2@email.com', '5556667777', 'Delivery Person', 30000.00);
INSERT INTO Employees (EmployeeID, Name, Email, ContactNumber, Role, Salary)
VALUES(4, 'John cena', 'john.cena@email.com', '1234567890', 'Manager', 60000.00), (5, 'Authur Johnson', 'authur.johnson@email.com', '9876543210', 'Clerk', 45000.00);
INSERT INTO Locations (LocationID, LocationName, Address)
VALUES(1, 'Warehouse1', '789 Storage St, Chennai'),
(2, 'Warehouse2', '456 Logistics Ave, Bangalore'),
(3, 'Warehouse3', '123 Distribution Rd, Hyderabad');
INSERT INTO Couriers (CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight,
Status, TrackingNumber, DeliveryDate, LocationID,EmployeeID,ServiceID)
VALUES(1, 'Rajesh Kumar', '12 Gandhi Nagar, Chennai', 'Ananya Singh', '78 Vindhya Nagar, Coimbatore',
2.5, 'In Transit', 'TN123456', '2024-03-01',1,2,1), (2, 'Priya Sharma', '34 Kaveri Street, Bangalore', 'Amit Patel', '56 Krishna Lane, Hyderabad', 1.8,
'Delivered', 'TN789012', '2024-03-02',1,2,2),
(3, 'Amit Patel', '56 Krishna Lane, Hyderabad', 'Priya Sharma', '34 Kaveri Street, Bangalore', 3.0,
'In Transit', 'TN345678', '2024-03-03',2,3,2),
(4, 'Ananya Singh', '78 Vindhya Nagar, Coimbatore', 'Rajesh Kumar', '12 Gandhi Nagar, Chennai', 4.0,
'In Transit', 'TN345679', '2024-03-05',2,3,2);
INSERT INTO Payments (PaymentID, CourierID, LocationID, Amount, PaymentDate, EmployeeID)
VALUES(1, 1, 1, 10000.00, '2024-03-03',2),
(2, 2, 2, 1500.00, '2024-03-04',2),
(3, 3, 3, 1200.50, '2024-03-05',3);
INSERT INTO Orders (OrderID, CustomerID, OrderDate)
VALUES(1, 1, '2024-02-01'),
(2, 2, '2024-02-02'),
(3, 3, '2024-02-03');
INSERT INTO Parcels (ParcelID, OrderID, CourierID, ServiceID, Weight, Status, TrackingNumber,
DeliveryDate,EmployeeID)
VALUES(1, 1, 1, 1, 2.5, 'In Transit', 'TN123456', '2024-03-01',2),
(2, 2, 2, 1.8, 'Delivered', 'TN789012', '2024-03-02',2),
(3, 3, 3, 1, 3.0, 'In Transit', 'TN345678', '2024-03-03',3);
INSERT INTO Users (UserID, Name, Email, Password, ContactNumber, Address)
VALUES
(5, 'Sara Khan', 'sara.khan@email.com', 'passwordxyz', '5432109876', '90 Yamuna Road, Delhi'),
(6, 'Michael Johnson', 'michael.johnson@email.com', 'password123', '6547893210', '23 Park Street,
(7, 'Emma Wilson', 'emma.wilson@email.com', 'password456', '7896543210', '45 Lake Avenue, Kolkata'),
(8, 'David Lee', 'david.lee@email.com', 'password789', '9876543210', '67 Forest Lane, Pune'),
(9, 'Sophia Garcia', 'sophia.garcia@email.com', 'passwordabc', '8765432109', '89 Ocean View, Goa');
INSERT INTO Orders (OrderID, CustomerID, OrderDate)
VALUES
(4, 4, '2024-02-04'),
(5, 5, '2024-02-05'),
(6, 6, '2024-02-06'),
(7, 7, '2024-02-07'),
(8, 8, '2024-02-08'),
(9, 1, '2024-02-08');
INSERT INTO Couriers (CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight,
Status, TrackingNumber, DeliveryDate, LocationID, EmployeeID, ServiceID)
VALUES
```

```
(5, 'Sara Khan', '90 Yamuna Road, Delhi', 'David Lee', '67 Forest Lane, Pune', 2.0, 'In Transit',
'TN234567', '2024-03-04', 1, 2, 2),
(6, 'Michael Johnson', '23 Park Street, Mumbai', 'Emma Wilson', '45 Lake Avenue, Kolkata', 1.5,
'Delivered', 'TN345688', '2024-03-05', 2, 3, 1),
(7, 'Emma Wilson', '45 Lake Avenue, Kolkata', 'Michael Johnson', '23 Park Street, Mumbai', 3.5, 'In
Transit', 'TN456789', '2024-03-06', 3, 2, 2),
(8, 'David Lee', '67 Forest Lane, Pune', 'Sara Khan', '90 Yamuna Road, Delhi', 4.5, 'In Transit',
'TN567890', '2024-03-07', 3, 2, 1),
(9, 'Rajesh Kumar', '12 Gandhi Nagar, Chennai', 'Sara Khan', '90 Yamuna Road, Delhi', 2.8,
'Delivered', 'TN678901', '2024-03-08', 2, 3, 2);
INSERT INTO Payments (PaymentID, CourierID, LocationID, Amount, PaymentDate, EmployeeID)
VALUES
(4, 4, 1, 1500.00, '2024-03-06', 2), (5, 5, 2, 1000.00, '2024-03-07', 3),
(6, 6, 3, 25000.00, '2024-03-08', 2), (7, 7, 1, 2000.00, '2024-03-09', 3), (8, 8, 2, 1200.50, '2024-03-10', 2), (9, 9, 2, 1200.50, '2024-03-10', 2);
INSERT INTO Parcels (ParcelID, OrderID, CourierID, ServiceID, Weight, Status, TrackingNumber,
DeliveryDate, EmployeeID)
VALUES
(4, 4, 4, 1, 4.0, 'In Transit', 'TN456789', '2024-03-04', 2), (5, 5, 5, 2, 2.5, 'Delivered', 'TN567890', '2024-03-05', 3), (6, 6, 6, 1, 3.2, 'In Transit', 'TN678901', '2024-03-06', 2), (7, 7, 7, 2, 2.0, 'Delivered', 'TN789013', '2024-03-07', 2), (8, 8, 8, 1, 3.5, 'In Transit', 'TN89012', '2024-03-08', 2), (9, 9, 9, 1, 3.5, 'In Transit', 'TN89014', '2024-03-08', 2);
```

Task 2: Select, Where

1. List all customers

