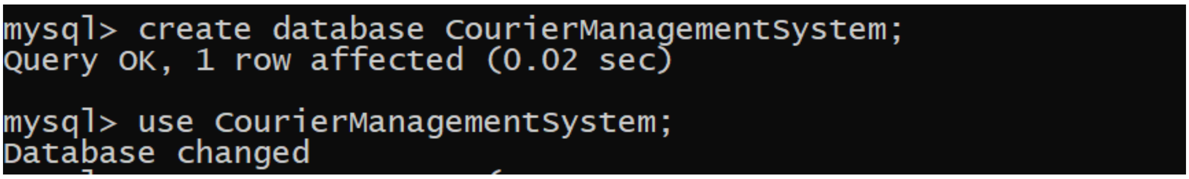
Task1 Database Design

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.

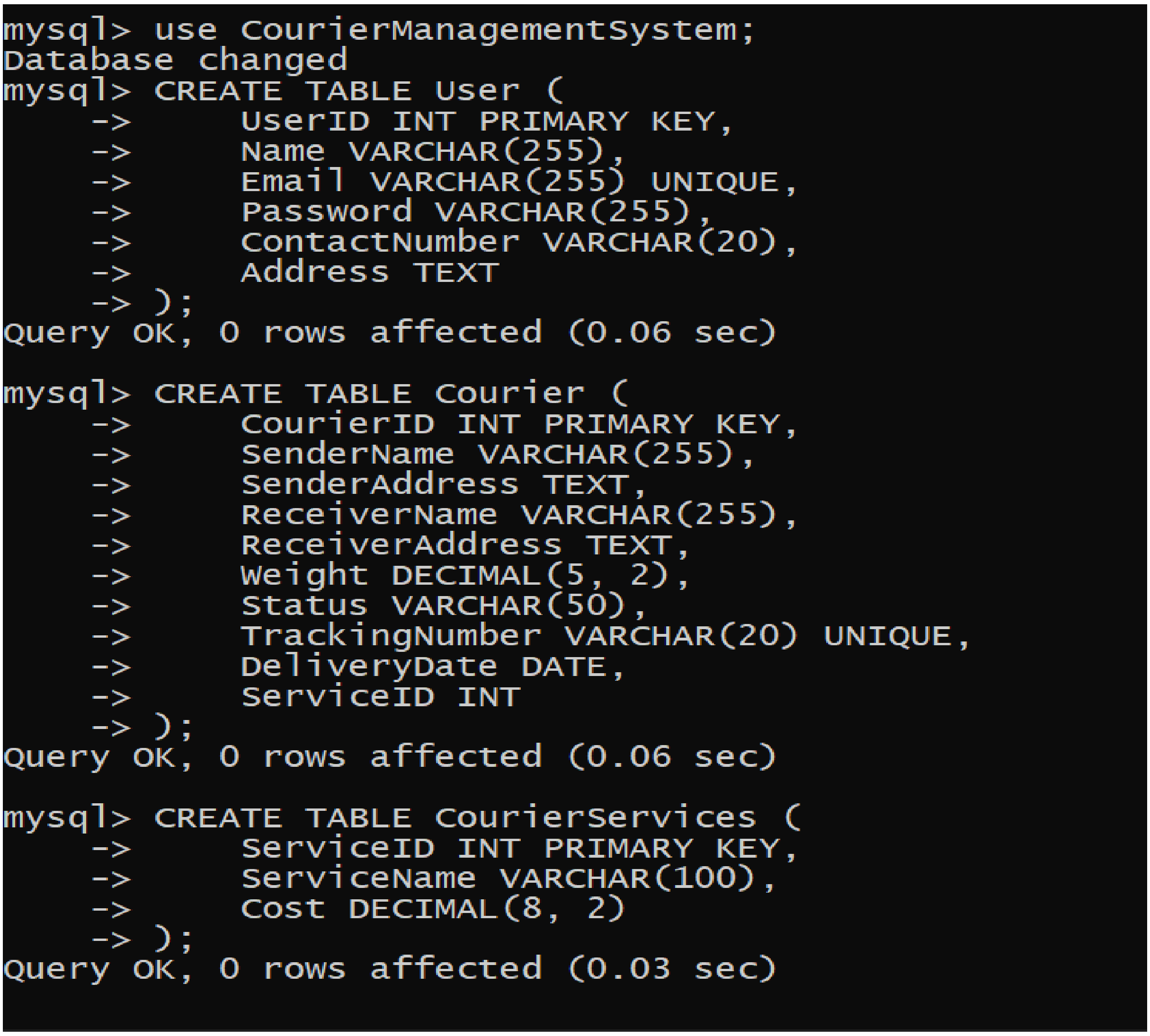


```
mysql> create database CourierManagementSystem;
Query OK, 1 row affected (0.02 sec)

mysql> use CourierManagementSystem;
Database changed
```

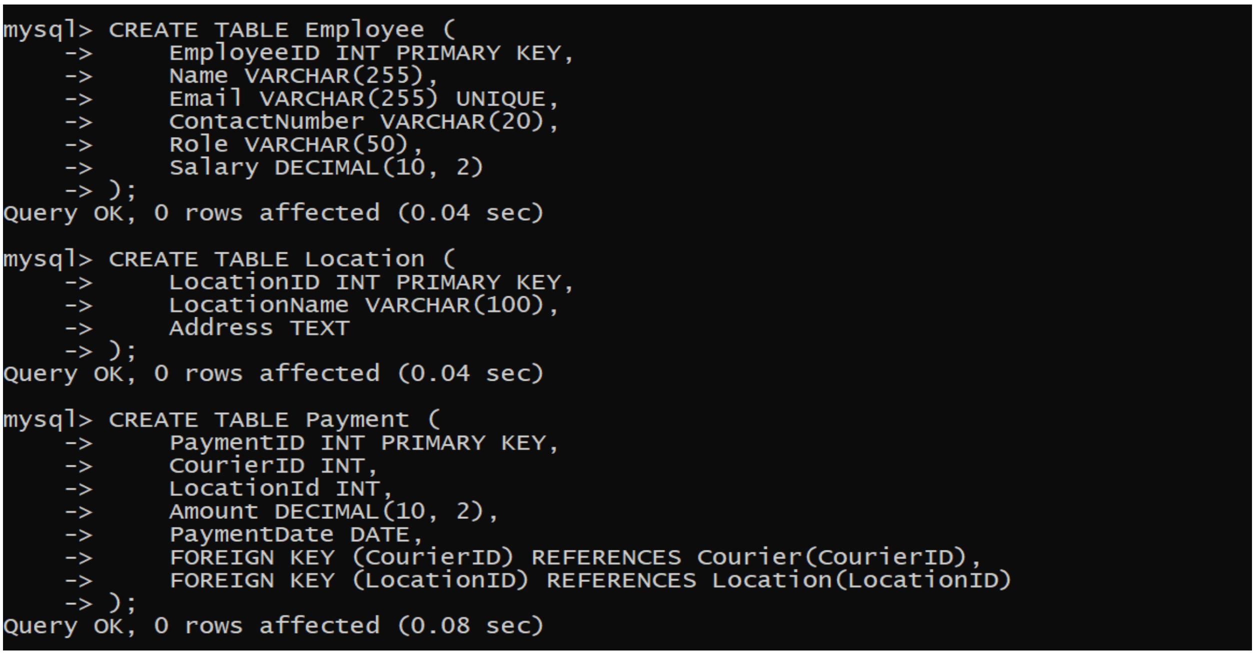
Requirements:

• Define the Database Schema • Create SQL tables for entities such as User, Courier, Employee, Location, Payment

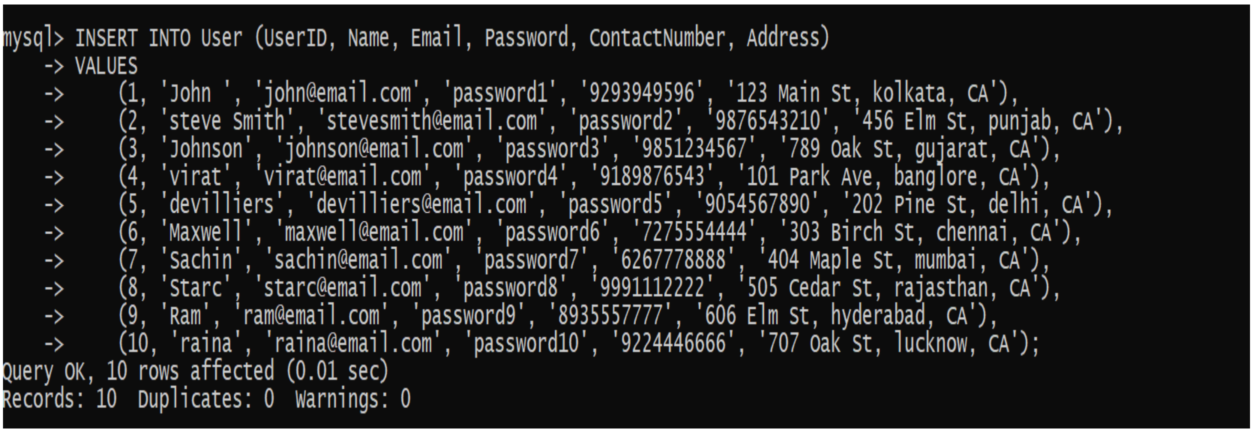
• Define relationships between these tables (one-to-many, many-to-many, etc.).



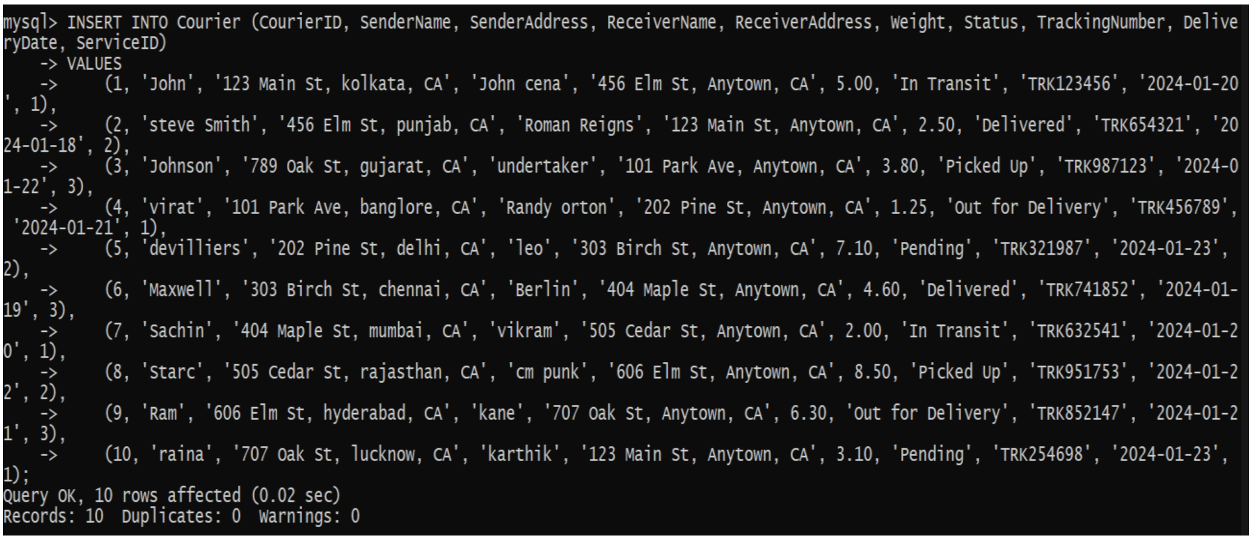
```
mysql> use CourierManagementSystem;
Database changed
mysql> CREATE TABLE User (
    ->     UserID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Email VARCHAR(255) UNIQUE,
    ->     Password VARCHAR(255),
    ->     ContactNumber VARCHAR(20),
    ->     Address TEXT
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql> CREATE TABLE Courier (
    ->     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,
    ->     ServiceID INT
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql> CREATE TABLE CourierServices (
    ->     ServiceID INT PRIMARY KEY,
    ->     ServiceName VARCHAR(100),
    ->     Cost DECIMAL(8, 2)
    -> );
Query OK, 0 rows affected (0.03 sec)
```



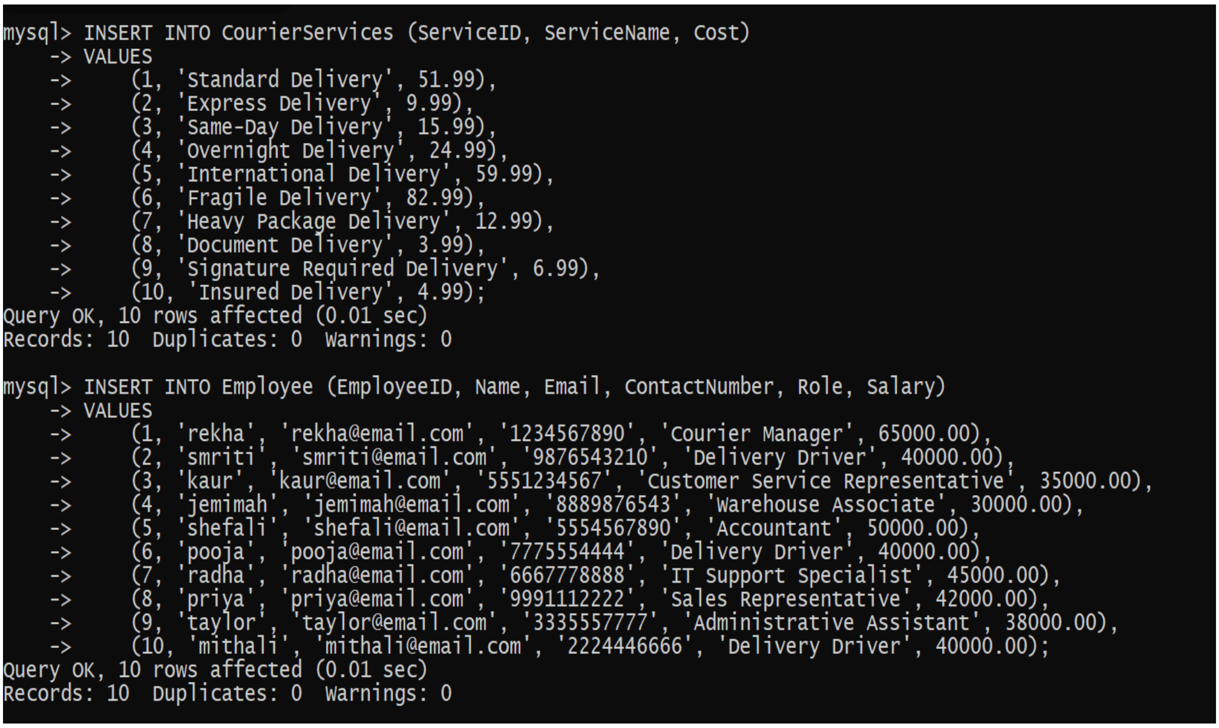
```
mysql> CREATE TABLE Employee (
    ->     EmployeeID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Email VARCHAR(255) UNIQUE,
    ->     ContactNumber VARCHAR(20),
    ->     Role VARCHAR(50),
    ->     Salary DECIMAL(10, 2)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE Location (
    ->     LocationID INT PRIMARY KEY,
    ->     LocationName VARCHAR(100),
    ->     Address TEXT
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE Payment (
    ->     PaymentID INT PRIMARY KEY,
    ->     CourierID INT,
    ->     LocationId INT,
    ->     Amount DECIMAL(10, 2),
    ->     PaymentDate DATE,
    ->     FOREIGN KEY (CourierID) REFERENCES Courier(CourierID),
    ->     FOREIGN KEY (LocationID) REFERENCES Location(LocationID)
    -> );
Query OK, 0 rows affected (0.08 sec)
```



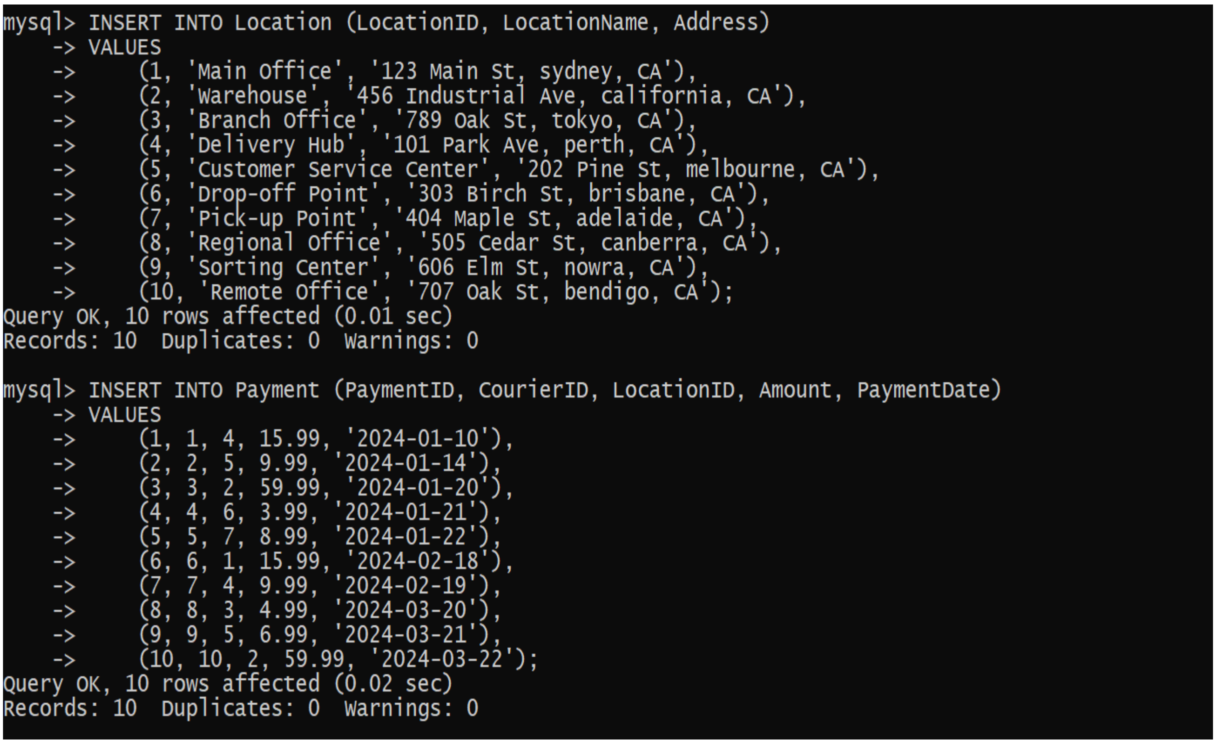
```
mysql> INSERT INTO User (UserID, Name, Email, Password, ContactNumber, Address)
    -> VALUES
    ->     (1, 'John ', 'john@email.com', 'password1', '9293949596', '123 Main St, kolkata, CA'),
    ->     (2, 'steve Smith', 'stevesmith@email.com', 'password2', '9876543210', '456 Elm St, punjab, CA'),
    ->     (3, 'Johnson', 'johnson@email.com', 'password3', '9851234567', '789 Oak St, gujarat, CA'),
    ->     (4, 'virat', 'virat@email.com', 'password4', '9189876543', '101 Park Ave, banglore, CA'),
    ->     (5, 'devilliers', 'devilliers@email.com', 'password5', '9054567890', '202 Pine St, delhi, CA'),
    ->     (6, 'Maxwell', 'maxwell@email.com', 'password6', '7275554444', '303 Birch St, chennai, CA'),
    ->     (7, 'Sachin', 'sachin@email.com', 'password7', '6267778888', '404 Maple St, mumbai, CA'),
    ->     (8, 'Starc', 'starc@email.com', 'password8', '9991112222', '505 Cedar St, rajasthan, CA'),
    ->     (9, 'Ram', 'ram@email.com', 'password9', '8935557777', '606 Elm St, hyderabad, CA'),
    ->     (10, 'raina', 'raina@email.com', 'password10', '9224446666', '707 Oak St, lucknow, CA');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```



```
mysql> INSERT INTO Courier (CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, TrackingNumber, Delive
ryDate, ServiceID)
    -> VALUES
    ->     (1, 'John', '123 Main St, kolkata, CA', 'John cena', '456 Elm St, Anytown, CA', 5.00, 'In Transit', 'TRK123456', '2024-01-20
', 1),
    ->     (2, 'steve Smith', '456 Elm St, punjab, CA', 'Roman Reigns', '123 Main St, Anytown, CA', 2.50, 'Delivered', 'TRK654321', '20
24-01-18', 2),
    ->     (3, 'Johnson', '789 Oak St, gujarat, CA', 'undertaker', '101 Park Ave, Anytown, CA', 3.80, 'Picked Up', 'TRK987123', '2024-0
1-22', 3),
    ->     (4, 'virat', '101 Park Ave, banglore, CA', 'Randy orton', '202 Pine St, Anytown, CA', 1.25, 'Out for Delivery', 'TRK456789',
 '2024-01-21', 1),
    ->     (5, 'devilliers', '202 Pine St, delhi, CA', 'leo', '303 Birch St, Anytown, CA', 7.10, 'Pending', 'TRK321987', '2024-01-23',
2),
    ->     (6, 'Maxwell', '303 Birch St, chennai, CA', 'Berlin', '404 Maple St, Anytown, CA', 4.60, 'Delivered', 'TRK741852', '2024-01-
19', 3),
    ->     (7, 'Sachin', '404 Maple St, mumbai, CA', 'vikram', '505 Cedar St, Anytown, CA', 2.00, 'In Transit', 'TRK632541', '2024-01-2
0', 1),
    ->     (8, 'Starc', '505 Cedar St, rajasthan, CA', 'cm punk', '606 Elm St, Anytown, CA', 8.50, 'Picked Up', 'TRK951753', '2024-01-2
2', 2),
    ->     (9, 'Ram', '606 Elm St, hyderabad, CA', 'kane', '707 Oak St, Anytown, CA', 6.30, 'Out for Delivery', 'TRK852147', '2024-01-2
1', 3),
    ->     (10, 'raina', '707 Oak St, lucknow, CA', 'karthik', '123 Main St, Anytown, CA', 3.10, 'Pending', 'TRK254698', '2024-01-23',
1);
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0
```



```
mysql> INSERT INTO CourierServices (ServiceID, ServiceName, Cost)
    -> VALUES
    ->     (1, 'Standard Delivery', 51.99),
    ->     (2, 'Express Delivery', 9.99),
    ->     (3, 'Same-Day Delivery', 15.99),
    ->     (4, 'Overnight Delivery', 24.99),
    ->     (5, 'International Delivery', 59.99),
    ->     (6, 'Fragile Delivery', 82.99),
    ->     (7, 'Heavy Package Delivery', 12.99),
    ->     (8, 'Document Delivery', 3.99),
    ->     (9, 'Signature Required Delivery', 6.99),
    ->     (10, 'Insured Delivery', 4.99);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> INSERT INTO Employee (EmployeeID, Name, Email, ContactNumber, Role, Salary)
    -> VALUES
    ->     (1, 'rekha', 'rekha@email.com', '1234567890', 'Courier Manager', 65000.00),
    ->     (2, 'smriti', 'smriti@email.com', '9876543210', 'Delivery Driver', 40000.00),
    ->     (3, 'kaur', 'kaur@email.com', '5551234567', 'Customer Service Representative', 35000.00),
    ->     (4, 'jemimah', 'jemimah@email.com', '8889876543', 'Warehouse Associate', 30000.00),
    ->     (5, 'shefali', 'shefali@email.com', '5554567890', 'Accountant', 50000.00),
    ->     (6, 'pooja', 'pooja@email.com', '7775554444', 'Delivery Driver', 40000.00),
    ->     (7, 'radha', 'radha@email.com', '6667778888', 'IT Support Specialist', 45000.00),
    ->     (8, 'priya', 'priya@email.com', '9991112222', 'Sales Representative', 42000.00),
    ->     (9, 'taylor', 'taylor@email.com', '3335557777', 'Administrative Assistant', 38000.00),
    ->     (10, 'mithali', 'mithali@email.com', '2224446666', 'Delivery Driver', 40000.00);
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