SELECT * FROM Users;

Populto pl

	UserID	Name	Email	Password	ContactNumber	Address
1	1	Rajesh Kumar	rajesh.kumar@email.com	password123	9876543210	12 Gandhi Nagar, Chennai
2	2	Priya Sharma	priya.shamna@email.com	password456	8765432109	34 Kaveri Street, Bangalore
3	3	Amit Patel	amit.patel@email.com	password789	7654321098	56 Krishna Lane, Hyderabad
4	4	Ananya Singh	ananya.singh@email.com	passwordabc	6543210987	78 Vindhya Nagar, Coimbatore
5	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi
6	6	Michael Johnson	michael.johnson@email.com	password123	6547893210	23 Park Street, Mumbai
7	7	Emma Wilson	emma.wilson@email.com	password456	7896543210	45 Lake Avenue, Kolkata
8	8	David Lee	david.lee@email.com	password 789	9876543210	67 Forest Lane, Pune
9	9	Sophia Garcia	sophia.garcia@email.com	passwordabc	8765432109	89 Ocean View, Goa

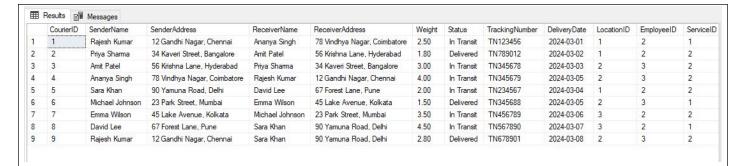
2. List all orders for a specific customer:

SELECT * FROM Orders WHERE CustomerID = 1;

 	Results		Messages	
	Orderl	ID	CustomerID	OrderDate
1	1		1	2024-03-01
2	9		1	2024-03-08

3. List all couriers:

SELECT * FROM Couriers;



4. List all packages for a specific order:

SELECT * FROM Orders WHERE OrderID = 2;

	Results	Message	es
	Orderl	D Custome	rID OrderDate
1	2	2	2024-02-04

5. List all deliveries for a specific courier:

SELECT * FROM Parcels WHERE CourierID = 1;

	Results	Message:	3							
	ParcelID	OrderID	CourierID	ServiceID	Weight	Status	Tracking Number	Delivery Date	EmployeeID	Γ
1	1	1	1	1	2.50	In Transit	TN123456	2024-03-01	2	

6. List all undelivered packages:

SELECT * FROM Parcels WHERE Status = 'In Transit'

	Results		Messages							
	Parcel	ID	OrderID	CourierID	ServiceID	Weight	Status	TrackingNumber	Delivery Date	EmployeeID
1	1		1	1	1	2.50	In Transit	TN123456	2024-03-01	2
2	3		3	3	1	3.00	In Transit	TN345678	2024-03-03	3
3	4		4	4	1	4.00	In Transit	TN456789	2024-03-04	2
4	6		6	6	1	3.20	In Transit	TN678901	2024-03-06	2
5	8		8	8	1	3.50	In Transit	TN89012	2024-03-08	2
6	9		9	9	1	3.50	In Transit	TN89014	2024-03-08	2

7. List all packages that are scheduled for delivery today:

SELECT * FROM Couriers WHERE DeliveryDate = CAST(GETDATE() AS DATE);

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
1	4	Sender4	SenderAddress4	Receiver4	ReceiverAddress4	4.00	In Transit	TN345679	2024-03-05	2	3	2
2	6	Sender6	SenderAddress6	Receiver6	ReceiverAddress6	1.50	Delivered	TN345688	2024-03-05	2	3	1

8. List all packages with a specific status:

SELECT * FROM Parcels WHERE Status = 'Delivered';

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	LocationID	EmployeeID	ServiceID
2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1	2	2
6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2	3	1
9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2

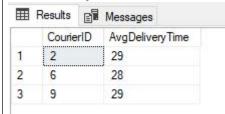
9. Calculate the total number of packages for each courier.

SELECT CourierID, COUNT(*) AS TotalPackages FROM Parcels GROUP BY CourierID;



10. Find the average delivery time for each courier

SELECT CourierID, AVG(DATEDIFF(DAY, o.OrderDate, c.DeliveryDate)) AS AvgDeliveryTime FROM Couriers c INNER JOIN Orders o ON c.CourierID=o.OrderID AND c.Status = 'Delivered' GROUP BY c.CourierID;



11. List all packages with a specific weight range:

SELECT * FROM Parcels WHERE Weight BETWEEN 1.0 AND 2.0;

	ParcelID	OrderID	CourierID	ServiceID	Weight	Status	TrackingNumber	DeliveryDate	EmployeeID
1	2	2	2	2	1.80	Delivered	TN789012	2024-03-02	2
2	7	7	7	2	2.00	Delivered	TN789013	2024-03-07	2

12. Retrieve employees whose names contain 'John'

SELECT * FROM Employees WHERE Name LIKE '%John%';

	Results 🗐 N	Messages				
	EmployeeID	Name	Email	Contact Number	Role	Salary
1	4	John cena	john.cena@email.com	1234567890	Manager	60000.00
2	5	Authur Johnson	authur.johnson@email.com	9876543210	Clerk	45000.00

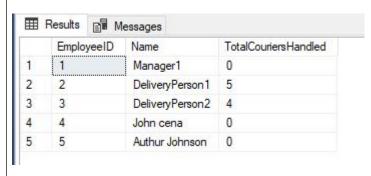
13. Retrieve all courier records with payments greater than \$50 SELECT * FROM Payments WHERE Amount > 50.00;

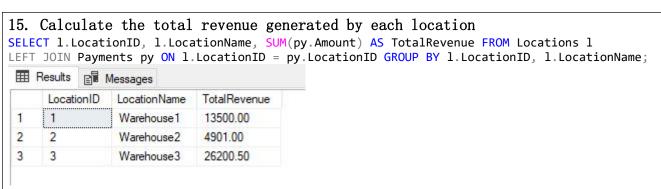
Results Messages PaymentID CourierID LocationID Payment Date Amount Employee ID 2 2 1500.00 2024-03-04 2 2 2 3 3 3 2024-03-05 3 3 1200.50 4 4 4 1 1500.00 2024-03-06 2 5 2 5 5 1000.00 2024-03-07 3 6 6 3 25000.00 2024-03-08 2 6 7 7 7 1 2000.00 2024-03-09 3 8 8 8 2 1200.50 2024-03-10 2 9 9 2 1200.50 2024-03-10 2

Task 3: GroupBy, Aggregate Functions, Having, Order By, where