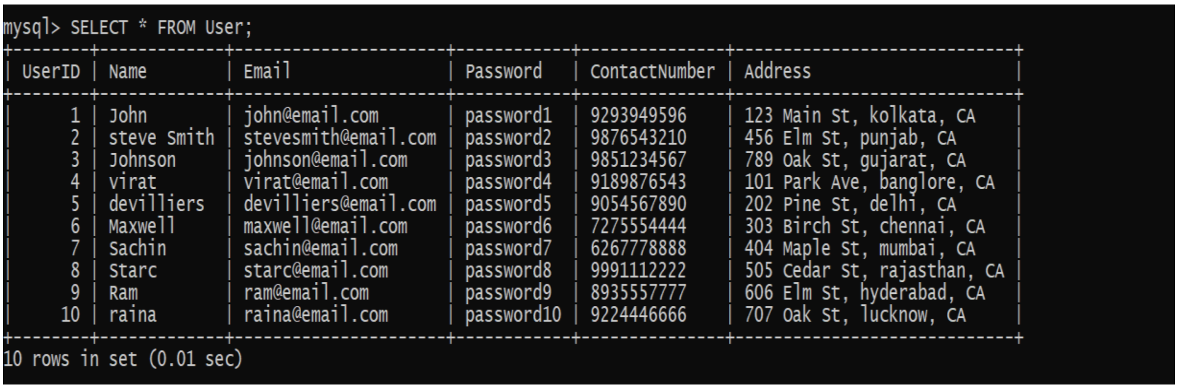


```
mysql> INSERT INTO Location (LocationID, LocationName, Address)
    -> VALUES
    ->     (1, 'Main Office', '123 Main St, sydney, CA'),
    ->     (2, 'Warehouse', '456 Industrial Ave, california, CA'),
    ->     (3, 'Branch Office', '789 Oak St, tokyo, CA'),
    ->     (4, 'Delivery Hub', '101 Park Ave, perth, CA'),
    ->     (5, 'Customer Service Center', '202 Pine St, melbourne, CA'),
    ->     (6, 'Drop-off Point', '303 Birch St, brisbane, CA'),
    ->     (7, 'Pick-up Point', '404 Maple St, adelaide, CA'),
    ->     (8, 'Regional Office', '505 Cedar St, canberra, CA'),
    ->     (9, 'Sorting Center', '606 Elm St, nowra, CA'),
    ->     (10, 'Remote Office', '707 Oak St, bendigo, CA');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> INSERT INTO Payment (PaymentID, CourierID, LocationID, Amount, PaymentDate)
    -> VALUES
    ->     (1, 1, 4, 15.99, '2024-01-10'),
    ->     (2, 2, 5, 9.99, '2024-01-14'),
    ->     (3, 3, 2, 59.99, '2024-01-20'),
    ->     (4, 4, 6, 3.99, '2024-01-21'),
    ->     (5, 5, 7, 8.99, '2024-01-22'),
    ->     (6, 6, 1, 15.99, '2024-02-18'),
    ->     (7, 7, 4, 9.99, '2024-02-19'),
    ->     (8, 8, 3, 4.99, '2024-03-20'),
    ->     (9, 9, 5, 6.99, '2024-03-21'),
    ->     (10, 10, 2, 59.99, '2024-03-22');
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

Task 2: Select,Where

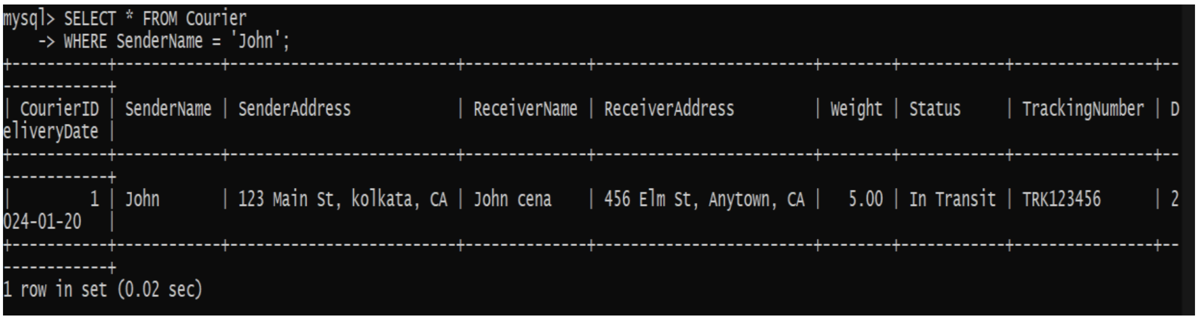
Solve the following queries in the Schema that you have created above

1. List all customers:



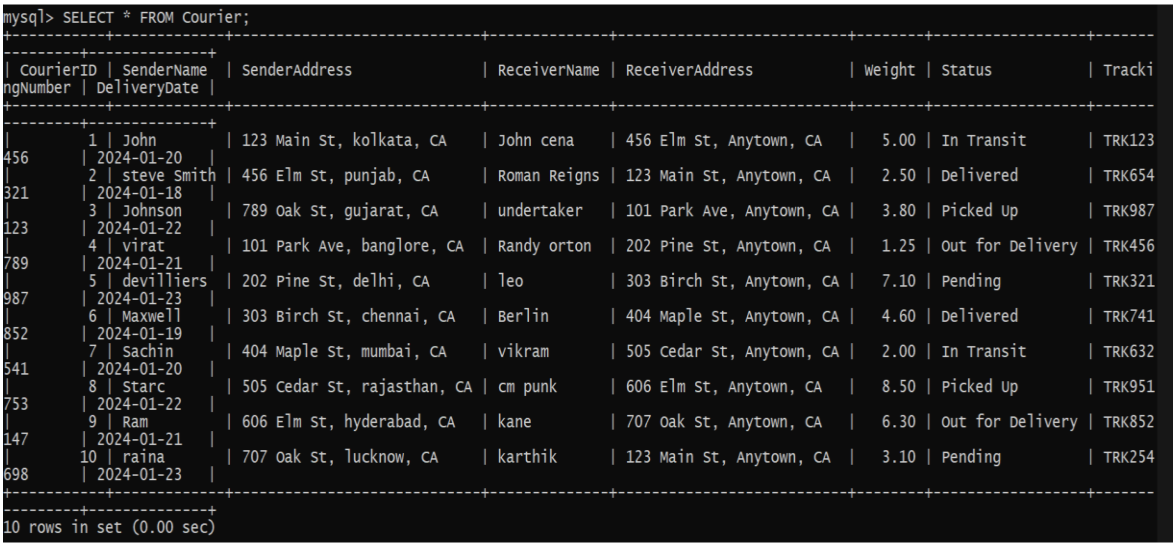
```
mysql> SELECT * FROM User;
+--------+-------------+----------------------+------------+---------------+-----------------------------+
| UserID | Name        | Email                | Password   | ContactNumber | Address                     |
+--------+-------------+----------------------+------------+---------------+-----------------------------+
|      1 | John        | john@email.com       | password1  | 9293949596    | 123 Main St, kolkata, CA    |
|      2 | steve Smith | stevesmith@email.com | password2  | 9876543210    | 456 Elm St, punjab, CA      |
|      3 | Johnson     | johnson@email.com    | password3  | 9851234567    | 789 Oak St, gujarat, CA     |
|      4 | virat       | virat@email.com      | password4  | 9189876543    | 101 Park Ave, banglore, CA  |
|      5 | devilliers  | devilliers@email.com | password5  | 9054567890    | 202 Pine St, delhi, CA      |
|      6 | Maxwell     | maxwell@email.com    | password6  | 7275554444    | 303 Birch St, chennai, CA   |
|      7 | Sachin      | sachin@email.com     | password7  | 6267778888    | 404 Maple St, mumbai, CA    |
|      8 | Starc       | starc@email.com      | password8  | 9991112222    | 505 Cedar St, rajasthan, CA |
|      9 | Ram         | ram@email.com        | password9  | 8935557777    | 606 Elm St, hyderabad, CA   |
|     10 | raina       | raina@email.com      | password10 | 9224446666    | 707 Oak St, lucknow, CA     |
+--------+-------------+----------------------+------------+---------------+-----------------------------+
10 rows in set (0.01 sec)
```

2. List all orders for a specific customer:



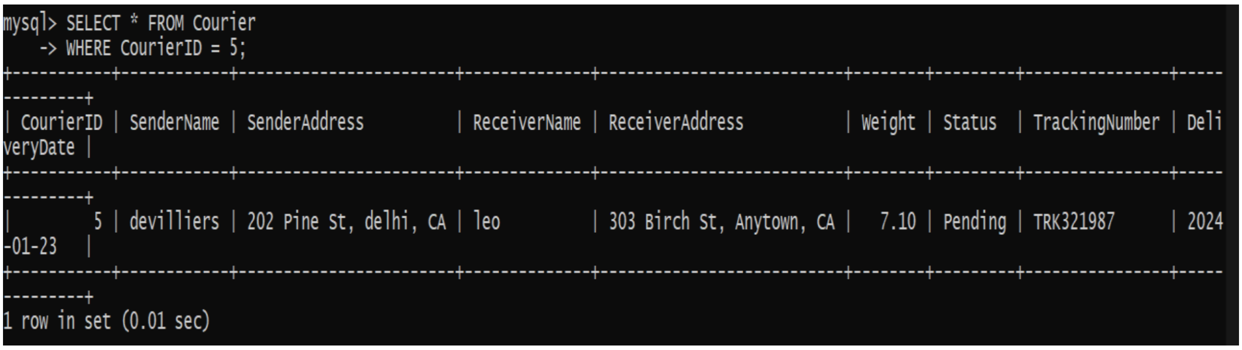
```
mysql> SELECT * FROM Courier
    -> WHERE SenderName = 'John';
+-----------+------------+--------------------------+--------------+-------------------------+--------+------------+----------------+--
------------+
| CourierID | SenderName | SenderAddress            | ReceiverName | ReceiverAddress         | Weight | Status     | TrackingNumber | D
eliveryDate |
+-----------+------------+--------------------------+--------------+-------------------------+--------+------------+----------------+--
------------+
|         1 | John       | 123 Main St, kolkata, CA | John cena    | 456 Elm St, Anytown, CA |   5.00 | In Transit | TRK123456      | 2
024-01-20   |
+-----------+------------+--------------------------+--------------+-------------------------+--------+------------+----------------+--
------------+
1 row in set (0.02 sec)
```

3. List all couriers:



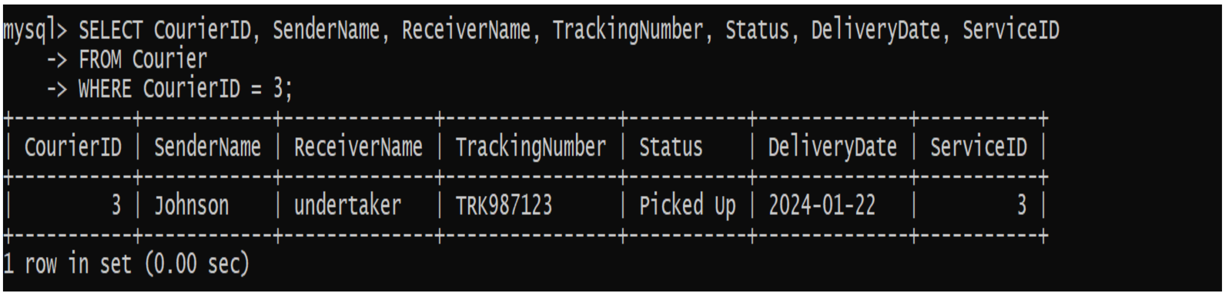
```
mysql> SELECT * FROM Courier;
+-----------+-------------+-----------------------------+--------------+---------------------------+--------+------------------+-------
---------+--------------+
| CourierID | SenderName  | SenderAddress               | ReceiverName | ReceiverAddress           | Weight | Status           | Tracki
ngNumber | DeliveryDate |
+-----------+-------------+-----------------------------+--------------+---------------------------+--------+------------------+-------
---------+--------------+
|         1 | John        | 123 Main St, kolkata, CA    | John cena    | 456 Elm St, Anytown, CA   |   5.00 | In Transit       | TRK123
456      | 2024-01-20   |
|         2 | steve Smith | 456 Elm St, punjab, CA      | Roman Reigns | 123 Main St, Anytown, CA  |   2.50 | Delivered        | TRK654
321      | 2024-01-18   |
|         3 | Johnson     | 789 Oak St, gujarat, CA     | undertaker   | 101 Park Ave, Anytown, CA |   3.80 | Picked Up        | TRK987
123      | 2024-01-22   |
|         4 | virat       | 101 Park Ave, banglore, CA  | Randy orton  | 202 Pine St, Anytown, CA  |   1.25 | Out for Delivery | TRK456
789      | 2024-01-21   |
|         5 | devilliers  | 202 Pine St, delhi, CA      | leo          | 303 Birch St, Anytown, CA |   7.10 | Pending          | TRK321
987      | 2024-01-23   |
|         6 | Maxwell     | 303 Birch St, chennai, CA   | Berlin       | 404 Maple St, Anytown, CA |   4.60 | Delivered        | TRK741
852      | 2024-01-19   |
|         7 | Sachin      | 404 Maple St, mumbai, CA    | vikram       | 505 Cedar St, Anytown, CA |   2.00 | In Transit       | TRK632
541      | 2024-01-20   |
|         8 | Starc       | 505 Cedar St, rajasthan, CA | cm punk      | 606 Elm St, Anytown, CA   |   8.50 | Picked Up        | TRK951
753      | 2024-01-22   |
|         9 | Ram         | 606 Elm St, hyderabad, CA   | kane         | 707 Oak St, Anytown, CA   |   6.30 | Out for Delivery | TRK852
147      | 2024-01-21   |
|        10 | raina       | 707 Oak St, lucknow, CA     | karthik      | 123 Main St, Anytown, CA  |   3.10 | Pending          | TRK254
698      | 2024-01-23   |
+-----------+-------------+-----------------------------+--------------+---------------------------+--------+------------------+-------
---------+--------------+
10 rows in set (0.00 sec)
```

4. List all packages for a specific order:



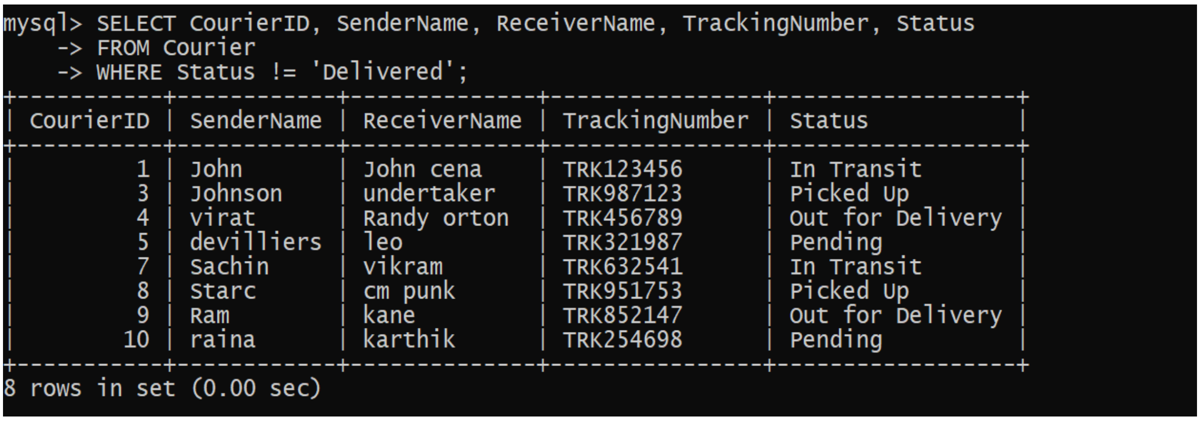
```
mysql> SELECT * FROM Courier
    -> WHERE CourierID = 5;
+-----------+------------+------------------------+--------------+---------------------------+--------+---------+----------------+-----
---------+
| CourierID | SenderName | SenderAddress          | ReceiverName | ReceiverAddress           | Weight | Status  | TrackingNumber | Deli
veryDate |
+-----------+------------+------------------------+--------------+---------------------------+--------+---------+----------------+-----
---------+
|         5 | devilliers | 202 Pine St, delhi, CA | leo          | 303 Birch St, Anytown, CA |   7.10 | Pending | TRK321987      | 2024
-01-23   |
+-----------+------------+------------------------+--------------+---------------------------+--------+---------+----------------+-----
---------+
1 row in set (0.01 sec)
```

5. List all deliveries for a specific courier:



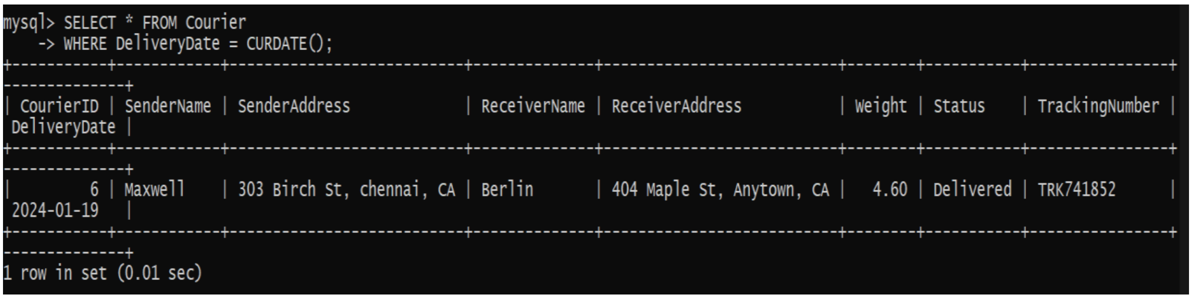
```
mysql> SELECT CourierID, SenderName, ReceiverName, TrackingNumber, Status, DeliveryDate, ServiceID
    -> FROM Courier
    -> WHERE CourierID = 3;
+-----------+------------+--------------+----------------+-----------+--------------+-----------+
| CourierID | SenderName | ReceiverName | TrackingNumber | Status    | DeliveryDate | ServiceID |
+-----------+------------+--------------+----------------+-----------+--------------+-----------+
|         3 | Johnson    | undertaker   | TRK987123      | Picked Up | 2024-01-22   |         3 |
+-----------+------------+--------------+----------------+-----------+--------------+-----------+
1 row in set (0.00 sec)
```

6. List all undelivered packages:



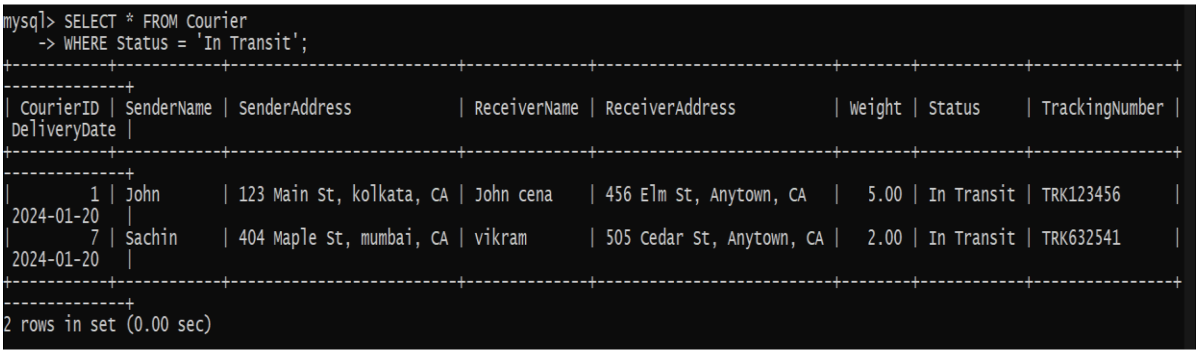
```
mysql> SELECT CourierID, SenderName, ReceiverName, TrackingNumber, Status
    -> FROM Courier
    -> WHERE Status != 'Delivered';
+-----------+------------+--------------+----------------+------------------+
| CourierID | SenderName | ReceiverName | TrackingNumber | Status           |
+-----------+------------+--------------+----------------+------------------+
|         1 | John       | John cena    | TRK123456      | In Transit       |
|         3 | Johnson    | undertaker   | TRK987123      | Picked Up        |
|         4 | virat      | Randy orton  | TRK456789      | Out for Delivery |
|         5 | devilliers | leo          | TRK321987      | Pending          |
|         7 | Sachin     | vikram       | TRK632541      | In Transit       |
|         8 | Starc      | cm punk      | TRK951753      | Picked Up        |
|         9 | Ram        | kane         | TRK852147      | Out for Delivery |
|        10 | raina      | karthik      | TRK254698      | Pending          |
+-----------+------------+--------------+----------------+------------------+
8 rows in set (0.00 sec)
```

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



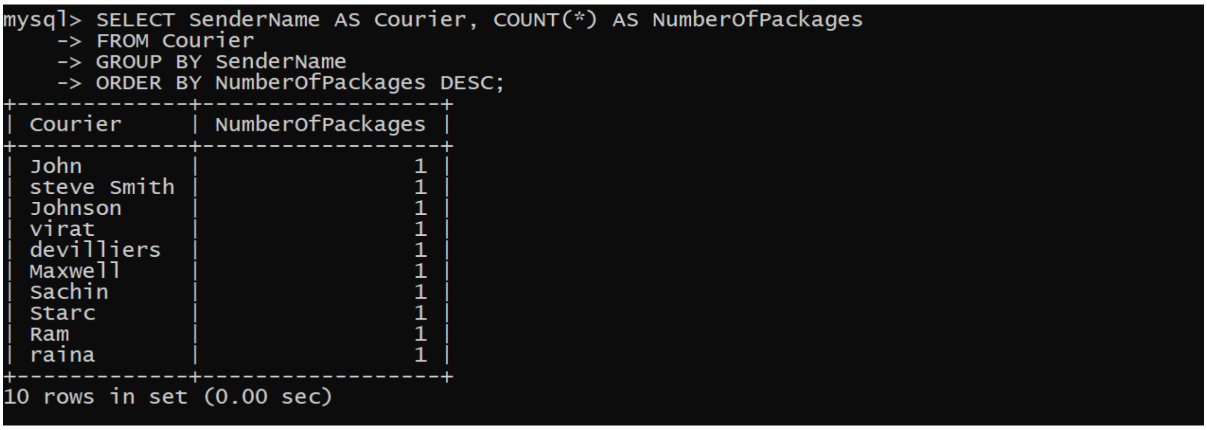
```
mysql> SELECT * FROM Courier
    -> WHERE DeliveryDate = CURDATE();
+-----------+------------+---------------------------+--------------+---------------------------+--------+-----------+----------------+
--------------+
| CourierID | SenderName | SenderAddress             | ReceiverName | ReceiverAddress           | Weight | Status    | TrackingNumber |
 DeliveryDate |
+-----------+------------+---------------------------+--------------+---------------------------+--------+-----------+----------------+
--------------+
|         6 | Maxwell    | 303 Birch St, chennai, CA | Berlin       | 404 Maple St, Anytown, CA |   4.60 | Delivered | TRK741852      |
 2024-01-19   |
+-----------+------------+---------------------------+--------------+---------------------------+--------+-----------+----------------+
--------------+
1 row in set (0.01 sec)
```

8. List all packages with a specific status:



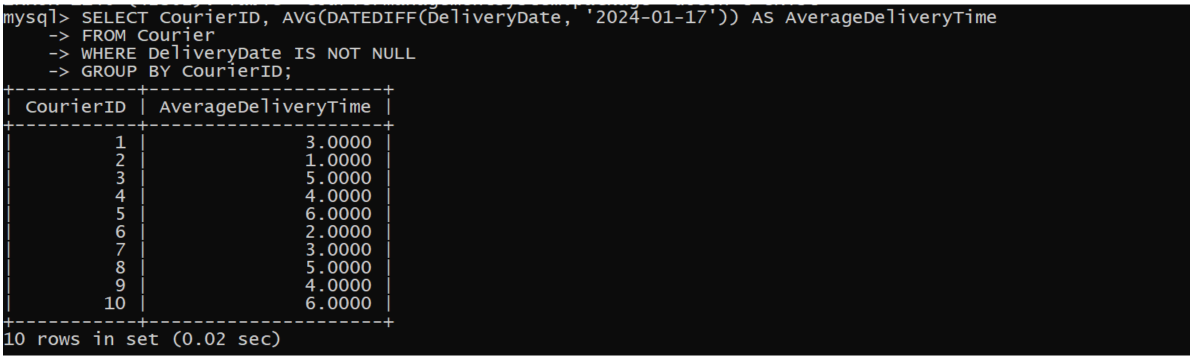
```
mysql> SELECT * FROM Courier
    -> WHERE Status = 'In Transit';
+-----------+------------+--------------------------+--------------+---------------------------+--------+------------+----------------+
--------------+
| CourierID | SenderName | SenderAddress            | ReceiverName | ReceiverAddress           | Weight | Status     | TrackingNumber |
 DeliveryDate |
+-----------+------------+--------------------------+--------------+---------------------------+--------+------------+----------------+
--------------+
|         1 | John       | 123 Main St, kolkata, CA | John cena    | 456 Elm St, Anytown, CA   |   5.00 | In Transit | TRK123456      |
 2024-01-20   |
|         7 | Sachin     | 404 Maple St, mumbai, CA | vikram       | 505 Cedar St, Anytown, CA |   2.00 | In Transit | TRK632541      |
 2024-01-20   |
+-----------+------------+--------------------------+--------------+---------------------------+--------+------------+----------------+
--------------+
2 rows in set (0.00 sec)
```

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



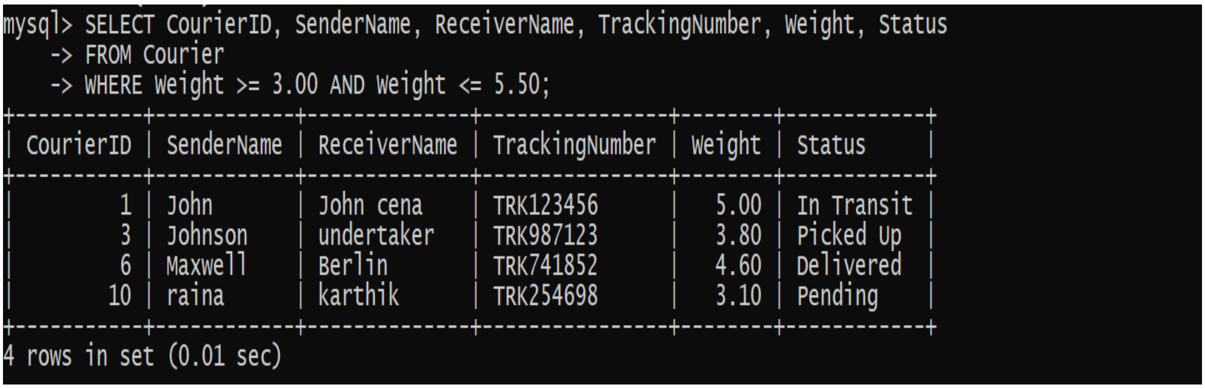
```
mysql> SELECT SenderName AS Courier, COUNT(*) AS NumberOfPackages
    -> FROM Courier
    -> GROUP BY SenderName
    -> ORDER BY NumberOfPackages DESC;
+-------------+------------------+
| Courier     | NumberOfPackages |
+-------------+------------------+
| John        |                1 |
| steve Smith |                1 |
| Johnson     |                1 |
| virat       |                1 |
| devilliers  |                1 |
| Maxwell     |                1 |
| Sachin      |                1 |
| Starc       |                1 |
| Ram         |                1 |
| raina       |                1 |
+-------------+------------------+
10 rows in set (0.00 sec)
```

10. Find the average delivery time for each courier



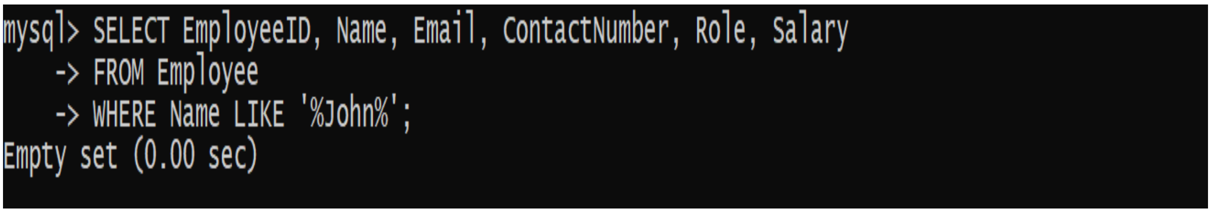
```
mysql> SELECT CourierID, AVG(DATEDIFF(DeliveryDate, '2024-01-17')) AS AverageDeliveryTime
    -> FROM Courier
    -> WHERE DeliveryDate IS NOT NULL
    -> GROUP BY CourierID;
+-----------+---------------------+
| CourierID | AverageDeliveryTime |
+-----------+---------------------+
|         1 |              3.0000 |
|         2 |              1.0000 |
|         3 |              5.0000 |
|         4 |              4.0000 |
|         5 |              6.0000 |
|         6 |              2.0000 |
|         7 |              3.0000 |
|         8 |              5.0000 |
|         9 |              4.0000 |
|        10 |              6.0000 |
+-----------+---------------------+
10 rows in set (0.02 sec)
```

11. List all packages with a specific weight range:



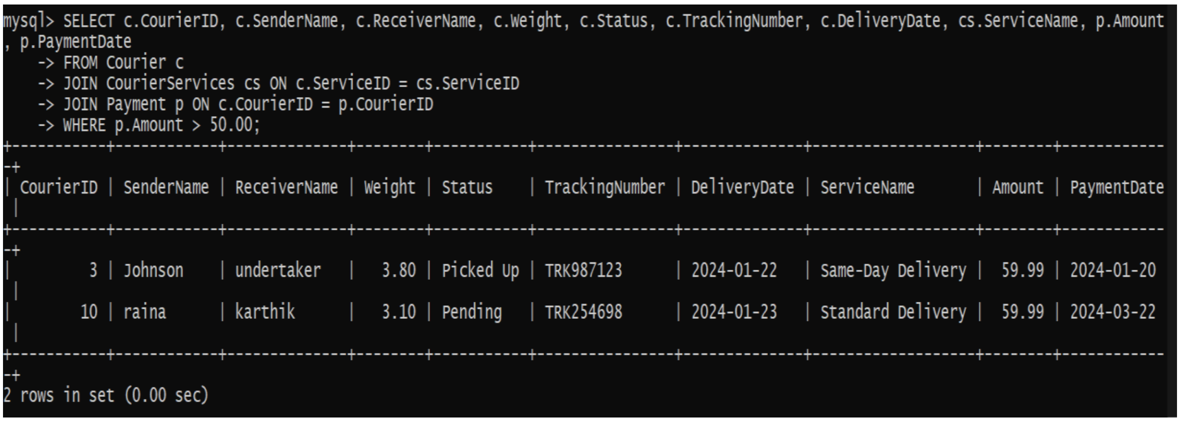
```
mysql> SELECT CourierID, SenderName, ReceiverName, TrackingNumber, Weight, Status
    -> FROM Courier
    -> WHERE Weight >= 3.00 AND Weight <= 5.50;
+-----------+------------+--------------+----------------+--------+------------+
| CourierID | SenderName | ReceiverName | TrackingNumber | Weight | Status     |
+-----------+------------+--------------+----------------+--------+------------+
|         1 | John       | John cena    | TRK123456      |   5.00 | In Transit |
|         3 | Johnson    | undertaker   | TRK987123      |   3.80 | Picked Up  |
|         6 | Maxwell    | Berlin       | TRK741852      |   4.60 | Delivered  |
|        10 | raina      | karthik      | TRK254698      |   3.10 | Pending    |
+-----------+------------+--------------+----------------+--------+------------+
4 rows in set (0.01 sec)
```

12. Retrieve employees whose names contain ’John’



```
mysql> SELECT EmployeeID, Name, Email, ContactNumber, Role, Salary
    -> FROM Employee
    -> WHERE Name LIKE '%John%';
Empty set (0.00 sec)
```

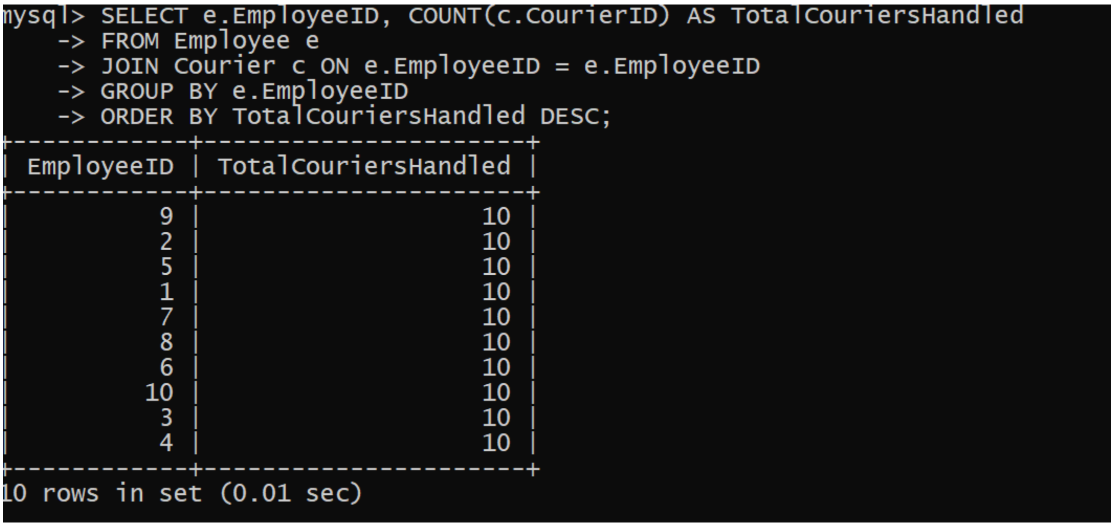
13. Retrieve all courier records with payments greater than $50.



```
mysql> SELECT c.CourierID, c.SenderName, c.ReceiverName, c.Weight, c.Status, c.TrackingNumber, c.DeliveryDate, cs.ServiceName, p.Amount
, p.PaymentDate
    -> FROM Courier c
    -> JOIN CourierServices cs ON c.ServiceID = cs.ServiceID
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> WHERE p.Amount > 50.00;
+-----------+------------+--------------+--------+-----------+----------------+--------------+-------------------+--------+------------
-+
| CourierID | SenderName | ReceiverName | Weight | Status    | TrackingNumber | DeliveryDate | ServiceName       | Amount | PaymentDate
 |
+-----------+------------+--------------+--------+-----------+----------------+--------------+-------------------+--------+------------
-+
|         3 | Johnson    | undertaker   |   3.80 | Picked Up | TRK987123      | 2024-01-22   | Same-Day Delivery |  59.99 | 2024-01-20
 |
|        10 | raina      | karthik      |   3.10 | Pending   | TRK254698      | 2024-01-23   | Standard Delivery |  59.99 | 2024-03-22
 |
+-----------+------------+--------------+--------+-----------+----------------+--------------+-------------------+--------+------------
-+
2 rows in set (0.00 sec)
```

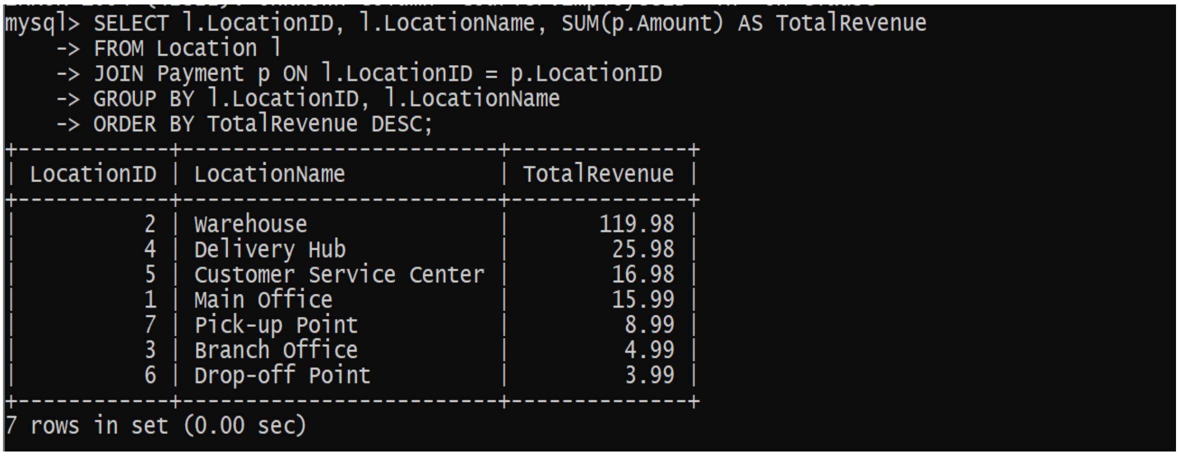
Task 3: GroupBy, Aggregate Functions, Having, Order By, where

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



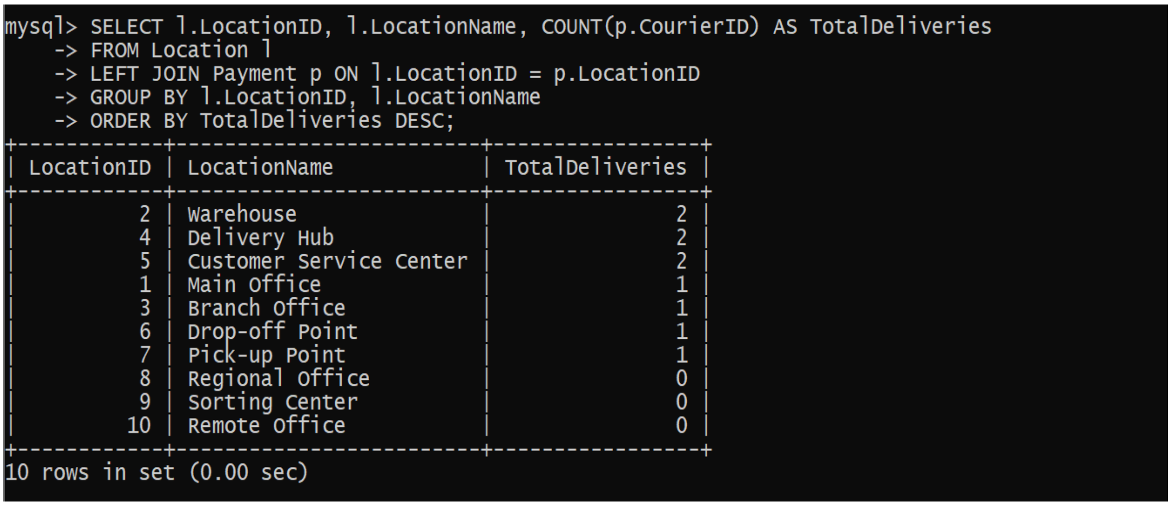
```
mysql> SELECT e.EmployeeID, COUNT(c.CourierID) AS TotalCouriersHandled
    -> FROM Employee e
    -> JOIN Courier c ON e.EmployeeID = e.EmployeeID
    -> GROUP BY e.EmployeeID
    -> ORDER BY TotalCouriersHandled DESC;
+------------+----------------------+
| EmployeeID | TotalCouriersHandled |
+------------+----------------------+
|          9 |                   10 |
|          2 |                   10 |
|          5 |                   10 |
|          1 |                   10 |
|          7 |                   10 |
|          8 |                   10 |
|          6 |                   10 |
|         10 |                   10 |
|          3 |                   10 |
|          4 |                   10 |
+------------+----------------------+
10 rows in set (0.01 sec)
```

15. Calculate the total revenue generated by each location



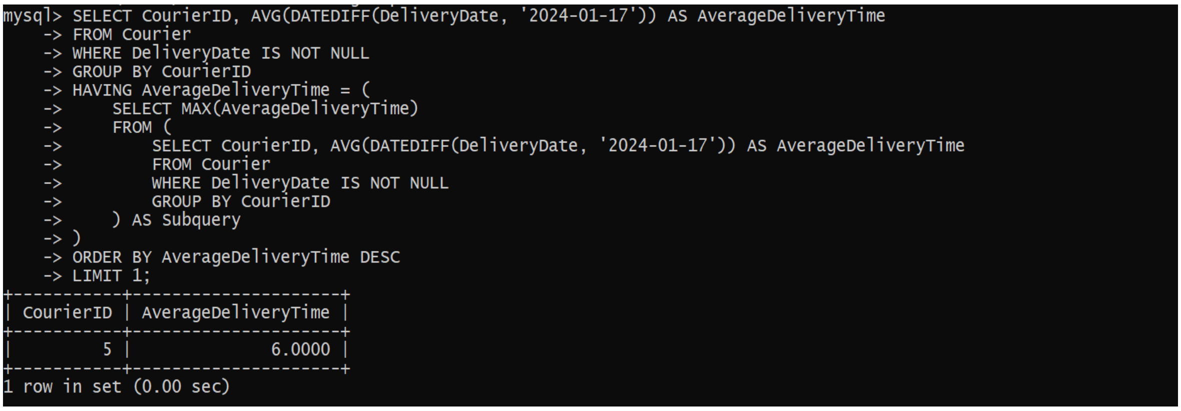
```
mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalRevenue
    -> FROM Location l
    -> JOIN Payment p ON l.LocationID = p.LocationID
    -> GROUP BY l.LocationID, l.LocationName
    -> ORDER BY TotalRevenue DESC;
+------------+-------------------------+--------------+
| LocationID | LocationName            | TotalRevenue |
+------------+-------------------------+--------------+
|          2 | Warehouse               |       119.98 |
|          4 | Delivery Hub            |        25.98 |
|          5 | Customer Service Center |        16.98 |
|          1 | Main Office             |        15.99 |
|          7 | Pick-up Point           |         8.99 |
|          3 | Branch Office           |         4.99 |
|          6 | Drop-off Point          |         3.99 |
+------------+-------------------------+--------------+
7 rows in set (0.00 sec)
```

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



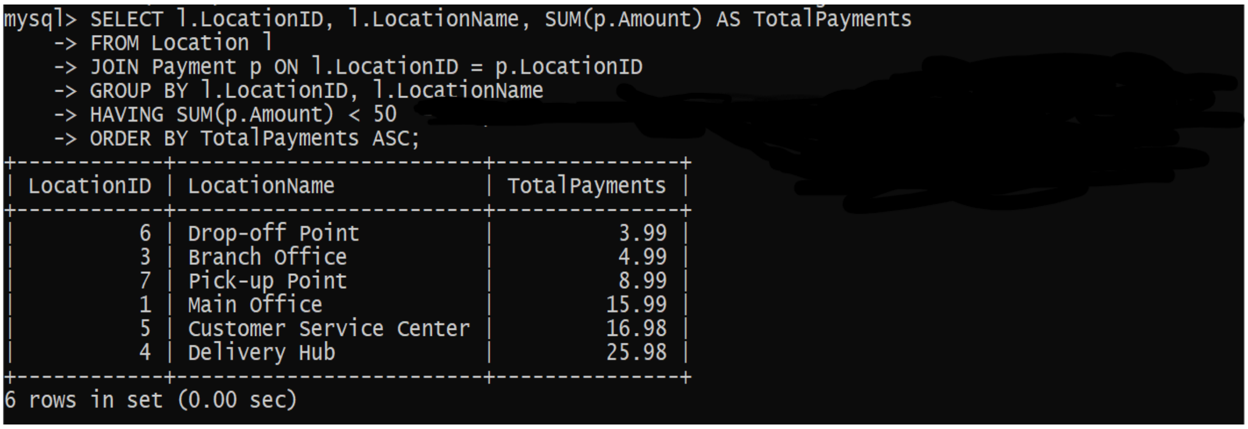
```
mysql> SELECT l.LocationID, l.LocationName, COUNT(p.CourierID) AS TotalDeliveries
    -> FROM Location l
    -> LEFT JOIN Payment p ON l.LocationID = p.LocationID
    -> GROUP BY l.LocationID, l.LocationName
    -> ORDER BY TotalDeliveries DESC;
+------------+-------------------------+-----------------+
| LocationID | LocationName            | TotalDeliveries |
+------------+-------------------------+-----------------+
|          2 | Warehouse               |               2 |
|          4 | Delivery Hub            |               2 |
|          5 | Customer Service Center |               2 |
|          1 | Main Office             |               1 |
|          3 | Branch Office           |               1 |
|          6 | Drop-off Point          |               1 |
|          7 | Pick-up Point           |               1 |
|          8 | Regional Office         |               0 |
|          9 | Sorting Center          |               0 |
|         10 | Remote Office           |               0 |
+------------+-------------------------+-----------------+
10 rows in set (0.00 sec)
```

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



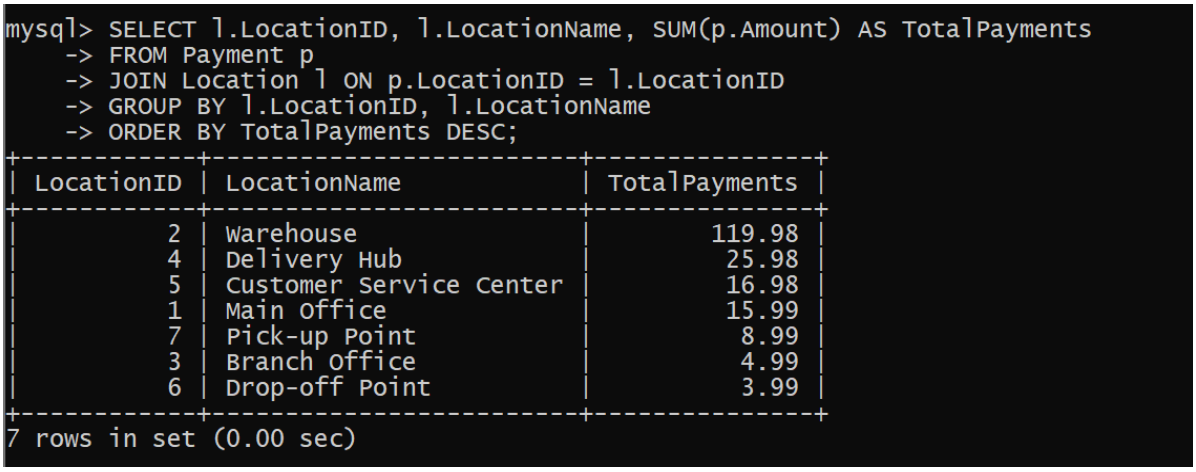
```
mysql> SELECT CourierID, AVG(DATEDIFF(DeliveryDate, '2024-01-17')) AS AverageDeliveryTime
    -> FROM Courier
    -> WHERE DeliveryDate IS NOT NULL
    -> GROUP BY CourierID
    -> HAVING AverageDeliveryTime = (
    ->     SELECT MAX(AverageDeliveryTime)
    ->     FROM (
    ->         SELECT CourierID, AVG(DATEDIFF(DeliveryDate, '2024-01-17')) AS AverageDeliveryTime
    ->         FROM Courier
    ->         WHERE DeliveryDate IS NOT NULL
    ->         GROUP BY CourierID
    ->     ) AS Subquery
    -> )
    -> ORDER BY AverageDeliveryTime DESC
    -> LIMIT 1;
+-----------+---------------------+
| CourierID | AverageDeliveryTime |
+-----------+---------------------+
|         5 |              6.0000 |
+-----------+---------------------+
1 row in set (0.00 sec)
```

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



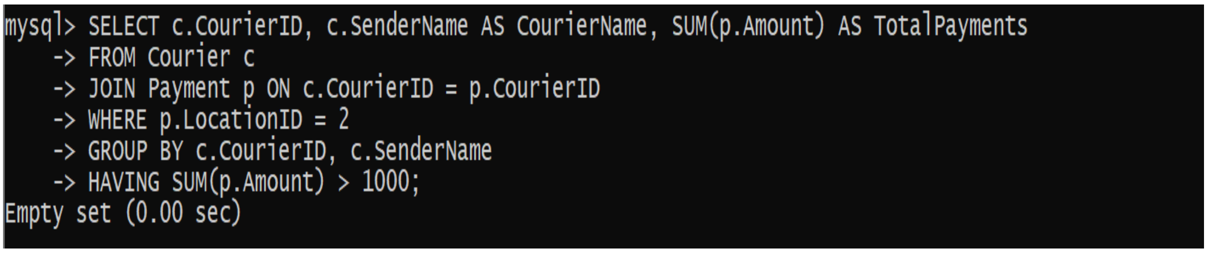
```
mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments
    -> FROM Location l
    -> JOIN Payment p ON l.LocationID = p.LocationID
    -> GROUP BY l.LocationID, l.LocationName
    -> HAVING SUM(p.Amount) < 50 [redacted]
    -> ORDER BY TotalPayments ASC;
+------------+-------------------------+---------------+
| LocationID | LocationName            | TotalPayments |
+------------+-------------------------+---------------+
|          6 | Drop-off Point          |          3.99 |
|          3 | Branch Office           |          4.99 |
|          7 | Pick-up Point           |          8.99 |
|          1 | Main Office             |         15.99 |
|          5 | Customer Service Center |         16.98 |
|          4 | Delivery Hub            |         25.98 |
+------------+-------------------------+---------------+
6 rows in set (0.00 sec)
```

19. Calculate Total Payments per Location



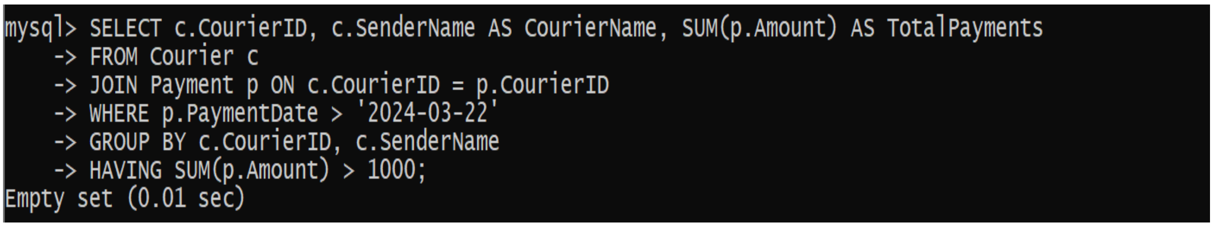
```
mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments
    -> FROM Payment p
    -> JOIN Location l ON p.LocationID = l.LocationID
    -> GROUP BY l.LocationID, l.LocationName
    -> ORDER BY TotalPayments DESC;
+------------+-------------------------+---------------+
| LocationID | LocationName            | TotalPayments |
+------------+-------------------------+---------------+
|          2 | Warehouse               |        119.98 |
|          4 | Delivery Hub            |         25.98 |
|          5 | Customer Service Center |         16.98 |
|          1 | Main Office             |         15.99 |
|          7 | Pick-up Point           |          8.99 |
|          3 | Branch Office           |          4.99 |
|          6 | Drop-off Point          |          3.99 |
+------------+-------------------------+---------------+
7 rows in set (0.00 sec)
```

20. Retrieve couriers who have received payments totaling more than $1000 in a specific location (LocationID = 2):



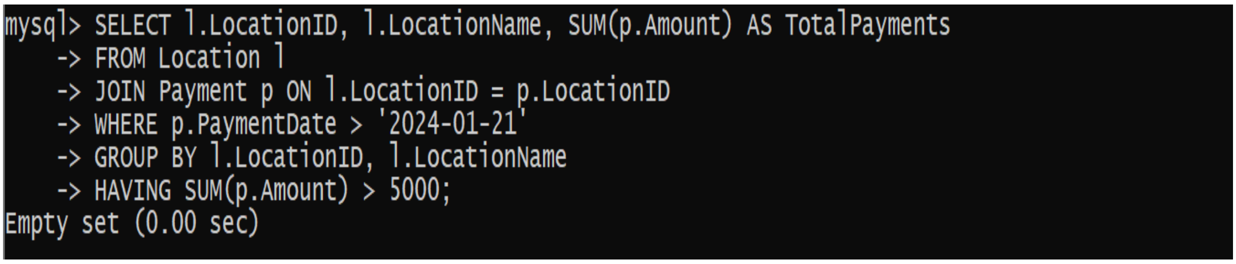
```
mysql> SELECT c.CourierID, c.SenderName AS CourierName, SUM(p.Amount) AS TotalPayments
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> WHERE p.LocationID = 2
    -> GROUP BY c.CourierID, c.SenderName
    -> HAVING SUM(p.Amount) > 1000;
Empty set (0.00 sec)
```

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