14. Find the total number of couriers handled by each employee.

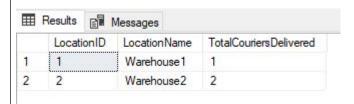
SELECT e.EmployeeID, e.Name, COUNT(p.CourierID) AS TotalCouriersHandled FROM Employees e
LEFT JOIN Couriers p ON e.EmployeeID = p.EmployeeID GROUP BY e.EmployeeID, e.Name;





16. Find the total number of couriers delivered to each location.

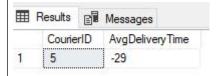
SELECT 1.LocationID, 1.LocationName, COUNT(p.CourierID) AS TotalCouriersDelivered FROM Locations 1 LEFT JOIN Couriers p ON 1.LocationID = p.LocationID WHERE p.Status = 'Delivered' GROUP BY 1.LocationID, 1.LocationName;



17. Find the courier with the highest average delivery time:

SELECT TOP 1 CourierID, AVG(DATEDIFF(DAY, p.DeliveryDate, o.OrderDate)) AS AvgDeliveryTime FROM Parcels p, Orders o

WHERE Status = 'Delivered' AND p.OrderID = o.OrderID GROUP BY CourierID ORDER BY AvgDeliveryTime DESC;



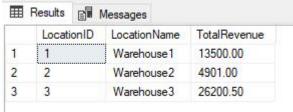
18. Find Locations with Total Payments Less Than a Certain Amount

SELECT LocationID, LocationName FROM Locations WHERE LocationID
IN (SELECT LocationID FROM Payments GROUP BY LocationID HAVING SUM(Amount) < 5000);</pre>



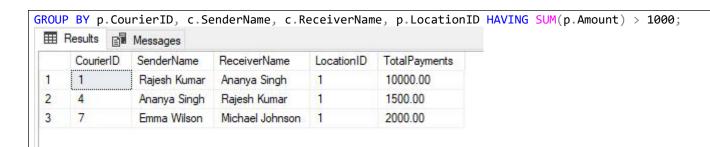
19. Calculate Total Payments per Location

SELECT LocationID, SUM(Amount) AS TotalPayments FROM Payments GROUP BY LocationID;



20. Retrieve couriers who have received payments totaling more than 1000 in a specific location (LocationID = X):

SELECT p.CourierID, c.SenderName, c.ReceiverName, p.LocationID, SUM(p.Amount) AS TotalPayments FROM Payments p JOIN Couriers c ON p.CourierID = c.CourierID WHERE p.LocationID = 1



21. Retrieve couriers who have received payments totaling more than \$1000 after a certain date (PaymentDate > 'YYYY-MM-DD'):

SELECT p.CourierID, c.SenderName, c.ReceiverName, SUM(p.Amount) AS TotalPayments
FROM Payments p JOIN Couriers c ON p.CourierID = c.CourierID WHERE p.PaymentDate > '2024-03-01'
GROUP BY p.CourierID, c.SenderName, c.ReceiverName HAVING SUM(p.Amount) > 1000;

	Results		Messages		
	Courie	rID	SenderName	ReceiverName	TotalPayments
1	1		Rajesh Kumar	Ananya Singh	10000.00
2	2		Priya Sharma	Amit Patel	1500.00
3	3		Amit Patel	Priya Sharma	1200.50
4	4		Ananya Singh	Rajesh Kumar	1500.00
5	6		Michael Johnson	Emma Wilson	25000.00
6	7		Emma Wilson	Michael Johnson	2000.00
7	8		David Lee	Sara Khan	1200.50
8	9		Rajesh Kumar	Sara Khan	1200.50

22. Retrieve locations where the total amount received is more than \$5000 before a certain date (PaymentDate > 'YYYY-MM-DD')

SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalAmountReceived FROM Locations l JOIN Payments p ON l.LocationID = p.LocationID WHERE p.PaymentDate > '2024-03-01' GROUP BY l.LocationID, l.LocationName HAVING SUM(p.Amount) > 5000;



Task 4: Inner Join, Full Outer Join, Cross Join, Left Outer Join, Right Outer Join

23. Retrieve Payments with Courier Information

SELECT p.*, c.* FROM Payments p INNER JOIN Couriers c ON p.CourierID = c.CourierID;

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight
	1	1	1	10000.00	2024-03-03	2	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50
2	2	2	2	1500.00	2024-03-04	2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80
3	3	3	3	1200.50	2024-03-05	3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00
1	4	4	1	1500.00	2024-03-06	2	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00
5	5	5	2	1000.00	2024-03-07	3	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00
6	6	6	3	25000.00	2024-03-08	2	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50
7	7	7	1	2000.00	2024-03-09	3	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50
3	8	8	2	1200.50	2024-03-10	2	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50
9	9	9	2	1200.50	2024-03-10	2	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	Tracking Number	DeliveryDate	LocationID	EmployeeID	ServiceID
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1
2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1	2	2
3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2	3	2
4	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2	3	2
5	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04	1	2	2
6	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2	3	1
7	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3	2	2
8	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3	2	1
9	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2

24. Retrieve Payments with Location Information

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	LocationID	Location Name	Address
1	1	1	1	10000.00	2024-03-03	2	1:	Warehouse 1	789 Storage St, Chennai
2	2	2	2	1500.00	2024-03-04	2	2	Warehouse2	456 Logistics Ave, Bangalore
3	3	3	3	1200.50	2024-03-05	3	3	Warehouse3	123 Distribution Rd, Hyderabad
4	4	4	1	1500.00	2024-03-06	2	1	Warehouse 1	789 Storage St, Chennai
5	5	5	2	1000.00	2024-03-07	3	2	Warehouse2	456 Logistics Ave, Bangalore
6	6	6	3	25000.00	2024-03-08	2	3	Warehouse3	123 Distribution Rd, Hyderabad
7	7	7	1	2000.00	2024-03-09	3	1	Warehouse 1	789 Storage St, Chennai
8	8	8	2	1200.50	2024-03-10	2	2	Warehouse2	456 Logistics Ave, Bangalore
9	9	9	2	1200.50	2024-03-10	2	2	Warehouse2	456 Logistics Ave, Bangalore

25. Retrieve Payments with Courier and Location Information

SELECT p.*, c.*, 1.* FROM Payments p INNER JOIN Couriers c ON p.CourierID = c.CourierID INNER JOIN Locations 1 ON p.LocationID = 1.LocationID;

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight
1	1	1	1	10000.00	2024-03-03	2	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50
2	2	2	2	1500.00	2024-03-04	2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80