```
mysql> SELECT c.CourierID, c.SenderName AS CourierName, SUM(p.Amount) AS TotalPayments
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> WHERE p.PaymentDate > '2024-03-22'
    -> GROUP BY c.CourierID, c.SenderName
    -> HAVING SUM(p.Amount) > 1000;
Empty set (0.01 sec)
```

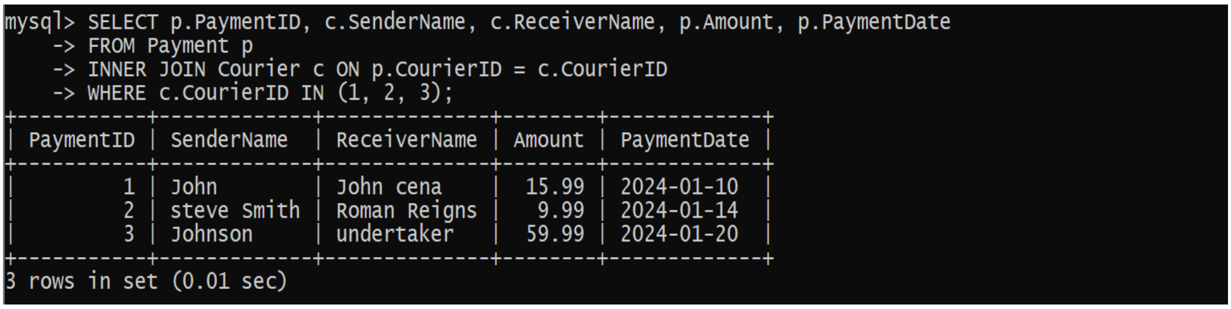
22. Retrieve locations where the total amount received is more than $5000 before a certain date (PaymentDate > ’YYYY-MM-DD’)



```
mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments
    -> FROM Location l
    -> JOIN Payment p ON l.LocationID = p.LocationID
    -> WHERE p.PaymentDate > '2024-01-21'
    -> GROUP BY l.LocationID, l.LocationName
    -> HAVING SUM(p.Amount) > 5000;
Empty set (0.00 sec)
```

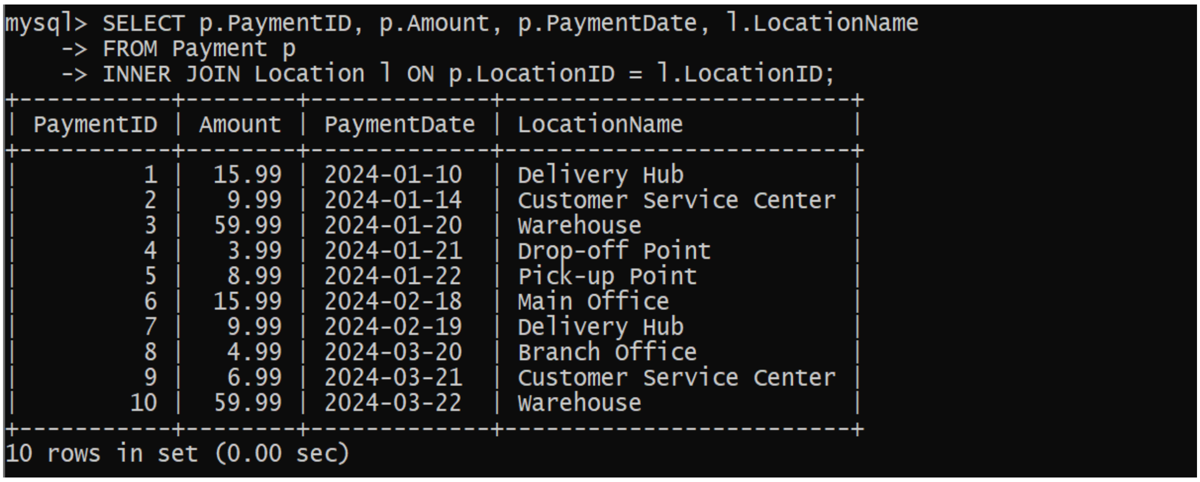
Task 4: Inner Join,Full Outer Join, Cross Join, Left Outer Join,Right Outer Join

23.Retrieve Payments with Courier Information



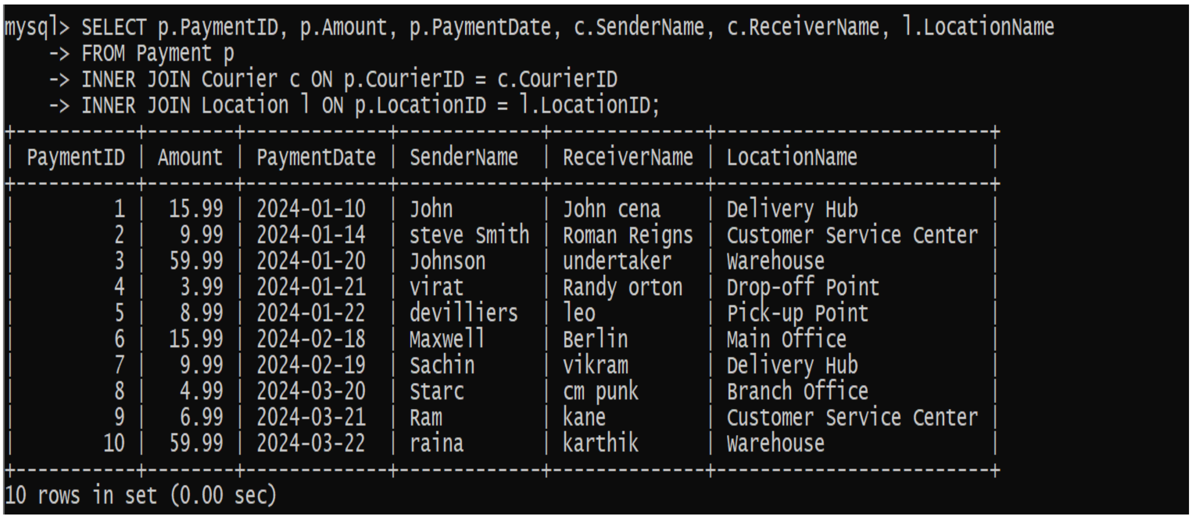
```
mysql> SELECT p.PaymentID, c.SenderName, c.ReceiverName, p.Amount, p.PaymentDate
    -> FROM Payment p
    -> INNER JOIN Courier c ON p.CourierID = c.CourierID
    -> WHERE c.CourierID IN (1, 2, 3);
+-----------+-------------+--------------+--------+-------------+
| PaymentID | SenderName  | ReceiverName | Amount | PaymentDate |
+-----------+-------------+--------------+--------+-------------+
|         1 | John        | John cena    |  15.99 | 2024-01-10  |
|         2 | steve Smith | Roman Reigns |   9.99 | 2024-01-14  |
|         3 | Johnson     | undertaker   |  59.99 | 2024-01-20  |
+-----------+-------------+--------------+--------+-------------+
3 rows in set (0.01 sec)
```

24.Retrieve Payments with Location Information



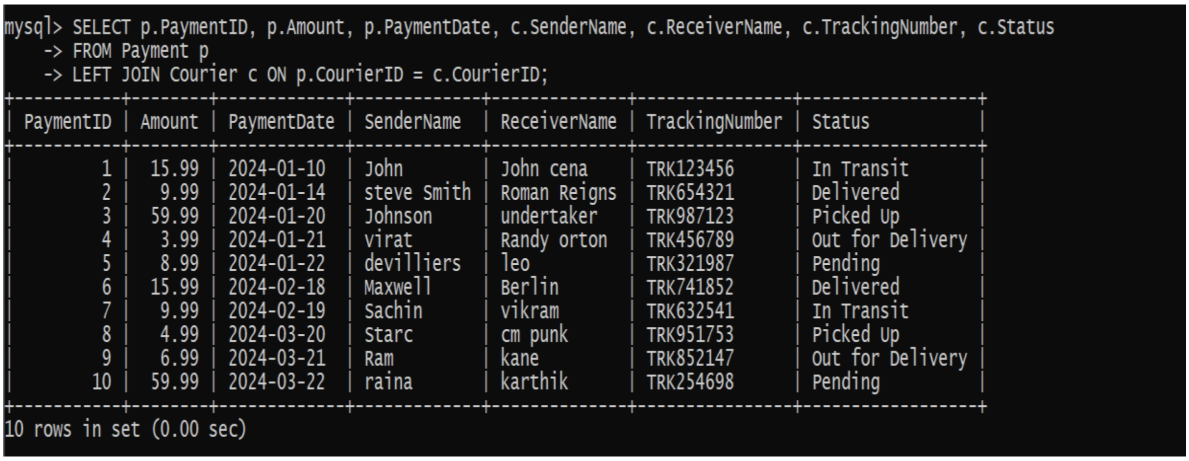
```
mysql> SELECT p.PaymentID, p.Amount, p.PaymentDate, l.LocationName
    -> FROM Payment p
    -> INNER JOIN Location l ON p.LocationID = l.LocationID;
+-----------+--------+-------------+-------------------------+
| PaymentID | Amount | PaymentDate | LocationName            |
+-----------+--------+-------------+-------------------------+
|         1 |  15.99 | 2024-01-10  | Delivery Hub            |
|         2 |   9.99 | 2024-01-14  | Customer Service Center |
|         3 |  59.99 | 2024-01-20  | Warehouse               |
|         4 |   3.99 | 2024-01-21  | Drop-off Point          |
|         5 |   8.99 | 2024-01-22  | Pick-up Point           |
|         6 |  15.99 | 2024-02-18  | Main Office             |
|         7 |   9.99 | 2024-02-19  | Delivery Hub            |
|         8 |   4.99 | 2024-03-20  | Branch Office           |
|         9 |   6.99 | 2024-03-21  | Customer Service Center |
|        10 |  59.99 | 2024-03-22  | Warehouse               |
+-----------+--------+-------------+-------------------------+
10 rows in set (0.00 sec)
```

25.Retrieve Payments with Courier and Location Information



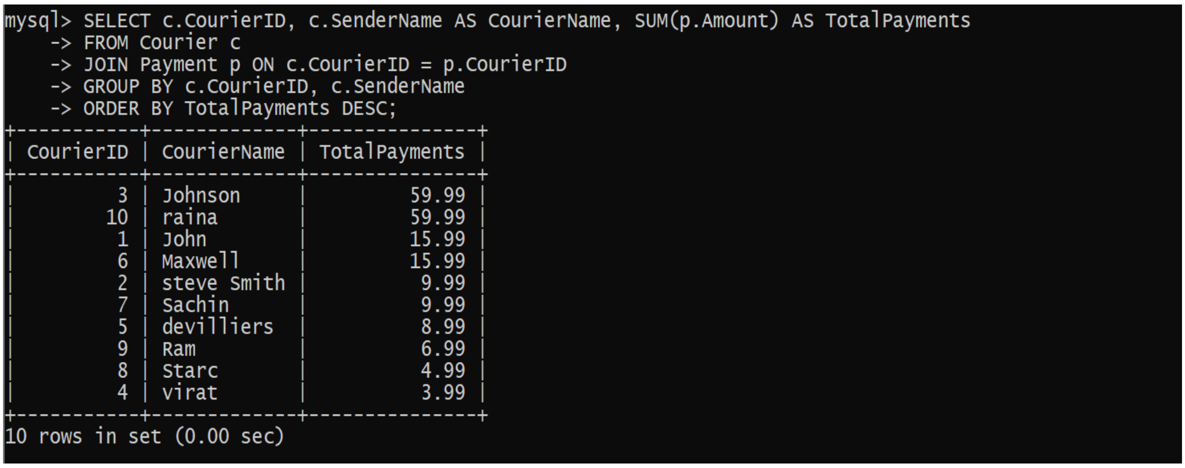
```
mysql> SELECT p.PaymentID, p.Amount, p.PaymentDate, c.SenderName, c.ReceiverName, l.LocationName
    -> FROM Payment p
    -> INNER JOIN Courier c ON p.CourierID = c.CourierID
    -> INNER JOIN Location l ON p.LocationID = l.LocationID;
+-----------+--------+-------------+-------------+--------------+-------------------------+
| PaymentID | Amount | PaymentDate | SenderName  | ReceiverName | LocationName            |
+-----------+--------+-------------+-------------+--------------+-------------------------+
|         1 |  15.99 | 2024-01-10  | John        | John cena    | Delivery Hub            |
|         2 |   9.99 | 2024-01-14  | steve Smith | Roman Reigns | Customer Service Center |
|         3 |  59.99 | 2024-01-20  | Johnson     | undertaker   | Warehouse               |
|         4 |   3.99 | 2024-01-21  | virat       | Randy orton  | Drop-off Point          |
|         5 |   8.99 | 2024-01-22  | devilliers  | leo          | Pick-up Point           |
|         6 |  15.99 | 2024-02-18  | Maxwell     | Berlin       | Main Office             |
|         7 |   9.99 | 2024-02-19  | Sachin      | vikram       | Delivery Hub            |
|         8 |   4.99 | 2024-03-20  | Starc       | cm punk      | Branch Office           |
|         9 |   6.99 | 2024-03-21  | Ram         | kane         | Customer Service Center |
|        10 |  59.99 | 2024-03-22  | raina       | karthik      | Warehouse               |
+-----------+--------+-------------+-------------+--------------+-------------------------+
10 rows in set (0.00 sec)
```

26.List all payments with courier details



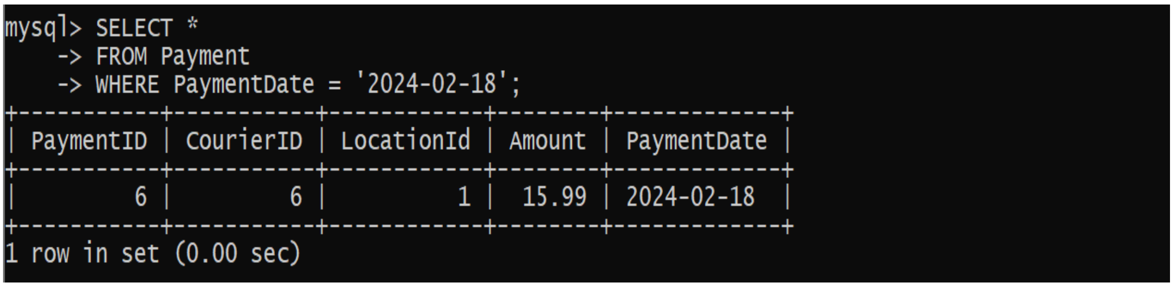
```
mysql> SELECT p.PaymentID, p.Amount, p.PaymentDate, c.SenderName, c.ReceiverName, c.TrackingNumber, c.Status
    -> FROM Payment p
    -> LEFT JOIN Courier c ON p.CourierID = c.CourierID;
+-----------+--------+-------------+-------------+--------------+----------------+------------------+
| PaymentID | Amount | PaymentDate | SenderName  | ReceiverName | TrackingNumber | Status           |
+-----------+--------+-------------+-------------+--------------+----------------+------------------+
|         1 |  15.99 | 2024-01-10  | John        | John cena    | TRK123456      | In Transit       |
|         2 |   9.99 | 2024-01-14  | steve Smith | Roman Reigns | TRK654321      | Delivered        |
|         3 |  59.99 | 2024-01-20  | Johnson     | undertaker   | TRK987123      | Picked Up        |
|         4 |   3.99 | 2024-01-21  | virat       | Randy orton  | TRK456789      | Out for Delivery |
|         5 |   8.99 | 2024-01-22  | devilliers  | leo          | TRK321987      | Pending          |
|         6 |  15.99 | 2024-02-18  | Maxwell     | Berlin       | TRK741852      | Delivered        |
|         7 |   9.99 | 2024-02-19  | Sachin      | vikram       | TRK632541      | In Transit       |
|         8 |   4.99 | 2024-03-20  | Starc       | cm punk      | TRK951753      | Picked Up        |
|         9 |   6.99 | 2024-03-21  | Ram         | kane         | TRK852147      | Out for Delivery |
|        10 |  59.99 | 2024-03-22  | raina       | karthik      | TRK254698      | Pending          |
+-----------+--------+-------------+-------------+--------------+----------------+------------------+
10 rows in set (0.00 sec)
```

27. Total payments received for each courier



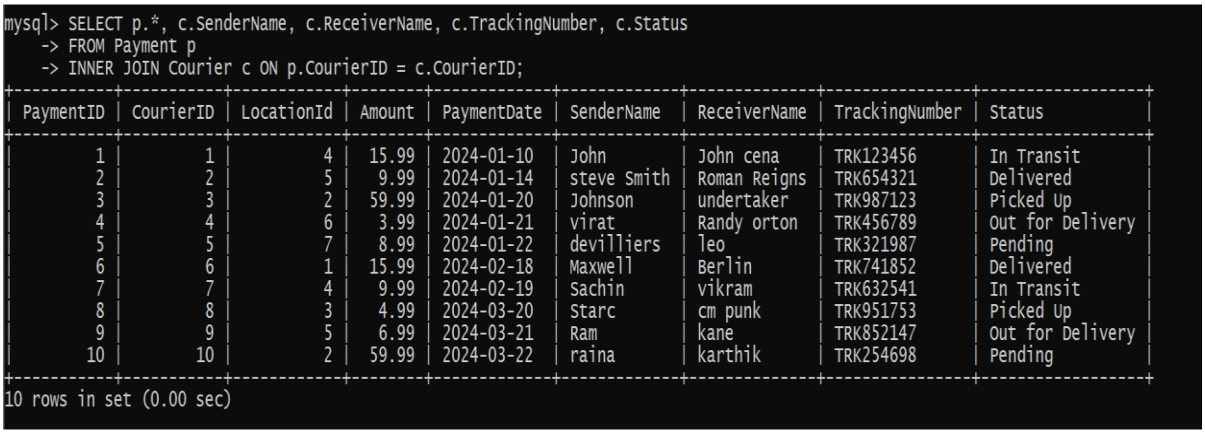
```
mysql> SELECT c.CourierID, c.SenderName AS CourierName, SUM(p.Amount) AS TotalPayments
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> GROUP BY c.CourierID, c.SenderName
    -> ORDER BY TotalPayments DESC;
+-----------+-------------+---------------+
| CourierID | CourierName | TotalPayments |
+-----------+-------------+---------------+
|         3 | Johnson     |         59.99 |
|        10 | raina       |         59.99 |
|         1 | John        |         15.99 |
|         6 | Maxwell     |         15.99 |
|         2 | steve Smith |          9.99 |
|         7 | Sachin      |          9.99 |
|         5 | devilliers  |          8.99 |
|         9 | Ram         |          6.99 |
|         8 | Starc       |          4.99 |
|         4 | virat       |          3.99 |
+-----------+-------------+---------------+
10 rows in set (0.00 sec)
```

28. List payments made on a specific date



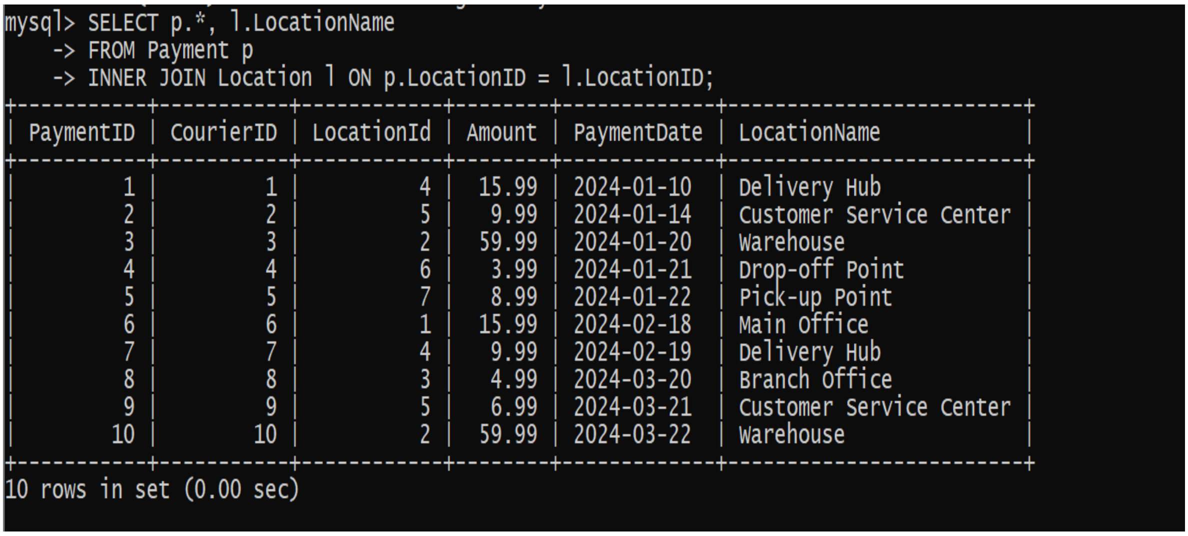
```
mysql> SELECT *
    -> FROM Payment
    -> WHERE PaymentDate = '2024-02-18';
+-----------+-----------+------------+--------+-------------+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----------+-----------+------------+--------+-------------+
|         6 |         6 |          1 |  15.99 | 2024-02-18  |
+-----------+-----------+------------+--------+-------------+
1 row in set (0.00 sec)
```

29. Get Courier Information for Each Payment



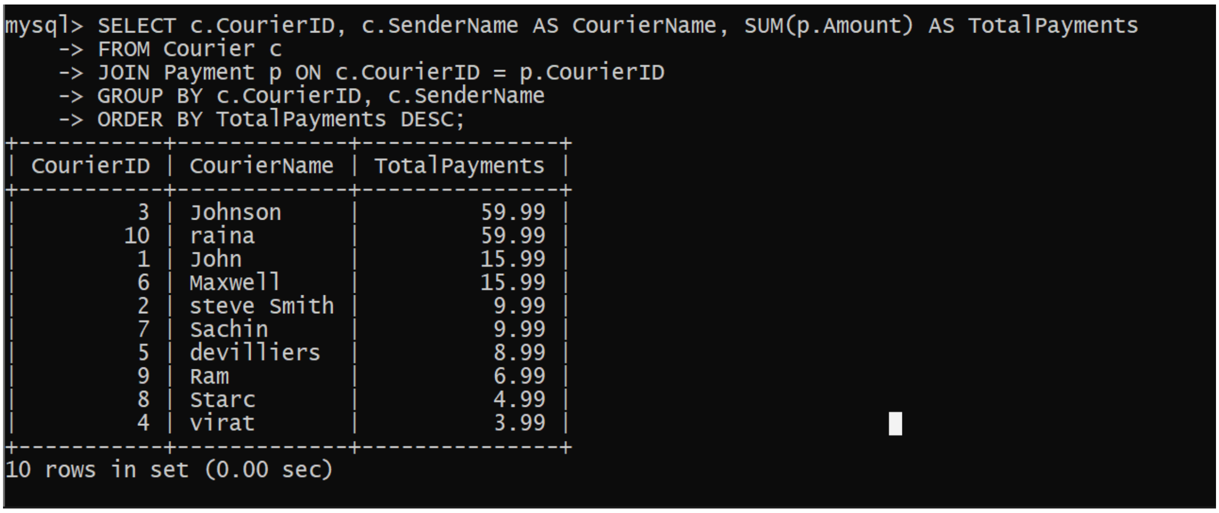
```
mysql> SELECT p.*, c.SenderName, c.ReceiverName, c.TrackingNumber, c.Status
    -> FROM Payment p
    -> INNER JOIN Courier c ON p.CourierID = c.CourierID;
+-----------+-----------+------------+--------+-------------+-------------+--------------+----------------+------------------+
| PaymentID | CourierID | LocationId | Amount | PaymentDate | SenderName  | ReceiverName | TrackingNumber | Status           |
+-----------+-----------+------------+--------+-------------+-------------+--------------+----------------+------------------+
|         1 |         1 |          4 |  15.99 | 2024-01-10  | John        | John cena    | TRK123456      | In Transit       |
|         2 |         2 |          5 |   9.99 | 2024-01-14  | steve Smith | Roman Reigns | TRK654321      | Delivered        |
|         3 |         3 |          2 |  59.99 | 2024-01-20  | Johnson     | undertaker   | TRK987123      | Picked Up        |
|         4 |         4 |          6 |   3.99 | 2024-01-21  | virat       | Randy orton  | TRK456789      | Out for Delivery |
|         5 |         5 |          7 |   8.99 | 2024-01-22  | devilliers  | leo          | TRK321987      | Pending          |
|         6 |         6 |          1 |  15.99 | 2024-02-18  | Maxwell     | Berlin       | TRK741852      | Delivered        |
|         7 |         7 |          4 |   9.99 | 2024-02-19  | Sachin      | vikram       | TRK632541      | In Transit       |
|         8 |         8 |          3 |   4.99 | 2024-03-20  | Starc       | cm punk      | TRK951753      | Picked Up        |
|         9 |         9 |          5 |   6.99 | 2024-03-21  | Ram         | kane         | TRK852147      | Out for Delivery |
|        10 |        10 |          2 |  59.99 | 2024-03-22  | raina       | karthik      | TRK254698      | Pending          |
+-----------+-----------+------------+--------+-------------+-------------+--------------+----------------+------------------+
10 rows in set (0.00 sec)
```

30. Get Payment Details with Location



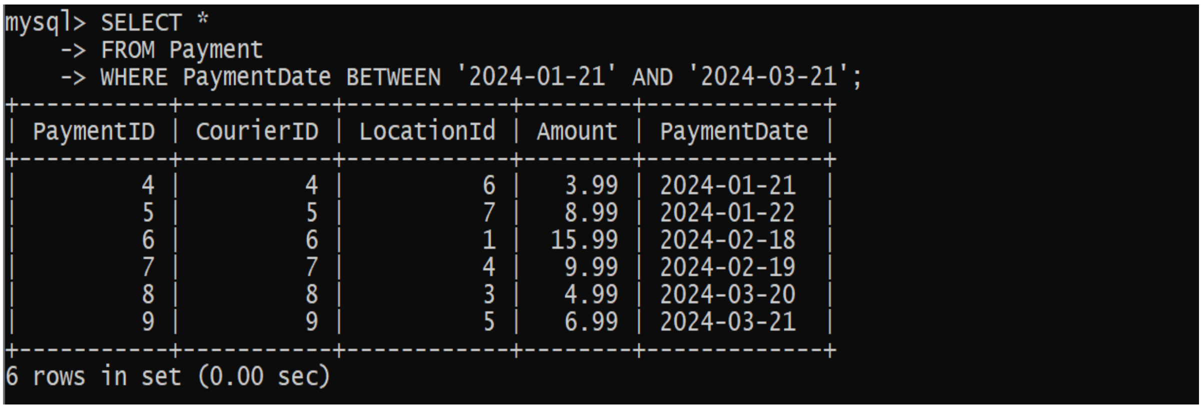
```
mysql> SELECT p.*, l.LocationName
    -> FROM Payment p
    -> INNER JOIN Location l ON p.LocationID = l.LocationID;
+-----------+-----------+------------+--------+-------------+-------------------------+
| PaymentID | CourierID | LocationId | Amount | PaymentDate | LocationName            |
+-----------+-----------+------------+--------+-------------+-------------------------+
|         1 |         1 |          4 |  15.99 | 2024-01-10  | Delivery Hub            |
|         2 |         2 |          5 |   9.99 | 2024-01-14  | Customer Service Center |
|         3 |         3 |          2 |  59.99 | 2024-01-20  | Warehouse               |
|         4 |         4 |          6 |   3.99 | 2024-01-21  | Drop-off Point          |
|         5 |         5 |          7 |   8.99 | 2024-01-22  | Pick-up Point           |
|         6 |         6 |          1 |  15.99 | 2024-02-18  | Main Office             |
|         7 |         7 |          4 |   9.99 | 2024-02-19  | Delivery Hub            |
|         8 |         8 |          3 |   4.99 | 2024-03-20  | Branch Office           |
|         9 |         9 |          5 |   6.99 | 2024-03-21  | Customer Service Center |
|        10 |        10 |          2 |  59.99 | 2024-03-22  | Warehouse               |
+-----------+-----------+------------+--------+-------------+-------------------------+
10 rows in set (0.00 sec)
```

31. Calculating Total Payments for Each Courier



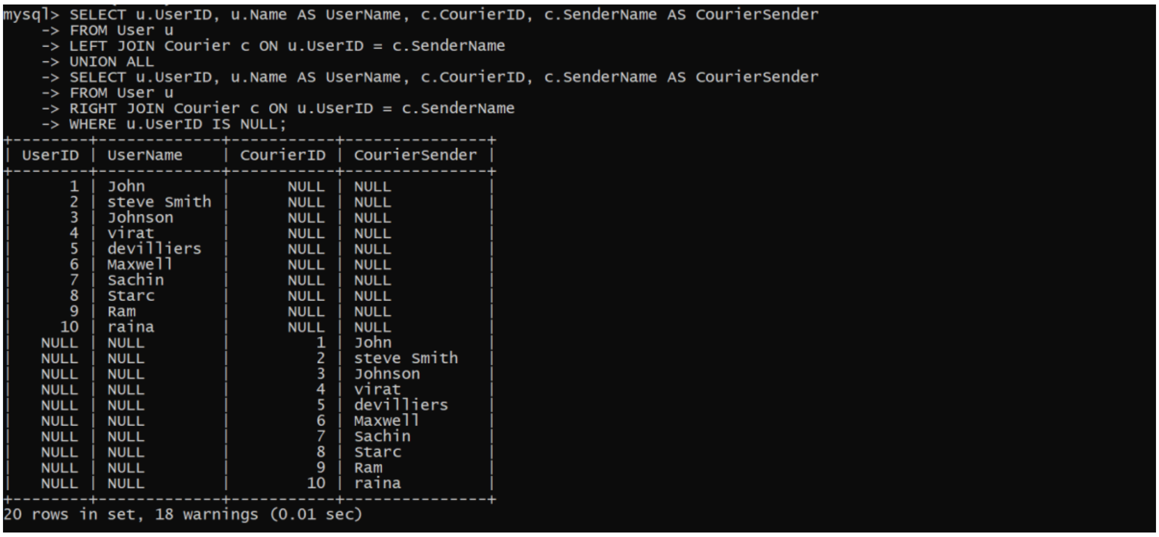
```
mysql> SELECT c.CourierID, c.SenderName AS CourierName, SUM(p.Amount) AS TotalPayments
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> GROUP BY c.CourierID, c.SenderName
    -> ORDER BY TotalPayments DESC;
+-----------+-------------+---------------+
| CourierID | CourierName | TotalPayments |
+-----------+-------------+---------------+
|         3 | Johnson     |         59.99 |
|        10 | raina       |         59.99 |
|         1 | John        |         15.99 |
|         6 | Maxwell     |         15.99 |
|         2 | steve Smith |          9.99 |
|         7 | Sachin      |          9.99 |
|         5 | devilliers  |          8.99 |
|         9 | Ram         |          6.99 |
|         8 | Starc       |          4.99 |
|         4 | virat       |          3.99 |
+-----------+-------------+---------------+
10 rows in set (0.00 sec)
```

32. List Payments Within a Date Range



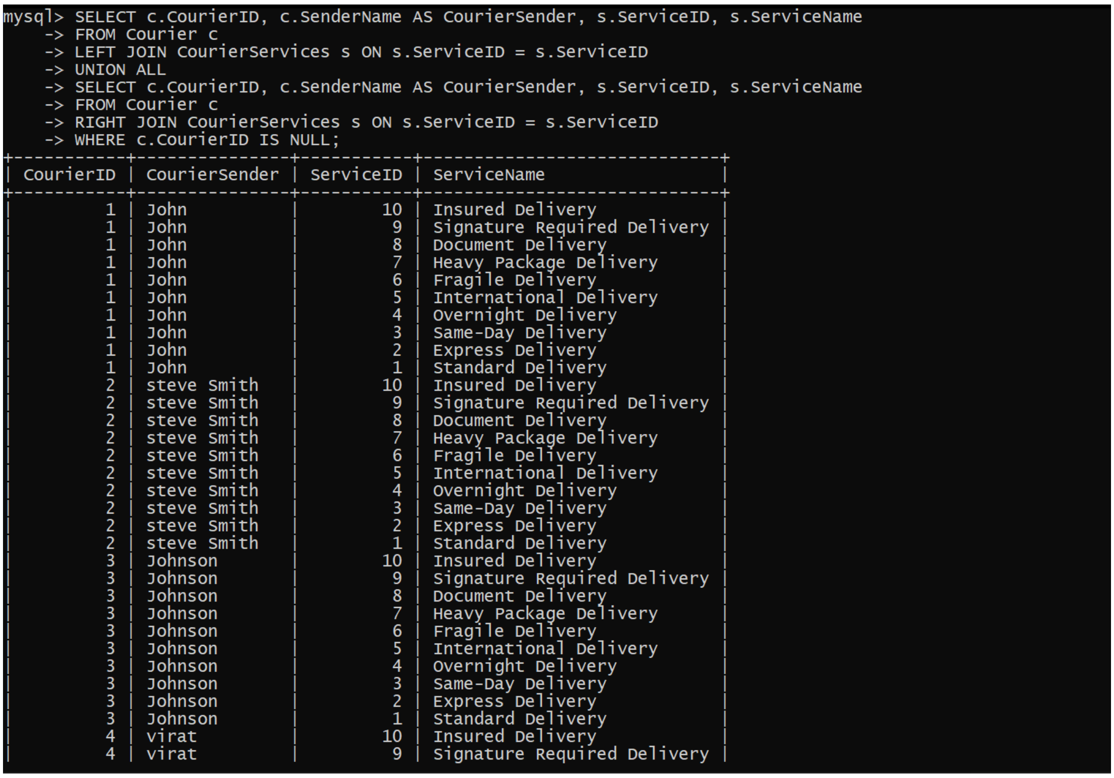
```
mysql> SELECT *
    -> FROM Payment
    -> WHERE PaymentDate BETWEEN '2024-01-21' AND '2024-03-21';
+-----------+-----------+------------+--------+-------------+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----------+-----------+------------+--------+-------------+
|         4 |         4 |          6 |   3.99 | 2024-01-21  |
|         5 |         5 |          7 |   8.99 | 2024-01-22  |
|         6 |         6 |          1 |  15.99 | 2024-02-18  |
|         7 |         7 |          4 |   9.99 | 2024-02-19  |
|         8 |         8 |          3 |   4.99 | 2024-03-20  |
|         9 |         9 |          5 |   6.99 | 2024-03-21  |
+-----------+-----------+------------+--------+-------------+
6 rows in set (0.00 sec)
```

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

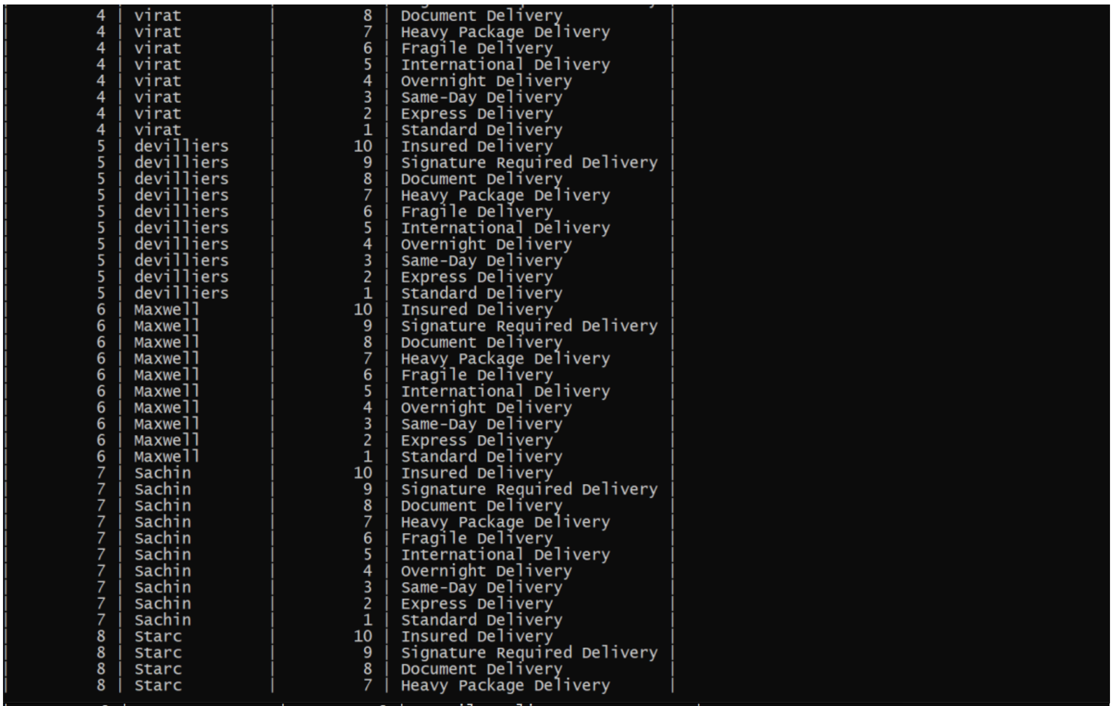


```
mysql> SELECT u.UserID, u.Name AS UserName, c.CourierID, c.SenderName AS CourierSender
    -> FROM User u
    -> LEFT JOIN Courier c ON u.UserID = c.SenderName
    -> UNION ALL
    -> SELECT u.UserID, u.Name AS UserName, c.CourierID, c.SenderName AS CourierSender
    -> FROM User u
    -> RIGHT JOIN Courier c ON u.UserID = c.SenderName
    -> WHERE u.UserID IS NULL;
+--------+-------------+-----------+---------------+
| UserID | UserName    | CourierID | CourierSender |
+--------+-------------+-----------+---------------+
|      1 | John        |      NULL | NULL          |
|      2 | steve Smith |      NULL | NULL          |
|      3 | Johnson     |      NULL | NULL          |
|      4 | virat       |      NULL | NULL          |
|      5 | devilliers  |      NULL | NULL          |
|      6 | Maxwell     |      NULL | NULL          |
|      7 | Sachin      |      NULL | NULL          |
|      8 | Starc       |      NULL | NULL          |
|      9 | Ram         |      NULL | NULL          |
|     10 | raina       |      NULL | NULL          |
|   NULL | NULL        |         1 | John          |
|   NULL | NULL        |         2 | steve Smith   |
|   NULL | NULL        |         3 | Johnson       |
|   NULL | NULL        |         4 | virat         |
|   NULL | NULL        |         5 | devilliers    |
|   NULL | NULL        |         6 | Maxwell       |
|   NULL | NULL        |         7 | Sachin        |
|   NULL | NULL        |         8 | Starc         |
|   NULL | NULL        |         9 | Ram           |
|   NULL | NULL        |        10 | raina         |
+--------+-------------+-----------+---------------+
20 rows in set, 18 warnings (0.01 sec)
```

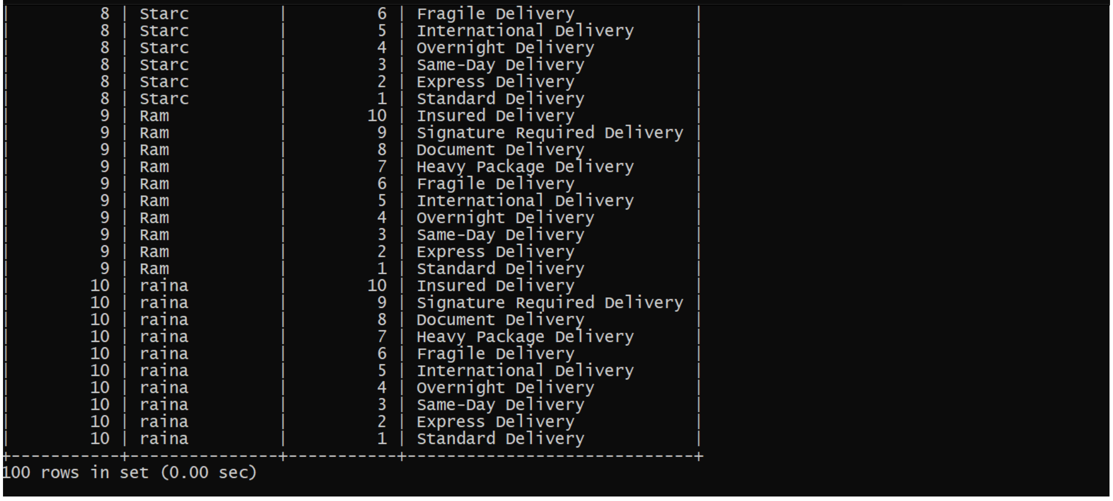
34. Retrieve a list of all couriers and their corresponding services, including cases where there are no matches on either side