3	3	3	3	1200.50	2024-03-05	3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00
4	4	4	1	1500.00	2024-03-06	2	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00
5	5	5	2	1000.00	2024-03-07	3	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00
6	6	6	3	25000.00	2024-03-08	2	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50
7	7	7	1	2000.00	2024-03-09	3	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50
8	8	8	2	1200.50	2024-03-10	2	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50
9	9	9	2	1200.50	2024-03-10	2	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80

	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID	LocationID	Location Name	Address
1	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1	1	Warehouse 1	789 Storage St, Chennai
2	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1	2	2	2	Warehouse2	456 Logistics Ave, Bangalore
3	² riya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2	3	2	3	Warehouse3	123 Distribution Rd, Hyderabad
4	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2	3	2	1	Warehouse 1	789 Storage St, Chennai
5	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04	1	2	2	2	Warehouse2	456 Logistics Ave, Bangalore
6	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2	3	1	3	Warehouse3	123 Distribution Rd, Hyderabac
7	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3	2	2	1	Warehouse 1	789 Storage St, Chennai
8	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3	2	1	2	Warehouse2	456 Logistics Ave, Bangalore
9	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2	2	Warehouse 2	456 Logistics Ave, Bangalore

26. List all payments with courier details

SELECT p.*, c.* FROM Payments p INNER JOIN Couriers c ON p.CourierID = c.CourierID;

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight
1	1	1	1	10000.00	2024-03-03	2	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50
2	2	2	2	1500.00	2024-03-04	2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80
3	3	3	3	1200.50	2024-03-05	3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00
4	4	4	1	1500.00	2024-03-06	2	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00
5	5	5	2	1000.00	2024-03-07	3	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00
6	6	6	3	25000.00	2024-03-08	2	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50
7	7	7	1	2000.00	2024-03-09	3	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50
3	8	8	2	1200.50	2024-03-10	2	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50
9	9	9	2	1200.50	2024-03-10	2	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80

Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
2.50	In Transit	TN123456	2024-03-01	1	2	1
1.80	Delivered	TN789012	2024-03-02	1	2	2
3.00	In Transit	TN345678	2024-03-03	2	3	2
4.00	In Transit	TN345679	2024-03-05	2	3	2
2.00	In Transit	TN234567	2024-03-04	1	2	2
1.50	Delivered	TN345688	2024-03-05	2	3	1
3.50	In Transit	TN456789	2024-03-06	3	2	2
4.50	In Transit	TN567890	2024-03-07	3	2	1
2.80	Delivered	TN678901	2024-03-08	2	3	2

27. Total payments received for each courier

SELECT c.CourierID, c.SenderName, c.ReceiverName, SUM(p.Amount) AS TotalPayments
FROM Couriers c LEFT JOIN Payments p ON c.CourierID = p.CourierID GROUP BY c.CourierID, c.SenderName,
c.ReceiverName;



28. List payments made on a specific date

SELECT * FROM Payments WHERE PaymentDate = '2024-03-08';



29. Get Courier Information for Each Payment

SELECT p.*, c.* FROM Payments p LEFT JOIN Couriers c ON p.CourierID = c.CourierID;

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight
1	1	1	1	10000.00	2024-03-03	2	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50
2	2	2	2	1500.00	2024-03-04	2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80
3	3	3	3	1200.50	2024-03-05	3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00
4	4	4	1	1500.00	2024-03-06	2	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00
5	5	5	2	1000.00	2024-03-07	3	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00
6	6	6	3	25000.00	2024-03-08	2	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50
7	7	7	1	2000.00	2024-03-09	3	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50
8	8	8	2	1200.50	2024-03-10	2	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50
9	9	9	2	1200.50	2024-03-10	2	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80

Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
In Transit	TN123456	2024-03-01	1	2	1
Delivered	TN789012	2024-03-02	1	2	2
In Transit	TN345678	2024-03-03	2	3	2
In Transit	TN345679	2024-03-05	2	3	2
In Transit	TN234567	2024-03-04	1	2	2
Delivered	TN345688	2024-03-05	2	3	1
In Transit	TN456789	2024-03-06	3	2	2
In Transit	TN567890	2024-03-07	3	2	1
Delivered	TN678901	2024-03-08	2	3	2

30. Get Payment Details with Location

SELECT p.*, 1.* FROM Payments p LEFT JOIN Locations 1 ON p.LocationID = 1.LocationID;

	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID	LocationID	Location Name	Address
	1	1	1	10000.00	2024-03-03	2	1	Warehouse 1	789 Storage St, Chennai
2	2	2	2	1500.00	2024-03-04	2	2	Warehouse2	456 Logistics Ave, Bangalore
3	3	3	3	1200.50	2024-03-05	3	3	Warehouse3	123 Distribution Rd, Hyderabad
4	4	4	1	1500.00	2024-03-06	2	1	Warehouse 1	789 Storage St, Chennai
5	5	5	2	1000.00	2024-03-07	3	2	Warehouse2	456 Logistics Ave, Bangalore
6	6	6	3	25000.00	2024-03-08	2	3	Warehouse3	123 Distribution Rd, Hyderabad
7	7	7	1	2000.00	2024-03-09	3	1	Warehouse 1	789 Storage St, Chennai
В	8	8	2	1200.50	2024-03-10	2	2	Warehouse2	456 Logistics Ave, Bangalore
9	9	9	2	1200.50	2024-03-10	2	2	Warehouse2	456 Logistics Ave, Bangalore

31. Calculating Total Payments for Each Courier