```
mysql> SELECT c.CourierID, c.SenderName AS CourierSender, s.ServiceID, s.ServiceName
    -> FROM Courier c
    -> LEFT JOIN CourierServices s ON s.ServiceID = s.ServiceID
    -> UNION ALL
    -> SELECT c.CourierID, c.SenderName AS CourierSender, s.ServiceID, s.ServiceName
    -> FROM Courier c
    -> RIGHT JOIN CourierServices s ON s.ServiceID = s.ServiceID
    -> WHERE c.CourierID IS NULL;
+-----------+---------------+-----------+-----------------------------+
| CourierID | CourierSender | ServiceID | ServiceName                 |
+-----------+---------------+-----------+-----------------------------+
|         1 | John          |        10 | Insured Delivery            |
|         1 | John          |         9 | Signature Required Delivery |
|         1 | John          |         8 | Document Delivery           |
|         1 | John          |         7 | Heavy Package Delivery      |
|         1 | John          |         6 | Fragile Delivery            |
|         1 | John          |         5 | International Delivery      |
|         1 | John          |         4 | Overnight Delivery          |
|         1 | John          |         3 | Same-Day Delivery           |
|         1 | John          |         2 | Express Delivery            |
|         1 | John          |         1 | Standard Delivery           |
|         2 | steve Smith   |        10 | Insured Delivery            |
|         2 | steve Smith   |         9 | Signature Required Delivery |
|         2 | steve Smith   |         8 | Document Delivery           |
|         2 | steve Smith   |         7 | Heavy Package Delivery      |
|         2 | steve Smith   |         6 | Fragile Delivery            |
|         2 | steve Smith   |         5 | International Delivery      |
|         2 | steve Smith   |         4 | Overnight Delivery          |
|         2 | steve Smith   |         3 | Same-Day Delivery           |
|         2 | steve Smith   |         2 | Express Delivery            |
|         2 | steve Smith   |         1 | Standard Delivery           |
|         3 | Johnson       |        10 | Insured Delivery            |
|         3 | Johnson       |         9 | Signature Required Delivery |
|         3 | Johnson       |         8 | Document Delivery           |
|         3 | Johnson       |         7 | Heavy Package Delivery      |
|         3 | Johnson       |         6 | Fragile Delivery            |
|         3 | Johnson       |         5 | International Delivery      |
|         3 | Johnson       |         4 | Overnight Delivery          |
|         3 | Johnson       |         3 | Same-Day Delivery           |
|         3 | Johnson       |         2 | Express Delivery            |
|         3 | Johnson       |         1 | Standard Delivery           |
|         4 | virat         |        10 | Insured Delivery            |
|         4 | virat         |         9 | Signature Required Delivery |
```

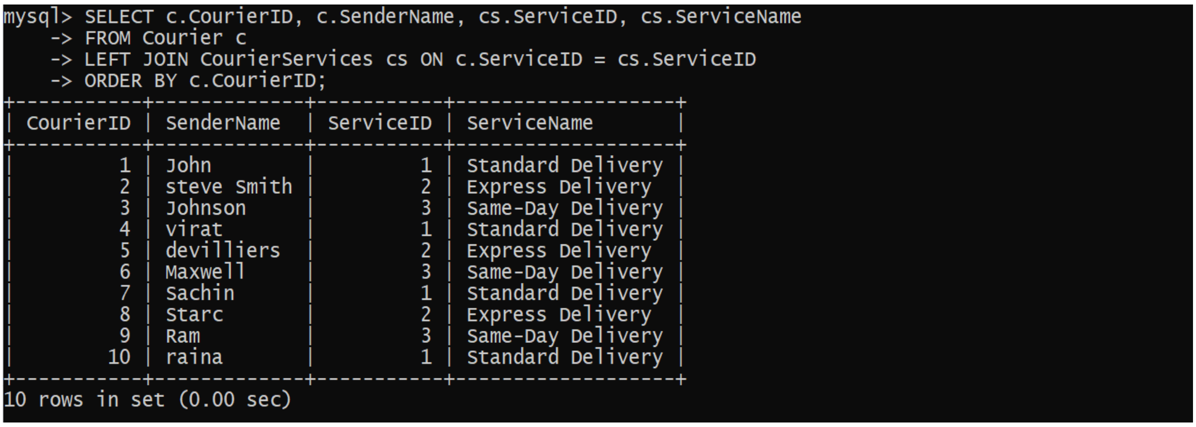


```
|         4 | virat        |         8 | Document Delivery          |
|         4 | virat        |         7 | Heavy Package Delivery     |
|         4 | virat        |         6 | Fragile Delivery           |
|         4 | virat        |         5 | International Delivery     |
|         4 | virat        |         4 | Overnight Delivery         |
|         4 | virat        |         3 | Same-Day Delivery          |
|         4 | virat        |         2 | Express Delivery           |
|         4 | virat        |         1 | Standard Delivery          |
|         5 | devilliers   |        10 | Insured Delivery           |
|         5 | devilliers   |         9 | Signature Required Delivery |
|         5 | devilliers   |         8 | Document Delivery          |
|         5 | devilliers   |         7 | Heavy Package Delivery     |
|         5 | devilliers   |         6 | Fragile Delivery           |
|         5 | devilliers   |         5 | International Delivery     |
|         5 | devilliers   |         4 | Overnight Delivery         |
|         5 | devilliers   |         3 | Same-Day Delivery          |
|         5 | devilliers   |         2 | Express Delivery           |
|         5 | devilliers   |         1 | Standard Delivery          |
|         6 | Maxwell      |        10 | Insured Delivery           |
|         6 | Maxwell      |         9 | Signature Required Delivery |
|         6 | Maxwell      |         8 | Document Delivery          |
|         6 | Maxwell      |         7 | Heavy Package Delivery     |
|         6 | Maxwell      |         6 | Fragile Delivery           |
|         6 | Maxwell      |         5 | International Delivery     |
|         6 | Maxwell      |         4 | Overnight Delivery         |
|         6 | Maxwell      |         3 | Same-Day Delivery          |
|         6 | Maxwell      |         2 | Express Delivery           |
|         6 | Maxwell      |         1 | Standard Delivery          |
|         7 | Sachin       |        10 | Insured Delivery           |
|         7 | Sachin       |         9 | Signature Required Delivery |
|         7 | Sachin       |         8 | Document Delivery          |
|         7 | Sachin       |         7 | Heavy Package Delivery     |
|         7 | Sachin       |         6 | Fragile Delivery           |
|         7 | Sachin       |         5 | International Delivery     |
|         7 | Sachin       |         4 | Overnight Delivery         |
|         7 | Sachin       |         3 | Same-Day Delivery          |
|         7 | Sachin       |         2 | Express Delivery           |
|         7 | Sachin       |         1 | Standard Delivery          |
|         8 | Starc        |        10 | Insured Delivery           |
|         8 | Starc        |         9 | Signature Required Delivery |
|         8 | Starc        |         8 | Document Delivery          |
|         8 | Starc        |         7 | Heavy Package Delivery     |
```



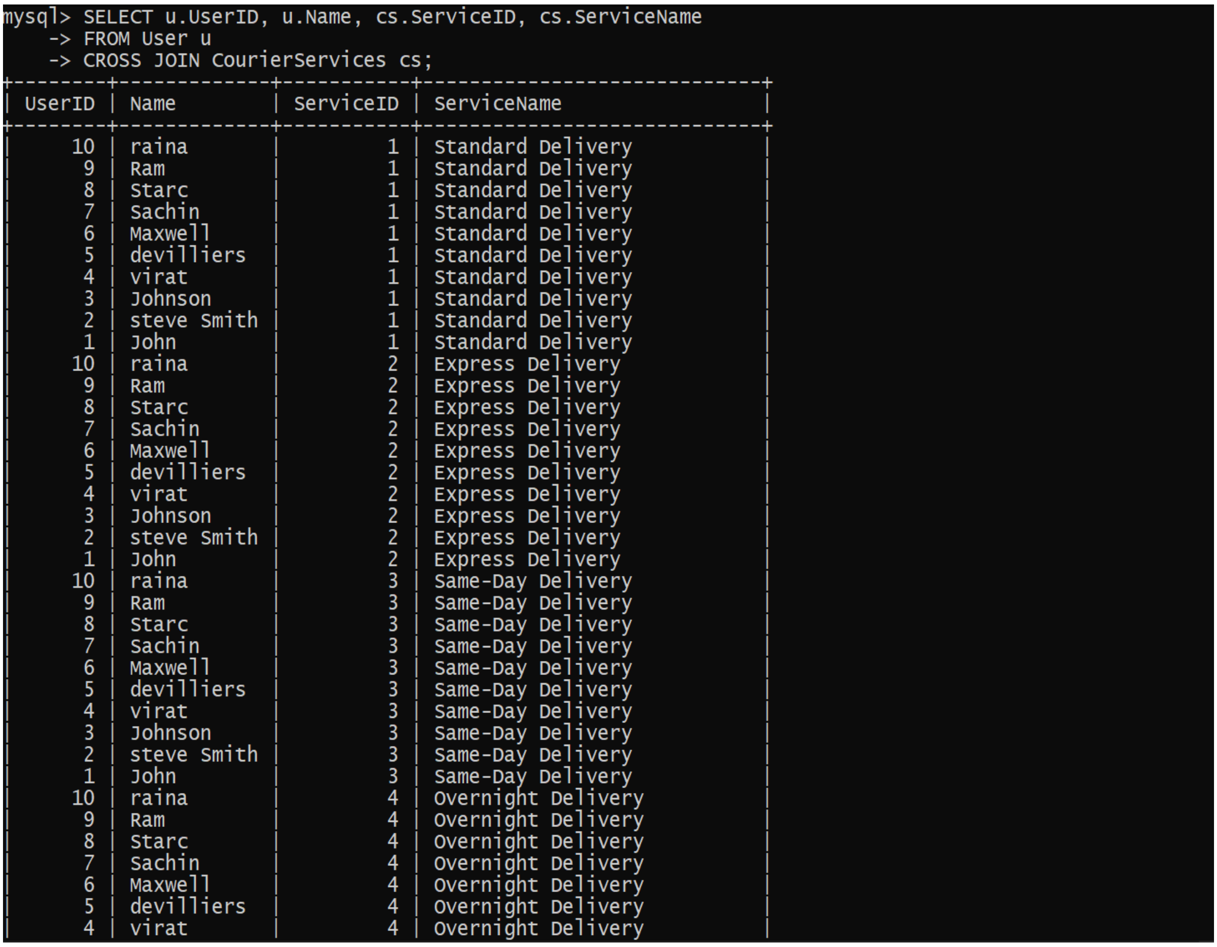
```
|         8 | Starc        |         6 | Fragile Delivery           |
|         8 | Starc        |         5 | International Delivery     |
|         8 | Starc        |         4 | Overnight Delivery         |
|         8 | Starc        |         3 | Same-Day Delivery          |
|         8 | Starc        |         2 | Express Delivery           |
|         8 | Starc        |         1 | Standard Delivery          |
|         9 | Ram          |        10 | Insured Delivery           |
|         9 | Ram          |         9 | Signature Required Delivery |
|         9 | Ram          |         8 | Document Delivery          |
|         9 | Ram          |         7 | Heavy Package Delivery     |
|         9 | Ram          |         6 | Fragile Delivery           |
|         9 | Ram          |         5 | International Delivery     |
|         9 | Ram          |         4 | Overnight Delivery         |
|         9 | Ram          |         3 | Same-Day Delivery          |
|         9 | Ram          |         2 | Express Delivery           |
|         9 | Ram          |         1 | Standard Delivery          |
|        10 | raina        |        10 | Insured Delivery           |
|        10 | raina        |         9 | Signature Required Delivery |
|        10 | raina        |         8 | Document Delivery          |
|        10 | raina        |         7 | Heavy Package Delivery     |
|        10 | raina        |         6 | Fragile Delivery           |
|        10 | raina        |         5 | International Delivery     |
|        10 | raina        |         4 | Overnight Delivery         |
|        10 | raina        |         3 | Same-Day Delivery          |
|        10 | raina        |         2 | Express Delivery           |
|        10 | raina        |         1 | Standard Delivery          |
+-----------+--------------+-----------+-----------------------------+
100 rows in set (0.00 sec)
```

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

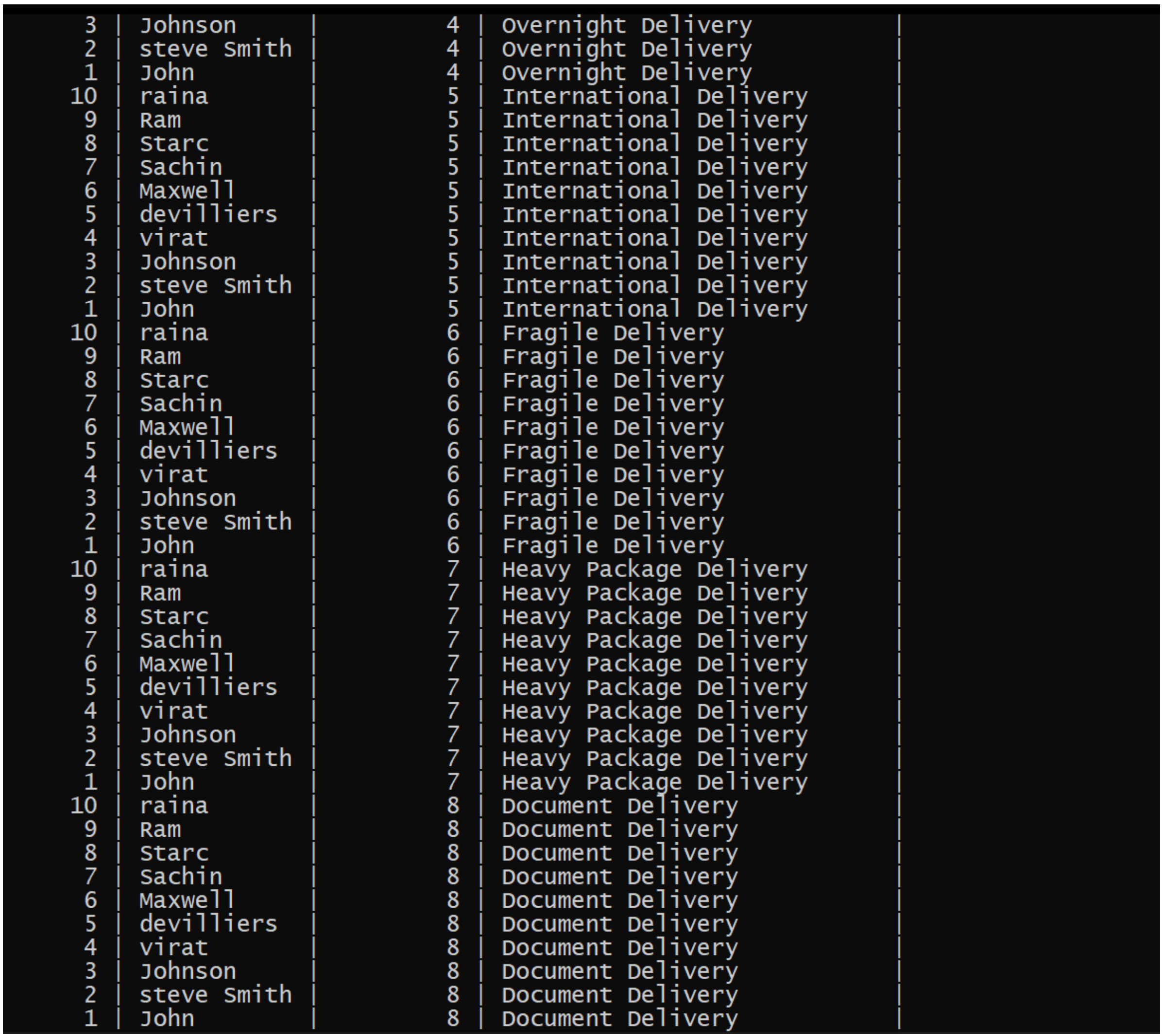


```
mysql> SELECT c.CourierID, c.SenderName, cs.ServiceID, cs.ServiceName
    -> FROM Courier c
    -> LEFT JOIN CourierServices cs ON c.ServiceID = cs.ServiceID
    -> ORDER BY c.CourierID;
+-----------+-------------+-----------+-------------------+
| CourierID | SenderName  | ServiceID | ServiceName       |
+-----------+-------------+-----------+-------------------+
|         1 | John        |         1 | Standard Delivery |
|         2 | steve Smith |         2 | Express Delivery  |
|         3 | Johnson     |         3 | Same-Day Delivery |
|         4 | virat       |         1 | Standard Delivery |
|         5 | devilliers  |         2 | Express Delivery  |
|         6 | Maxwell     |         3 | Same-Day Delivery |
|         7 | Sachin      |         1 | Standard Delivery |
|         8 | Starc       |         2 | Express Delivery  |
|         9 | Ram         |         3 | Same-Day Delivery |
|        10 | raina       |         1 | Standard Delivery |
+-----------+-------------+-----------+-------------------+
10 rows in set (0.00 sec)
```

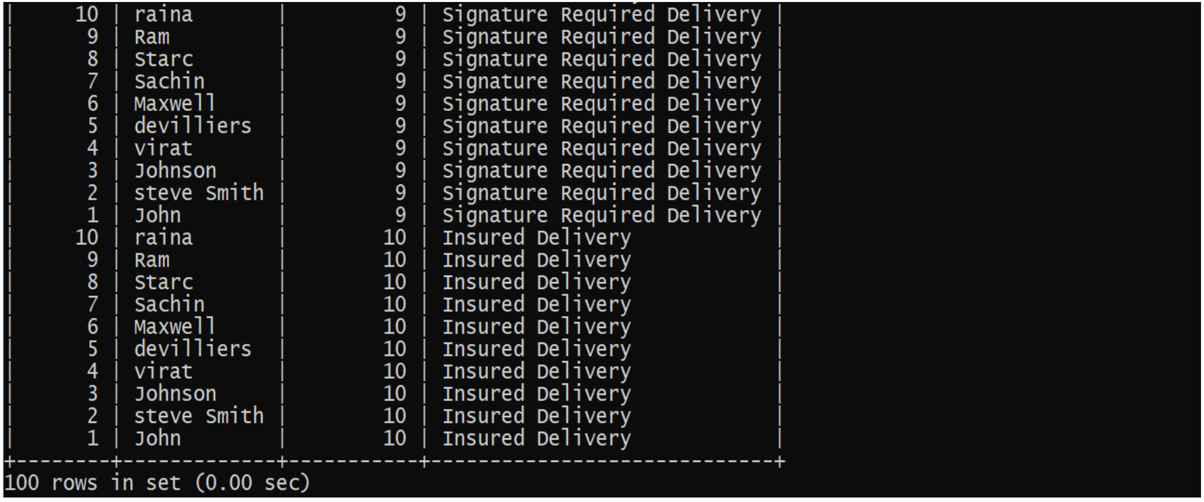
36. List all users and all courier services, showing all possible combinations.



```
mysql> SELECT u.UserID, u.Name, cs.ServiceID, cs.ServiceName
    -> FROM User u
    -> CROSS JOIN CourierServices cs;
+--------+-------------+-----------+------------------------------+
| UserID | Name        | ServiceID | ServiceName                  |
+--------+-------------+-----------+------------------------------+
|     10 | raina       |         1 | Standard Delivery            |
|      9 | Ram         |         1 | Standard Delivery            |
|      8 | Starc       |         1 | Standard Delivery            |
|      7 | Sachin      |         1 | Standard Delivery            |
|      6 | Maxwell     |         1 | Standard Delivery            |
|      5 | devilliers  |         1 | Standard Delivery            |
|      4 | virat       |         1 | Standard Delivery            |
|      3 | Johnson     |         1 | Standard Delivery            |
|      2 | steve Smith |         1 | Standard Delivery            |
|      1 | John        |         1 | Standard Delivery            |
|     10 | raina       |         2 | Express Delivery             |
|      9 | Ram         |         2 | Express Delivery             |
|      8 | Starc       |         2 | Express Delivery             |
|      7 | Sachin      |         2 | Express Delivery             |
|      6 | Maxwell     |         2 | Express Delivery             |
|      5 | devilliers  |         2 | Express Delivery             |
|      4 | virat       |         2 | Express Delivery             |
|      3 | Johnson     |         2 | Express Delivery             |
|      2 | steve Smith |         2 | Express Delivery             |
|      1 | John        |         2 | Express Delivery             |
|     10 | raina       |         3 | Same-Day Delivery            |
|      9 | Ram         |         3 | Same-Day Delivery            |
|      8 | Starc       |         3 | Same-Day Delivery            |
|      7 | Sachin      |         3 | Same-Day Delivery            |
|      6 | Maxwell     |         3 | Same-Day Delivery            |
|      5 | devilliers  |         3 | Same-Day Delivery            |
|      4 | virat       |         3 | Same-Day Delivery            |
|      3 | Johnson     |         3 | Same-Day Delivery            |
|      2 | steve Smith |         3 | Same-Day Delivery            |
|      1 | John        |         3 | Same-Day Delivery            |
|     10 | raina       |         4 | Overnight Delivery           |
|      9 | Ram         |         4 | Overnight Delivery           |
|      8 | Starc       |         4 | Overnight Delivery           |
|      7 | Sachin      |         4 | Overnight Delivery           |
|      6 | Maxwell     |         4 | Overnight Delivery           |
|      5 | devilliers  |         4 | Overnight Delivery           |
|      4 | virat       |         4 | Overnight Delivery           |
```

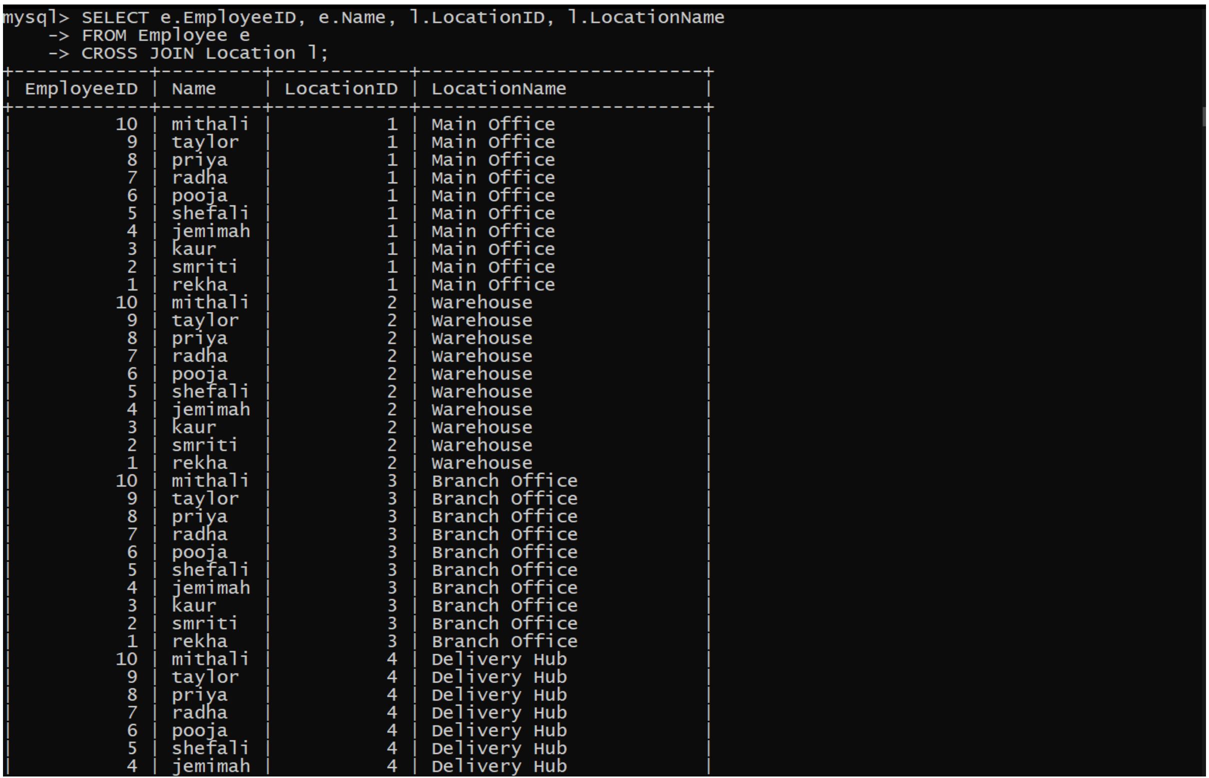


```
        3 | Johnson     |          4 | Overnight Delivery          |
        2 | steve Smith |          4 | Overnight Delivery          |
        1 | John        |          4 | Overnight Delivery          |
       10 | raina       |          5 | International Delivery      |
        9 | Ram         |          5 | International Delivery      |
        8 | Starc       |          5 | International Delivery      |
        7 | Sachin      |          5 | International Delivery      |
        6 | Maxwell     |          5 | International Delivery      |
        5 | devilliers  |          5 | International Delivery      |
        4 | virat       |          5 | International Delivery      |
        3 | Johnson     |          5 | International Delivery      |
        2 | steve Smith |          5 | International Delivery      |
        1 | John        |          5 | International Delivery      |
       10 | raina       |          6 | Fragile Delivery            |
        9 | Ram         |          6 | Fragile Delivery            |
        8 | Starc       |          6 | Fragile Delivery            |
        7 | Sachin      |          6 | Fragile Delivery            |
        6 | Maxwell     |          6 | Fragile Delivery            |
        5 | devilliers  |          6 | Fragile Delivery            |
        4 | virat       |          6 | Fragile Delivery            |
        3 | Johnson     |          6 | Fragile Delivery            |
        2 | steve Smith |          6 | Fragile Delivery            |
        1 | John        |          6 | Fragile Delivery            |
       10 | raina       |          7 | Heavy Package Delivery      |
        9 | Ram         |          7 | Heavy Package Delivery      |
        8 | Starc       |          7 | Heavy Package Delivery      |
        7 | Sachin      |          7 | Heavy Package Delivery      |
        6 | Maxwell     |          7 | Heavy Package Delivery      |
        5 | devilliers  |          7 | Heavy Package Delivery      |
        4 | virat       |          7 | Heavy Package Delivery      |
        3 | Johnson     |          7 | Heavy Package Delivery      |
        2 | steve Smith |          7 | Heavy Package Delivery      |
        1 | John        |          7 | Heavy Package Delivery      |
       10 | raina       |          8 | Document Delivery           |
        9 | Ram         |          8 | Document Delivery           |
        8 | Starc       |          8 | Document Delivery           |
        7 | Sachin      |          8 | Document Delivery           |
        6 | Maxwell     |          8 | Document Delivery           |
        5 | devilliers  |          8 | Document Delivery           |
        4 | virat       |          8 | Document Delivery           |
        3 | Johnson     |          8 | Document Delivery           |
        2 | steve Smith |          8 | Document Delivery           |
        1 | John        |          8 | Document Delivery           |
```

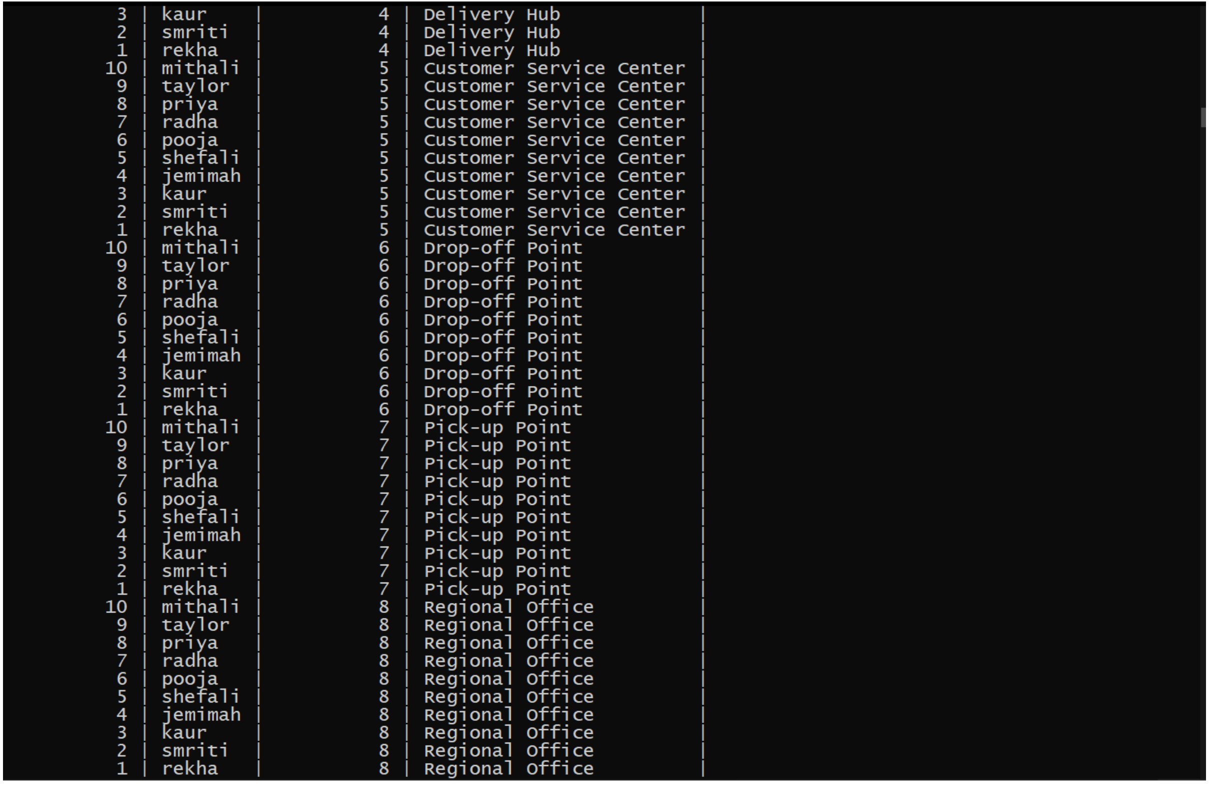


```
|       10 | raina       |          9 | Signature Required Delivery |
|        9 | Ram         |          9 | Signature Required Delivery |
|        8 | Starc       |          9 | Signature Required Delivery |
|        7 | Sachin      |          9 | Signature Required Delivery |
|        6 | Maxwell     |          9 | Signature Required Delivery |
|        5 | devilliers  |          9 | Signature Required Delivery |
|        4 | virat       |          9 | Signature Required Delivery |
|        3 | Johnson     |          9 | Signature Required Delivery |
|        2 | steve Smith |          9 | Signature Required Delivery |
|        1 | John        |          9 | Signature Required Delivery |
|       10 | raina       |         10 | Insured Delivery            |
|        9 | Ram         |         10 | Insured Delivery            |
|        8 | Starc       |         10 | Insured Delivery            |
|        7 | Sachin      |         10 | Insured Delivery            |
|        6 | Maxwell     |         10 | Insured Delivery            |
|        5 | devilliers  |         10 | Insured Delivery            |
|        4 | virat       |         10 | Insured Delivery            |
|        3 | Johnson     |         10 | Insured Delivery            |
|        2 | steve Smith |         10 | Insured Delivery            |
|        1 | John        |         10 | Insured Delivery            |
+----------+-------------+------------+-----------------------------+
100 rows in set (0.00 sec)
```

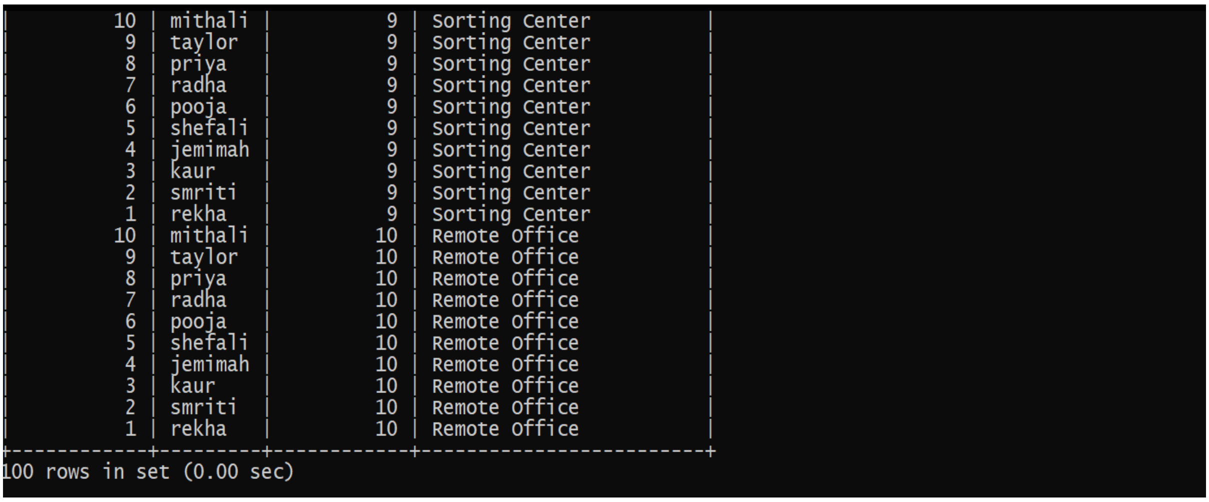
37. List all employees and all locations, showing all possible combinations:



```
mysql> SELECT e.EmployeeID, e.Name, l.LocationID, l.LocationName
    -> FROM Employee e
    -> CROSS JOIN Location l;
+------------+---------+------------+-------------------------+
| EmployeeID | Name    | LocationID | LocationName            |
+------------+---------+------------+-------------------------+
|         10 | mithali |          1 | Main Office             |
|          9 | taylor  |          1 | Main Office             |
|          8 | priya   |          1 | Main Office             |
|          7 | radha   |          1 | Main Office             |
|          6 | pooja   |          1 | Main Office             |
|          5 | shefali |          1 | Main Office             |
|          4 | jemimah |          1 | Main Office             |
|          3 | kaur    |          1 | Main Office             |
|          2 | smriti  |          1 | Main Office             |
|          1 | rekha   |          1 | Main Office             |
|         10 | mithali |          2 | Warehouse               |
|          9 | taylor  |          2 | Warehouse               |
|          8 | priya   |          2 | Warehouse               |
|          7 | radha   |          2 | Warehouse               |
|          6 | pooja   |          2 | Warehouse               |
|          5 | shefali |          2 | Warehouse               |
|          4 | jemimah |          2 | Warehouse               |
|          3 | kaur    |          2 | Warehouse               |
|          2 | smriti  |          2 | Warehouse               |
|          1 | rekha   |          2 | Warehouse               |
|         10 | mithali |          3 | Branch Office           |
|          9 | taylor  |          3 | Branch Office           |
|          8 | priya   |          3 | Branch Office           |
|          7 | radha   |          3 | Branch Office           |
|          6 | pooja   |          3 | Branch Office           |
|          5 | shefali |          3 | Branch Office           |
|          4 | jemimah |          3 | Branch Office           |
|          3 | kaur    |          3 | Branch Office           |
|          2 | smriti  |          3 | Branch Office           |
|          1 | rekha   |          3 | Branch Office           |
|         10 | mithali |          4 | Delivery Hub            |
|          9 | taylor  |          4 | Delivery Hub            |
|          8 | priya   |          4 | Delivery Hub            |
|          7 | radha   |          4 | Delivery Hub            |
|          6 | pooja   |          4 | Delivery Hub            |
|          5 | shefali |          4 | Delivery Hub            |
|          4 | jemimah |          4 | Delivery Hub            |
```

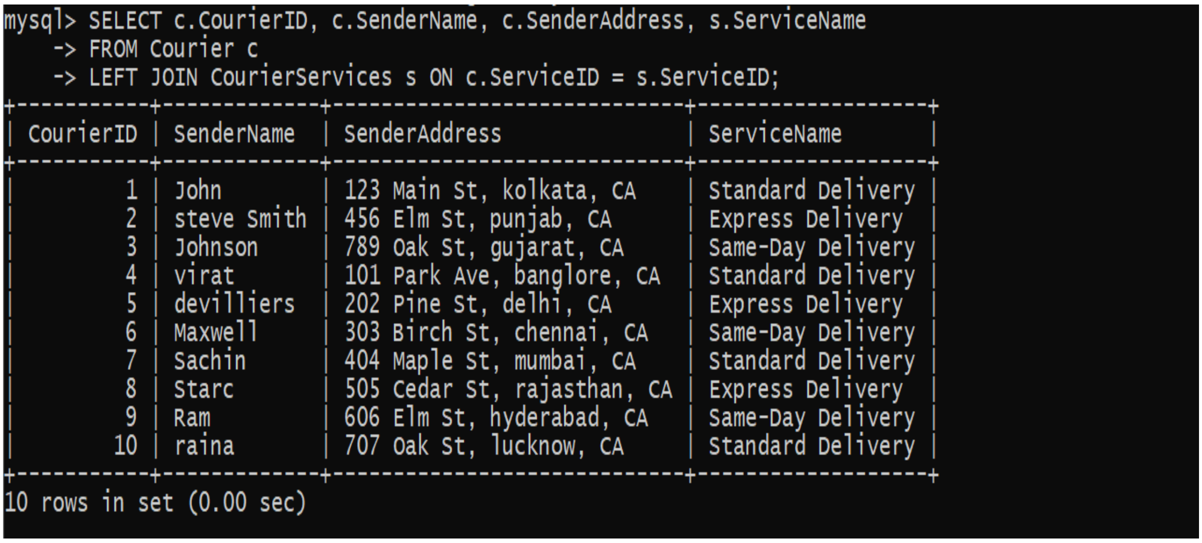