SELECT c.CourierID, c.SenderName, c.ReceiverName, SUM(p.Amount) AS TotalPayments FROM Couriers c
LEFT JOIN Payments p ON c.CourierID = p.CourierID GROUP BY c.CourierID, c.SenderName, c.ReceiverName;

	CourierID	SenderName	ReceiverName	TotalPayments
1	1	Rajesh Kumar	Ananya Singh	10000.00
2	2	Priya Sharma	Amit Patel	1500.00
3	3	Amit Patel	Priya Sharma	1200.50
4	4	Ananya Singh	Rajesh Kumar	1500.00
5	5	Sara Khan	David Lee	1000.00
6	6	Michael Johnson	Emma Wilson	25000.00
7	7	Emma Wilson	Michael Johnson	2000.00
8	8	David Lee	Sara Khan	1200.50
9	9	Rajesh Kumar	Sara Khan	1200.50

32. List Payments Within a Date Range

SELECT * FROM Payments WHERE PaymentDate BETWEEN '2024-02-01' AND '2024-03-08';

	Results		Messages				
	Payme	entID	CourierID	LocationID	Amount	Payment Date	EmployeeID
1	1		1	1	10000.00	2024-03-03	2
2	2		2	2	1500.00	2024-03-04	2
3	3		3	3	1200.50	2024-03-05	3
4	4		4	1	1500.00	2024-03-06	2
5	5		5	2	1000.00	2024-03-07	3
6	6		6	3	25000.00	2024-03-08	2

33. Retrieve a list of all users and their corresponding courier records, including cases where there are no matches on either side

SELECT u.*, c.* FROM Users u FULL OUTER JOIN Couriers c ON u.name = c.SenderName;

	UserID	Name	Email	Password	ContactNumber	Address	CourierID	SenderName	SenderAddress	ReceiverName
1	1	Rajesh Kumar	rajesh.kumar@email.com	password123	9876543210	12 Gandhi Nagar, Chennai	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh
2	1	Rajesh Kumar	rajesh.kumar@email.com	password123	9876543210	12 Gandhi Nagar, Chennai	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan
3	2	Priya Shama	priya.shama@email.com	password456	8765432109	34 Kaveri Street, Bangalore	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel
4	3	Amit Patel	amit.patel@email.com	password789	7654321098	56 Krishna Lane, Hyderabad	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma
5	4	Ananya Singh	ananya.singh@email.com	passwordabc	6543210987	78 Vindhya Nagar, Coimbatore	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar
6	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi	5	Sara Khan	90 Yamuna Road, Delhi	David Lee
7	6	Michael Johnson	michael.johnson@email.com	password 123	6547893210	23 Park Street, Mumbai	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson
8	7	Emma Wilson	emma.wilson@email.com	password456	7896543210	45 Lake Avenue, Kolkata	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson
9	8	David Lee	david.lee@email.com	password789	9876543210	67 Forest Lane, Pune	8	David Lee	67 Forest Lane, Pune	Sara Khan
10	9	Sophia Garcia	sophia.garcia@email.com	passwordabc	8765432109	89 Ocean View, Goa	NULL	NULL	NULL	NULL

ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1
90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2
56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1	2	2
34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2	3	2
12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2	3	2
67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04	1	2	2
45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2	3	1
23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3	2	2
90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3	2	1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

34. Retrieve a list of all couriers and their corresponding services, including cases where there are no matches on either side

SELECT c.*, cs.* FROM Couriers c FULL OUTER JOIN CourierServices cs ON c.ServiceID = cs.ServiceID;

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01
2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02
3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03
4	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05
5	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04
6	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05
7	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06
8	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07
9	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08

LocationID	EmployeeID	ServiceID	ServiceID	ServiceName	Cost
1	2	1	1	Standard	10.00
1	2	2	2	Express	15.00
2	3	2	2	Express	15.00
2	3	2	2	Express	15.00
1	2	2	2	Express	15.00
2	3	1	1	Standard	10.00
3	2	2	2	Express	15.00
3	2	1	1	Standard	10.00
2	3	2	2	Express	15.00

35. Retrieve a list of all employees and their corresponding payments, including cases where there are no matches on either side

SELECT e.*, p.*FROM Employees e FULL OUTER JOIN Payments p ON e.EmployeeID = p.EmployeeID;

	EmployeeID	Name	Email	Contact Number	Role	Salary	PaymentID	CourierID	LocationID	Amount	Payment Date	EmployeeID
1	1	Manager1	manager1@email.com	1112223333	Manager	50000.00	NULL	NULL	NULL	NULL	NULL	NULL
2	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	1	1	1	10000.00	2024-03-03	2
3	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	2	2	2	1500.00	2024-03-04	2
4	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	4	4	1	1500.00	2024-03-06	2
5	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	6	6	3	25000.00	2024-03-08	2
6	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	8	8	2	1200.50	2024-03-10	2
7	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	9	9	2	1200.50	2024-03-10	2
8	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	3	3	3	1200.50	2024-03-05	3
9	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	5	5	2	1000.00	2024-03-07	3
10	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	7	7	1	2000.00	2024-03-09	3
11	4	John cena	john.cena@email.com	1234567890	Manager	60000.00	NULL	NULL	NULL	NULL	NULL	NULL
12	5	Authur Johnson	authur.johnson@email.com	9876543210	Clerk	45000.00	NULL	NULL	NULL	NULL	NULL	NULL

36. List all users and all courier services, showing all possible combinations.

SELECT u.*, cs.*FROM Users u CROSS JOIN CourierServices cs;

	UserID	Name	Email	Password	Contact Number	Address	ServiceID	ServiceName	Cost
1	1	Rajesh Kumar	rajesh.kumar@email.com	password 123	9876543210	12 Gandhi Nagar, Chennai	1	Standard	10.00
2	2	Priya Sharma	priya.sharma@email.com	password456	8765432109	34 Kaveri Street, Bangalore	1	Standard	10.00
3	3	Amit Patel	amit.patel@email.com	password789	7654321098	56 Krishna Lane, Hyderabad	1	Standard	10.00
4	4	Ananya Singh	ananya.singh@email.com	passwordabc	6543210987	78 Vindhya Nagar, Coimbatore	1	Standard	10.00
5	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi	1	Standard	10.00
6	6	Michael Johnson	michael.johnson@email.com	password 123	6547893210	23 Park Street, Mumbai	1	Standard	10.00
7	7	Emma Wilson	emma.wilson@email.com	password456	7896543210	45 Lake Avenue, Kolkata	1	Standard	10.00
8	8	David Lee	david.lee@email.com	password789	9876543210	67 Forest Lane, Pune	1	Standard	10.00
9	9	Sophia Garcia	sophia.garcia@email.com	passwordabc	8765432109	89 Ocean View, Goa	1	Standard	10.00
10	1	Rajesh Kumar	rajesh.kumar@email.com	password 123	9876543210	12 Gandhi Nagar, Chennai	2	Express	15.00
11	2	Priya Sharma	priya.sharma@email.com	password456	8765432109	34 Kaveri Street, Bangalore	2	Express	15.00
12	3	Amit Patel	amit.patel@email.com	password789	7654321098	56 Krishna Lane, Hyderabad	2	Express	15.00
13	4	Ananya Singh	ananya.singh@email.com	passwordabc	6543210987	78 Vindhya Nagar, Coimbatore	2	Express	15.00
14	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi	2	Express	15.00
15	6	Michael Johnson	michael.johnson@email.com	password 123	6547893210	23 Park Street, Mumbai	2	Express	15.00
16	7	Emma Wilson	emma.wilson@email.com	password456	7896543210	45 Lake Avenue, Kolkata	2	Express	15.00
17	8	David Lee	david.lee@email.com	password789	9876543210	67 Forest Lane, Pune	2	Express	15.00
18	9	Sophia Garcia	sophia.garcia@email.com	passwordabc	8765432109	89 Ocean View, Goa	2	Express	15.00

37. List all employees and all locations, showing all possible combinations:

SELECT e.*, 1.* FROM Employees e CROSS JOIN Locations 1;

	EmployeeID	Name	Email	Contact Number	Role	Salary	LocationID	Location Name	Address
1	1	Manager1	manager1@email.com	1112223333	Manager	50000.00	1	Warehouse 1	789 Storage St, Chennai
2	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	1	Warehouse 1	789 Storage St, Chennai
3	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	1	Warehouse 1	789 Storage St, Chennai
4	4	John cena	john.cena@email.com	1234567890	Manager	60000.00	1	Warehouse 1	789 Storage St, Chennai
5	5	Authur Johnson	authur.johnson@email.com	9876543210	Clerk	45000.00	1	Warehouse 1	789 Storage St, Chennai
6	1	Manager1	manager1@email.com	1112223333	Manager	50000.00	2	Warehouse2	456 Logistics Ave, Bangalore
7	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	2	Warehouse2	456 Logistics Ave, Bangalore
8	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	2	Warehouse2	456 Logistics Ave, Bangalore
9	4	John cena	john.cena@email.com	1234567890	Manager	60000.00	2	Warehouse2	456 Logistics Ave, Bangalore
10	5	Authur Johnson	authur.johnson@email.com	9876543210	Clerk	45000.00	2	Warehouse2	456 Logistics Ave, Bangalore
11	1	Manager1	manager1@email.com	1112223333	Manager	50000.00	3	Warehouse3	123 Distribution Rd, Hyderabad
12	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00	3	Warehouse3	123 Distribution Rd, Hyderabad
13	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00	3	Warehouse3	123 Distribution Rd, Hyderabad
14	4	John cena	john.cena@email.com	1234567890	Manager	60000.00	3	Warehouse3	123 Distribution Rd, Hyderabad
15	5	Authur Johnson	authur.johnson@email.com	9876543210	Clerk	45000.00	3	Warehouse3	123 Distribution Rd, Hyderabad

38. Retrieve a list of couriers and their corresponding sender information (if available)

SELECT c.*, u.*FROM Couriers c LEFT JOIN Users u ON c.SenderName = u.Name;

	CourierID	SenderName	Sende	rA <mark>ddres</mark> s	ReceiverName	ReceiverAddress		Weight	Status	Tracking	Number	Delivery Date	LocationID
1	1	Rajesh Kuma	r 12 Ga	ndhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coim	mbatore	2.50	In Transit	TN1234	56	2024-03-01	1
2	2	Priya Shama	34 Ka	veri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyder	rabad	1.80	Delivered	TN7890	12	2024-03-02	1
3	3	Amit Patel	56 Kris	shna L <mark>ane, Hyderabad</mark>	Priya Sharma	34 Kaveri Street, Banga	alore	3.00	In Transit	TN3456	78	2024-03-03	2
4	4	Ananya Singl	n 78 Vin	idhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chen	nnai	4.00	In Transit	TN3456	79	2024-03-05	2
5	5	Sara Khan	90 Ya	muna Road, Delhi	David Lee	67 Forest Lane, Pune		2.00	In Transit	TN2345	67	2024-03-04	1
6	6	Michael John	7500	rk Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolka	ata	1.50	Delivered	TN3456	75.4	2024-03-05	2
7	7	Emma Wilson	45 Lal	ke Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	ai <u> </u>	3.50	In Transit	TN4567		2024-03-06	3
8	8	David Lee	67 For	rest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	ni	4.50	In Transit	TN5678	90	2024-03-07	3
9	9	Rajesh Kuma	r 12 Ga	n <mark>dhi N</mark> agar, Chennai	Sara Khan	90 Yamuna Road, Delhi	ni	2.80	Delivered	TN6789	01	2024-03-08	2
mp	oyeeID	ServiceID	UserID	Name	Email	Pa	asswor	d	Contact No	umber	Addre	SS	
mn	oveeID	ServiceID	UserID	Name	Fmail	Pa	asswon	d	Contact No	ımber	Addre	98	
	oyeeID	ServiceID 1	UserID 1	Name Rajesh Kumar	Email rajesh.kumar		asswor	-	98765432			ss an <mark>d</mark> hi Nagar,	Chennai
2	oyeeID	ServiceID 1 2				@email.com p		d123		210	12 Ga		
2	oyeeID	1	1	Rajesh Kumar	rajesh.kumar	@email.com p	asswor	d123 d456	98765432	210 109	12 Ga 34 Ka	an <mark>d</mark> hi Nagar,	Bangalore
2	oyeeID	1 2	1 2	Rajesh Kumar Priya Sharma	rajesh.kumar(priya.sharma(@email.com pomail.com pomail.com pomail.com	oasswor oasswor	d123 d456 d789	98765432 8765432	210 109 098	12 Ga 34 Ka 56 Kri	an <mark>d</mark> hi Nagar, averi Street, E	Bangalore Hyderabad
2 2 3 3	oyeeID	1 2 2	1 2 3	Rajesh Kumar Priya Sharma Amit Patel	rajesh.kumar(priya.sharma(amit.patel@e	@email.com pomail.com	oasswor oasswor oasswor	d123 d456 d789 dabc	98765432 8765432 76543210	210 109 098 987	12 Ga 34 Ka 56 Kri 78 Vir	andhi Nagar, averi Street, E ishna Lane, F	Bangalore Hyderabad , Coimbato
2 2 3 3 2 2	oyeeID	1 2 2 2	1 2 3 4	Rajesh Kumar Priya Sharma Amit Patel Ananya Singh	rajesh.kumar(priya.sharma(amit.patel@e ananya.singh sara.khan@e	@email.com p. mail.com p. mail.com p. mail.com p. mail.com p. mail.com p.	oasswor oasswor oasswor	d123 d456 d789 dabc	98765432 876543210 6543210	210 109 098 987 876	12 Ga 34 Ka 56 Kri 78 Vir 90 Ya	andhi Nagar, averi Street, E ishna Lane, F ndhya Nagar	Bangalore Hyderabad , Coimbato Delhi
2 2 3 3 3 3 3	oyeeID	1 2 2 2	1 2 3 4 5	Rajesh Kumar Priya Sharma Amit Patel Ananya Singh Sara Khan	rajesh.kumar(priya.sharma(amit.patel@e ananya.singh sara.khan@e	@email.com pomail.com pomail.com pomail.com pomail.com pomail.com pomail.com pomail.com pomail.com pom@email.com pom@email.com pom@email.com pomail.com po	passwor passwor passwor passwor passwor	rd123 rd456 rd789 rdabc rdxyz rd123	98765432 87654321 76543210 65432109	210 109 098 987 876 210	12 Ga 34 Ka 56 Kri 78 Vir 90 Ya 23 Pa	andhi Nagar, averi Street, E ishna Lane, F ndhya Nagar amuna Road,	Bangalore Hyderabad , Coimbato Delhi umbai
2 2 2 3 3 3 2 2	oyeeID	1 2 2 2 2 2 1	1 2 3 4 5 6	Rajesh Kumar Priya Sharma Amit Patel Ananya Singh Sara Khan Michael Johnson	rajesh.kumar(priya.shama(amit.patel@e ananya.singh sara.khan@e michael.johns	@email.com pomail.com pomail.com pomail.com pomail.com pomail.com pomail.com pomail.com pom@email.com pom@email.com pom@email.com pomail.com po	oasswor oasswor oasswor oasswor oasswor	d123 d456 d789 dabc dxyz d123 d456	98765432 876543210 76543210 65432109 65478932	210 109 098 987 876 210	12 Ga 34 Ka 56 Kri 78 Vir 90 Ya 23 Pa 45 La	andhi Nagar, averi Street, E ishna Lane, I ndhya Nagar amuna Road, ark Street, Mu	Bangalore Hyderabad , Coimbato Delhi Imbai Kolkata

39. Retrieve a list of couriers and their corresponding receiver information (if available):

SELECT c.*, u.*FROM Couriers c LEFT JOIN Users u ON c.ReceiverName = u.Name;

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1
2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1
3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2
4	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2
5	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04	1
6	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2
7	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3
8	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3
9	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2

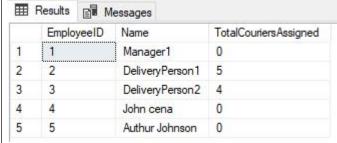
EmployeeID	ServiceID	UserID	Name	Email	Password	ContactNumber	Address
2	1	4	Ananya Singh	ananya.singh@email.com	passwordabc	6543210987	78 Vindhya Nagar, Coimbatore
2	2	3	Amit Patel	amit.patel@email.com	password789	7654321098	56 Krishna Lane, Hyderabad
3	2	2	Priya Sharma	priya.sharma@email.com	password456	8765432109	34 Kaveri Street, Bangalore
3	2	1	Rajesh Kumar	rajesh.kumar@email.com	password123	9876543210	12 Gandhi Nagar, Chennai
2	2	8	David Lee	david.lee@email.com	password789	9876543210	67 Forest Lane, Pune
3	1	7	Emma Wilson	emma.wilson@email.com	password456	7896543210	45 Lake Avenue, Kolkata
2	2	6	Michael Johnson	michael.johnson@email.com	password123	6547893210	23 Park Street, Mumbai
2	1	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi
3	2	5	Sara Khan	sara.khan@email.com	passwordxyz	5432109876	90 Yamuna Road, Delhi

40. Retrieve a list of couriers along with the courier service details (if available): SELECT c.*, cs.*FROM Couriers c LEFT JOIN CourierServices cs ON c.ServiceID = cs.ServiceID;

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456
2	2	Priya Sharma	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012
3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678
4	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679
5	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567
6	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688
7	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789
8	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890
9	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901

Delivery Date	LocationID	EmployeeID	ServiceID	ServiceID	ServiceName	Cost
2024-03-01	1	2	1	1	Standard	10.00
2024-03-02	1	2	2	2	Express	15.00
2024-03-03	2	3	2	2	Express	15.00
2024-03-05	2	3	2	2	Express	15.00
2024-03-04	1	2	2	2	Express	15.00
2024-03-05	2	3	1	1	Standard	10.00
2024-03-06	3	2	2	2	Express	15.00
2024-03-07	3	2	1	1	Standard	10.00
2024-03-08	2	3	2	2	Express	15.00

41. Retrieve a list of employees and the number of couriers assigned to each employee: SELECT e.EmployeeID, e.Name, COUNT(c.CourierID) AS TotalCouriersAssigned FROM Employees e LEFT JOIN Couriers c ON e.EmployeeID = c.EmployeeID GROUP BY e.EmployeeID, e.Name;



42. Retrieve a list of locations and the total payment amount received at each location:

SELECT 1.LocationID, 1.LocationName, SUM(p.Amount) AS TotalPaymentsReceived
FROM Locations 1 LEFT JOIN Payments p ON 1.LocationID = p.LocationID GROUP BY 1.LocationID,
1.LocationName;

	Results		Messages	
	Locati	onID	LocationName	TotalPaymentsReceived
1	1		Warehouse 1	13500.00
2	2		Warehouse2	4901.00
3	3		Warehouse3	26200.50

43. Retrieve all couriers sent by the same sender (based on SenderName).

SELECT c1.*FROM Couriers c1 JOIN Couriers c2 ON c1.SenderName = c2.SenderName WHERE c1.CourierID <>
c2.CourierID;;

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1
)	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2

44. List all employees who share the same role.

SELECT e1.*FROM Employees e1 JOIN Employees e2 ON e1.Role = e2.Role WHERE e1.EmployeeID <>
e2.EmployeeID;

	Results 📳 N	lessages				
	EmployeeID	Name	Email	ContactNumber	Role	Salary
1	1	Manager1	manager1@email.com	1112223333	Manager	50000.00
2	2	DeliveryPerson1	delivery1@email.com	4445556666	Delivery Person	30000.00
3	3	DeliveryPerson2	delivery2@email.com	5556667777	Delivery Person	30000.00
4	4	John cena	john.cena@email.com	1234567890	Manager	60000.00

45. Retrieve all payments made for couriers sent from the same location.

SELECT Payments.*FROM Payments JOIN Couriers ON Payments.CourierID = Couriers.CourierID WHERE SenderAddress LIKE '12 Gandhi Nagar, Chennai';

	Results		Messages				
	Payme	entID	CourierID	LocationID	Amount	Payment Date	EmployeeID
1	1		1	1	10000.00	2024-03-03	2
2	9		9	2	1200.50	2024-03-10	2

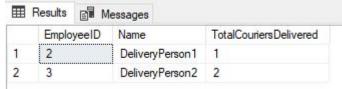
46. Retrieve all couriers sent from the same location (based on SenderAddress).

SELECT *FROM Couriers WHERE SenderAddress LIKE '12 Gandhi Nagar, Chennai';

▦	Results 📲	Messages										
	CourierID	SenderName	Sender Address	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1
2	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2

47. List employees and the number of couriers they have delivered:

SELECT e.EmployeeID, e.Name, COUNT(c.CourierID) AS TotalCouriersDelivered FROM Employees e LEFT JOIN Couriers c ON e.EmployeeID = c.EmployeeID WHERE c.Status = 'Delivered' GROUP BY e.EmployeeID, e.Name;



48. Find couriers that were paid an amount greater than the cost of their respective courier services

SELECT c.*FROM Couriers c JOIN Payments p ON c.CourierID = p.CourierID

JOIN CourierServices cs ON c.ServiceID = cs.ServiceID WHERE p.Amount > cs.Cost;

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
1	1	Rajesh Kumar	12 Gandhi Nagar, Chennai	Ananya Singh	78 Vindhya Nagar, Coimbatore	2.50	In Transit	TN123456	2024-03-01	1	2	1
2	2	Priya Shama	34 Kaveri Street, Bangalore	Amit Patel	56 Krishna Lane, Hyderabad	1.80	Delivered	TN789012	2024-03-02	1	2	2
3	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2	3	2
4	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2	3	2
5	5	Sara Khan	90 Yamuna Road, Delhi	David Lee	67 Forest Lane, Pune	2.00	In Transit	TN234567	2024-03-04	1	2	2
6	6	Michael Johnson	23 Park Street, Mumbai	Emma Wilson	45 Lake Avenue, Kolkata	1.50	Delivered	TN345688	2024-03-05	2	3	1
7	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3	2	2
8	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3	2	1
9	9	Rajesh Kumar	12 Gandhi Nagar, Chennai	Sara Khan	90 Yamuna Road, Delhi	2.80	Delivered	TN678901	2024-03-08	2	3	2

Scope: Inner Queries, Non Equi Joins, Equi joins, Exist, Any, All

49. Find couriers that have a weight greater than the average weight of all couriers SELECT * FROM Couriers WHERE Weight > (SELECT AVG(Weight) FROM Couriers):

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	Delivery Date	LocationID	EmployeeID	ServiceID
1	3	Amit Patel	56 Krishna Lane, Hyderabad	Priya Sharma	34 Kaveri Street, Bangalore	3.00	In Transit	TN345678	2024-03-03	2	3	2
2	4	Ananya Singh	78 Vindhya Nagar, Coimbatore	Rajesh Kumar	12 Gandhi Nagar, Chennai	4.00	In Transit	TN345679	2024-03-05	2	3	2
3	7	Emma Wilson	45 Lake Avenue, Kolkata	Michael Johnson	23 Park Street, Mumbai	3.50	In Transit	TN456789	2024-03-06	3	2	2
4	8	David Lee	67 Forest Lane, Pune	Sara Khan	90 Yamuna Road, Delhi	4.50	In Transit	TN567890	2024-03-07	3	2	1