```
         3 | kaur    |          4 | Delivery Hub            |
         2 | smriti  |          4 | Delivery Hub            |
         1 | rekha   |          4 | Delivery Hub            |
        10 | mithali |          5 | Customer Service Center |
         9 | taylor  |          5 | Customer Service Center |
         8 | priya   |          5 | Customer Service Center |
         7 | radha   |          5 | Customer Service Center |
         6 | pooja   |          5 | Customer Service Center |
         5 | shefali |          5 | Customer Service Center |
         4 | jemimah |          5 | Customer Service Center |
         3 | kaur    |          5 | Customer Service Center |
         2 | smriti  |          5 | Customer Service Center |
         1 | rekha   |          5 | Customer Service Center |
        10 | mithali |          6 | Drop-off Point          |
         9 | taylor  |          6 | Drop-off Point          |
         8 | priya   |          6 | Drop-off Point          |
         7 | radha   |          6 | Drop-off Point          |
         6 | pooja   |          6 | Drop-off Point          |
         5 | shefali |          6 | Drop-off Point          |
         4 | jemimah |          6 | Drop-off Point          |
         3 | kaur    |          6 | Drop-off Point          |
         2 | smriti  |          6 | Drop-off Point          |
         1 | rekha   |          6 | Drop-off Point          |
        10 | mithali |          7 | Pick-up Point           |
         9 | taylor  |          7 | Pick-up Point           |
         8 | priya   |          7 | Pick-up Point           |
         7 | radha   |          7 | Pick-up Point           |
         6 | pooja   |          7 | Pick-up Point           |
         5 | shefali |          7 | Pick-up Point           |
         4 | jemimah |          7 | Pick-up Point           |
         3 | kaur    |          7 | Pick-up Point           |
         2 | smriti  |          7 | Pick-up Point           |
         1 | rekha   |          7 | Pick-up Point           |
        10 | mithali |          8 | Regional Office         |
         9 | taylor  |          8 | Regional Office         |
         8 | priya   |          8 | Regional Office         |
         7 | radha   |          8 | Regional Office         |
         6 | pooja   |          8 | Regional Office         |
         5 | shefali |          8 | Regional Office         |
         4 | jemimah |          8 | Regional Office         |
         3 | kaur    |          8 | Regional Office         |
         2 | smriti  |          8 | Regional Office         |
         1 | rekha   |          8 | Regional Office         |
```



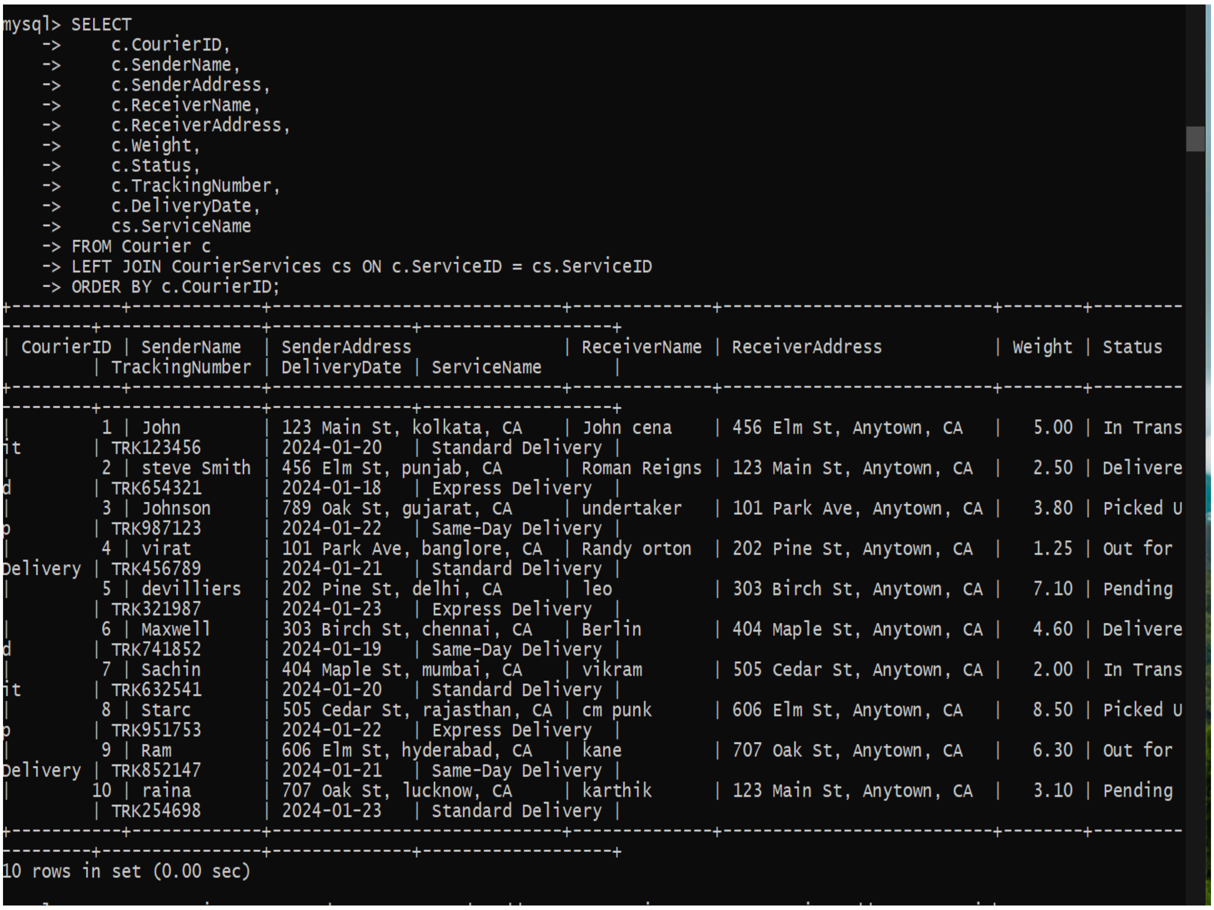
```
|         10 | mithali |          9 | Sorting Center         |
|          9 | taylor  |          9 | Sorting Center         |
|          8 | priya   |          9 | Sorting Center         |
|          7 | radha   |          9 | Sorting Center         |
|          6 | pooja   |          9 | Sorting Center         |
|          5 | shefali |          9 | Sorting Center         |
|          4 | jemimah |          9 | Sorting Center         |
|          3 | kaur    |          9 | Sorting Center         |
|          2 | smriti  |          9 | Sorting Center         |
|          1 | rekha   |          9 | Sorting Center         |
|         10 | mithali |         10 | Remote Office          |
|          9 | taylor  |         10 | Remote Office          |
|          8 | priya   |         10 | Remote Office          |
|          7 | radha   |         10 | Remote Office          |
|          6 | pooja   |         10 | Remote Office          |
|          5 | shefali |         10 | Remote Office          |
|          4 | jemimah |         10 | Remote Office          |
|          3 | kaur    |         10 | Remote Office          |
|          2 | smriti  |         10 | Remote Office          |
|          1 | rekha   |         10 | Remote Office          |
+------------+---------+------------+------------------------+
100 rows in set (0.00 sec)
```

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



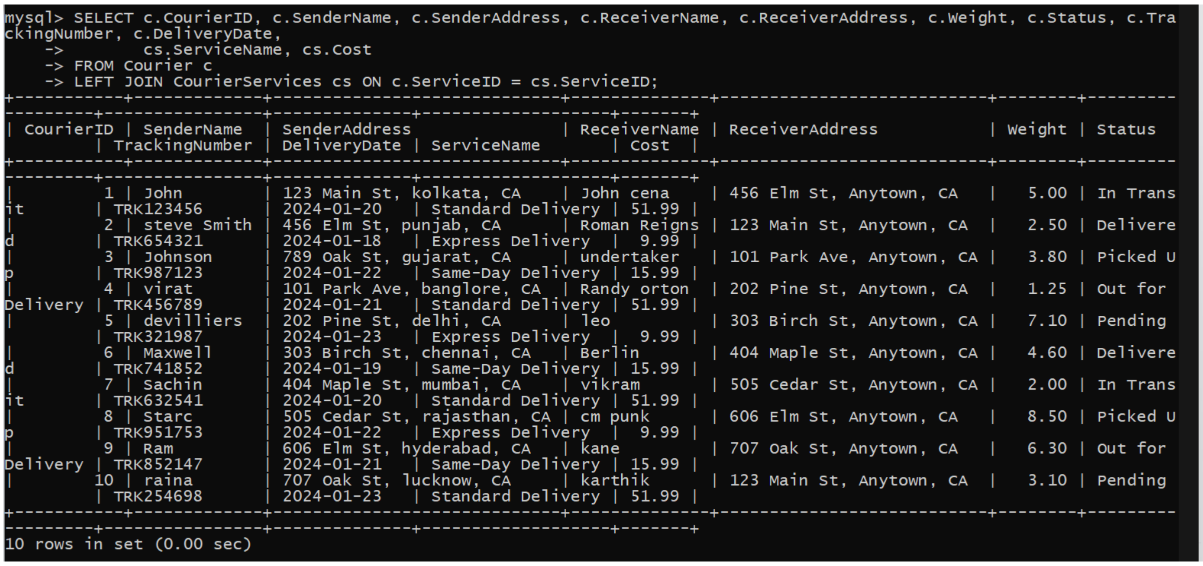
```
mysql> SELECT c.CourierID, c.SenderName, c.SenderAddress, s.ServiceName
    -> FROM Courier c
    -> LEFT JOIN CourierServices s ON c.ServiceID = s.ServiceID;
+-----------+-------------+----------------------------+-------------------+
| CourierID | SenderName  | SenderAddress              | ServiceName       |
+-----------+-------------+----------------------------+-------------------+
|         1 | John        | 123 Main St, kolkata, CA   | Standard Delivery |
|         2 | steve Smith | 456 Elm St, punjab, CA     | Express Delivery  |
|         3 | Johnson     | 789 Oak St, gujarat, CA    | Same-Day Delivery |
|         4 | virat       | 101 Park Ave, banglore, CA | Standard Delivery |
|         5 | devilliers  | 202 Pine St, delhi, CA     | Express Delivery  |
|         6 | Maxwell     | 303 Birch St, chennai, CA  | Same-Day Delivery |
|         7 | Sachin      | 404 Maple St, mumbai, CA   | Standard Delivery |
|         8 | Starc       | 505 Cedar St, rajasthan, CA | Express Delivery  |
|         9 | Ram         | 606 Elm St, hyderabad, CA  | Same-Day Delivery |
|        10 | raina       | 707 Oak St, lucknow, CA    | Standard Delivery |
+-----------+-------------+----------------------------+-------------------+
10 rows in set (0.00 sec)
```

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



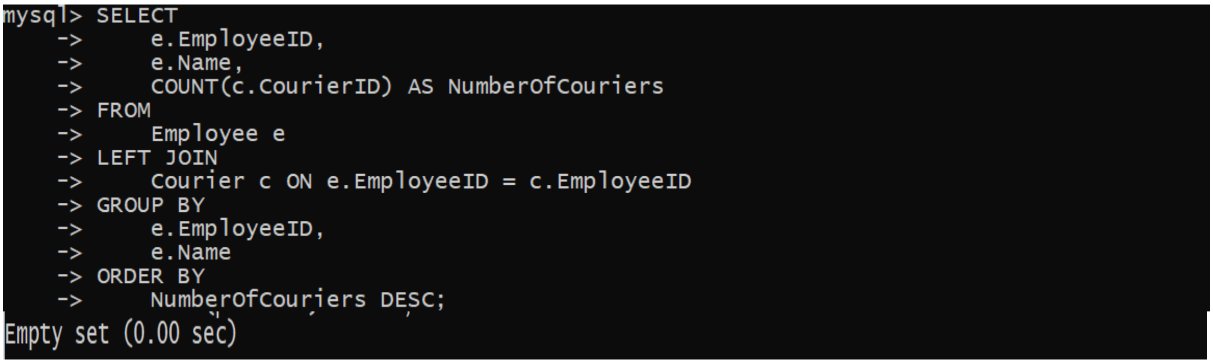
```
mysql> SELECT
    ->     c.CourierID,
    ->     c.SenderName,
    ->     c.SenderAddress,
    ->     c.ReceiverName,
    ->     c.ReceiverAddress,
    ->     c.Weight,
    ->     c.Status,
    ->     c.TrackingNumber,
    ->     c.DeliveryDate,
    ->     cs.ServiceName
    -> FROM Courier c
    -> LEFT JOIN CourierServices cs ON c.ServiceID = cs.ServiceID
    -> ORDER BY c.CourierID;
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+
| CourierID | SenderName    | SenderAddress                | ReceiverName | ReceiverAddress           | Weight | Status
         | TrackingNumber | DeliveryDate | ServiceName       |
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+
|         1 | John          | 123 Main St, kolkata, CA     | John cena    | 456 Elm St, Anytown, CA   |   5.00 | In Trans
it       | TRK123456      | 2024-01-20   | Standard Delivery |
|         2 | steve Smith   | 456 Elm St, punjab, CA       | Roman Reigns | 123 Main St, Anytown, CA  |   2.50 | Delivere
d        | TRK654321      | 2024-01-18   | Express Delivery  |
|         3 | Johnson       | 789 Oak St, gujarat, CA      | undertaker   | 101 Park Ave, Anytown, CA |   3.80 | Picked U
p        | TRK987123      | 2024-01-22   | Same-Day Delivery |
|         4 | virat         | 101 Park Ave, banglore, CA   | Randy orton  | 202 Pine St, Anytown, CA  |   1.25 | Out for
Delivery | TRK456789      | 2024-01-21   | Standard Delivery |
|         5 | devilliers    | 202 Pine St, delhi, CA       | leo          | 303 Birch St, Anytown, CA |   7.10 | Pending
         | TRK321987      | 2024-01-23   | Express Delivery  |
|         6 | Maxwell       | 303 Birch St, chennai, CA    | Berlin       | 404 Maple St, Anytown, CA |   4.60 | Delivere
d        | TRK741852      | 2024-01-19   | Same-Day Delivery |
|         7 | Sachin        | 404 Maple St, mumbai, CA     | vikram       | 505 Cedar St, Anytown, CA |   2.00 | In Trans
it       | TRK632541      | 2024-01-20   | Standard Delivery |
|         8 | Starc         | 505 Cedar St, rajasthan, CA  | cm punk      | 606 Elm St, Anytown, CA   |   8.50 | Picked U
p        | TRK951753      | 2024-01-22   | Express Delivery  |
|         9 | Ram           | 606 Elm St, hyderabad, CA    | kane         | 707 Oak St, Anytown, CA   |   6.30 | Out for
Delivery | TRK852147      | 2024-01-21   | Same-Day Delivery |
|        10 | raina         | 707 Oak St, lucknow, CA      | karthik      | 123 Main St, Anytown, CA  |   3.10 | Pending
         | TRK254698      | 2024-01-23   | Standard Delivery |
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+
10 rows in set (0.00 sec)
```

40. Retrieve a list of couriers along with the courier service details (if available):



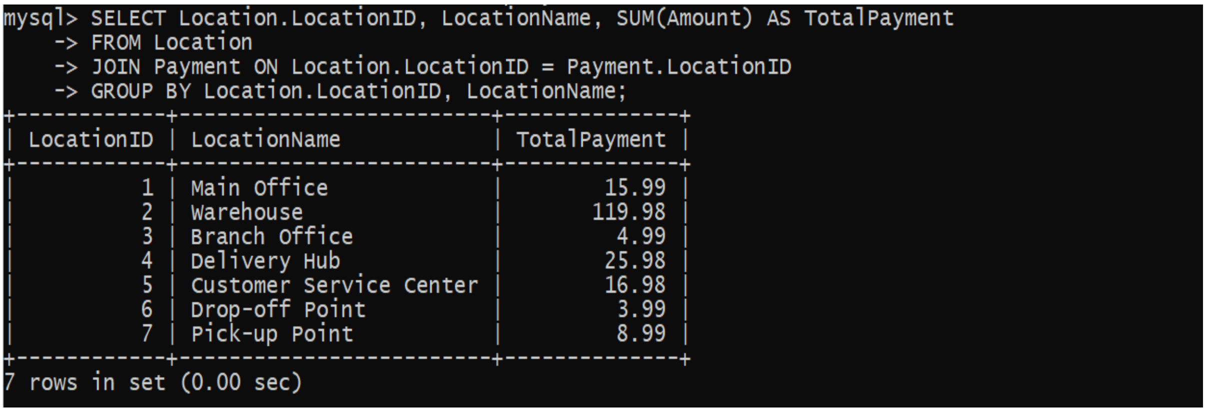
```
mysql> SELECT c.CourierID, c.SenderName, c.SenderAddress, c.ReceiverName, c.ReceiverAddress, c.Weight, c.Status, c.Tra
ckingNumber, c.DeliveryDate,
    ->        cs.ServiceName, cs.Cost
    -> FROM Courier c
    -> LEFT JOIN CourierServices cs ON c.ServiceID = cs.ServiceID;
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+-------+
| CourierID | SenderName    | SenderAddress                | ReceiverName | ReceiverAddress           | Weight | Status
         | TrackingNumber | DeliveryDate | ServiceName       | Cost  |
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+-------+
|         1 | John          | 123 Main St, kolkata, CA     | John cena    | 456 Elm St, Anytown, CA   |   5.00 | In Trans
it       | TRK123456      | 2024-01-20   | Standard Delivery | 51.99 |
|         2 | steve Smith   | 456 Elm St, punjab, CA       | Roman Reigns | 123 Main St, Anytown, CA  |   2.50 | Delivere
d        | TRK654321      | 2024-01-18   | Express Delivery  |  9.99 |
|         3 | Johnson       | 789 Oak St, gujarat, CA      | undertaker   | 101 Park Ave, Anytown, CA |   3.80 | Picked U
p        | TRK987123      | 2024-01-22   | Same-Day Delivery | 15.99 |
|         4 | virat         | 101 Park Ave, banglore, CA   | Randy orton  | 202 Pine St, Anytown, CA  |   1.25 | Out for
Delivery | TRK456789      | 2024-01-21   | Standard Delivery | 51.99 |
|         5 | devilliers    | 202 Pine St, delhi, CA       | leo          | 303 Birch St, Anytown, CA |   7.10 | Pending
         | TRK321987      | 2024-01-23   | Express Delivery  |  9.99 |
|         6 | Maxwell       | 303 Birch St, chennai, CA    | Berlin       | 404 Maple St, Anytown, CA |   4.60 | Delivere
d        | TRK741852      | 2024-01-19   | Same-Day Delivery | 15.99 |
|         7 | Sachin        | 404 Maple St, mumbai, CA     | vikram       | 505 Cedar St, Anytown, CA |   2.00 | In Trans
it       | TRK632541      | 2024-01-20   | Standard Delivery | 51.99 |
|         8 | Starc         | 505 Cedar St, rajasthan, CA  | cm punk      | 606 Elm St, Anytown, CA   |   8.50 | Picked U
p        | TRK951753      | 2024-01-22   | Express Delivery  |  9.99 |
|         9 | Ram           | 606 Elm St, hyderabad, CA    | kane         | 707 Oak St, Anytown, CA   |   6.30 | Out for
Delivery | TRK852147      | 2024-01-21   | Same-Day Delivery | 15.99 |
|        10 | raina         | 707 Oak St, lucknow, CA      | karthik      | 123 Main St, Anytown, CA  |   3.10 | Pending
         | TRK254698      | 2024-01-23   | Standard Delivery | 51.99 |
+-----------+---------------+------------------------------+--------------+---------------------------+--------+---------
---------+----------------+--------------+-------------------+-------+
10 rows in set (0.00 sec)
```

41. Retrieve a list of employees and the number of couriers assigned to each employee:



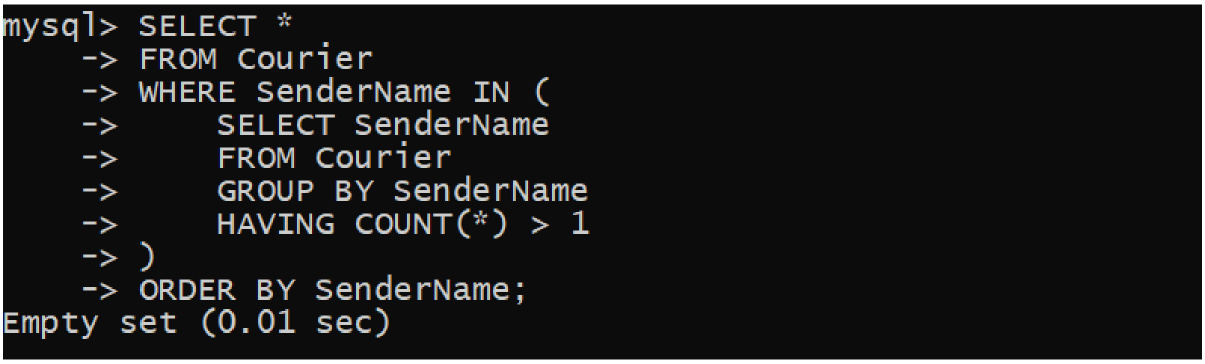
```
mysql> SELECT
    ->     e.EmployeeID,
    ->     e.Name,
    ->     COUNT(c.CourierID) AS NumberOfCouriers
    -> FROM
    ->     Employee e
    -> LEFT JOIN
    ->     Courier c ON e.EmployeeID = c.EmployeeID
    -> GROUP BY
    ->     e.EmployeeID,
    ->     e.Name
    -> ORDER BY
    ->     NumberOfCouriers DESC;
Empty set (0.00 sec)
```

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



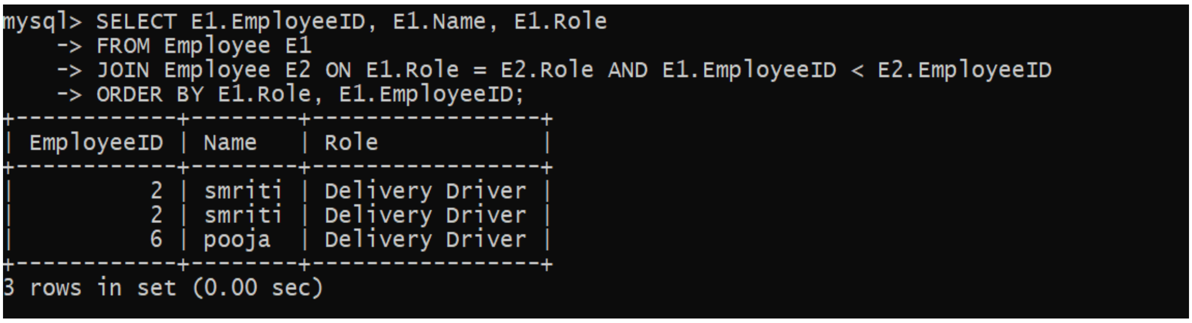
```
mysql> SELECT Location.LocationID, LocationName, SUM(Amount) AS TotalPayment
    -> FROM Location
    -> JOIN Payment ON Location.LocationID = Payment.LocationID
    -> GROUP BY Location.LocationID, LocationName;
+------------+-------------------------+--------------+
| LocationID | LocationName            | TotalPayment |
+------------+-------------------------+--------------+
|          1 | Main Office             |        15.99 |
|          2 | Warehouse               |       119.98 |
|          3 | Branch Office           |         4.99 |
|          4 | Delivery Hub            |        25.98 |
|          5 | Customer Service Center |        16.98 |
|          6 | Drop-off Point          |         3.99 |
|          7 | Pick-up Point           |         8.99 |
+------------+-------------------------+--------------+
7 rows in set (0.00 sec)
```

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



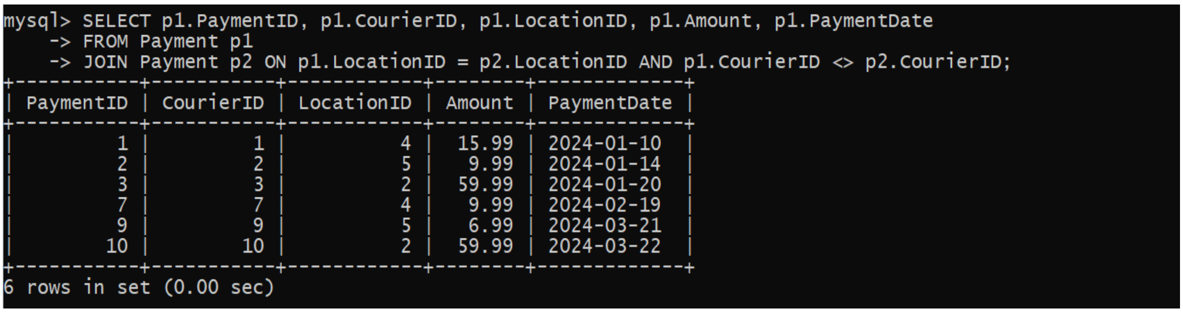
```
mysql> SELECT *
    -> FROM Courier
    -> WHERE SenderName IN (
    ->     SELECT SenderName
    ->     FROM Courier
    ->     GROUP BY SenderName
    ->     HAVING COUNT(*) > 1
    -> )
    -> ORDER BY SenderName;
Empty set (0.01 sec)
```

44. List all employees who share the same role.



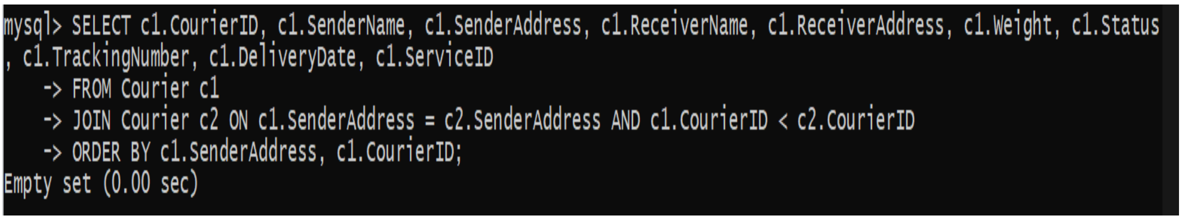
```
mysql> SELECT E1.EmployeeID, E1.Name, E1.Role
    -> FROM Employee E1
    -> JOIN Employee E2 ON E1.Role = E2.Role AND E1.EmployeeID < E2.EmployeeID
    -> ORDER BY E1.Role, E1.EmployeeID;
+------------+--------+-----------------+
| EmployeeID | Name   | Role            |
+------------+--------+-----------------+
|          2 | smriti | Delivery Driver |
|          2 | smriti | Delivery Driver |
|          6 | pooja  | Delivery Driver |
+------------+--------+-----------------+
3 rows in set (0.00 sec)
```

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



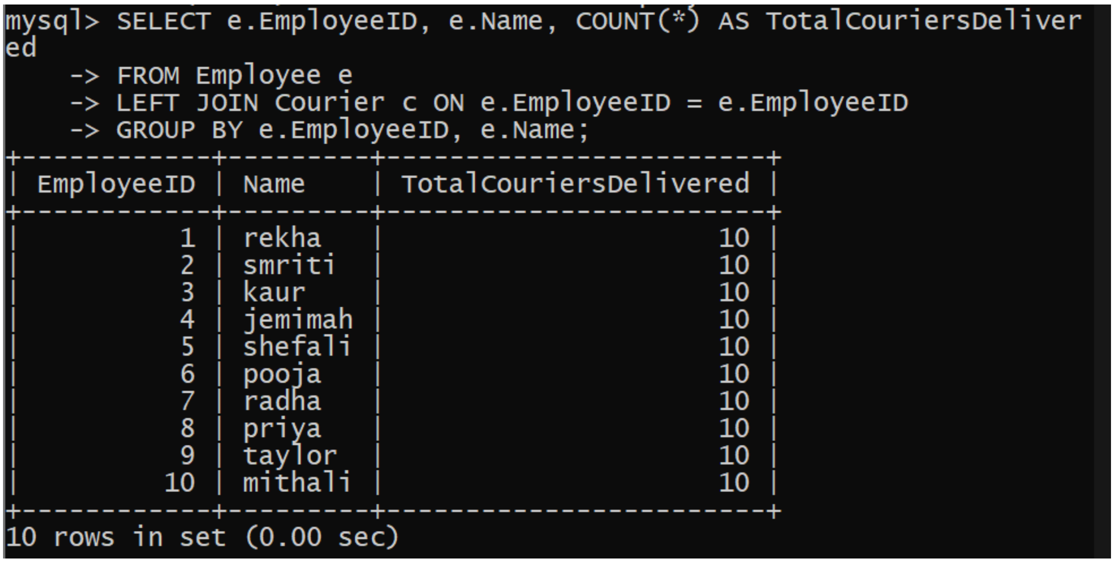
```
mysql> SELECT p1.PaymentID, p1.CourierID, p1.LocationID, p1.Amount, p1.PaymentDate
    -> FROM Payment p1
    -> JOIN Payment p2 ON p1.LocationID = p2.LocationID AND p1.CourierID <> p2.CourierID;
+-----------+-----------+------------+--------+-------------+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----------+-----------+------------+--------+-------------+
|         1 |         1 |          4 |  15.99 | 2024-01-10  |
|         2 |         2 |          5 |   9.99 | 2024-01-14  |
|         3 |         3 |          2 |  59.99 | 2024-01-20  |
|         7 |         7 |          4 |   9.99 | 2024-02-19  |
|         9 |         9 |          5 |   6.99 | 2024-03-21  |
|        10 |        10 |          2 |  59.99 | 2024-03-22  |
+-----------+-----------+------------+--------+-------------+
6 rows in set (0.00 sec)
```

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



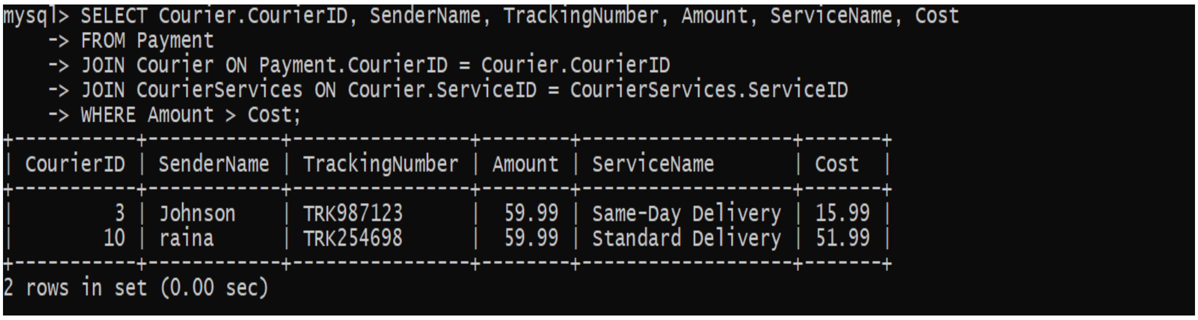
```
mysql> SELECT c1.CourierID, c1.SenderName, c1.SenderAddress, c1.ReceiverName, c1.ReceiverAddress, c1.Weight, c1.Status
, c1.TrackingNumber, c1.DeliveryDate, c1.ServiceID
    -> FROM Courier c1
    -> JOIN Courier c2 ON c1.SenderAddress = c2.SenderAddress AND c1.CourierID < c2.CourierID
    -> ORDER BY c1.SenderAddress, c1.CourierID;
Empty set (0.00 sec)
```

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



```
mysql> SELECT e.EmployeeID, e.Name, COUNT(*) AS TotalCouriersDeliver
ed
    -> FROM Employee e
    -> LEFT JOIN Courier c ON e.EmployeeID = e.EmployeeID
    -> GROUP BY e.EmployeeID, e.Name;
+------------+---------+-----------------------+
| EmployeeID | Name    | TotalCouriersDelivered |
+------------+---------+-----------------------+
|          1 | rekha   |                    10 |
|          2 | smriti  |                    10 |
|          3 | kaur    |                    10 |
|          4 | jemimah |                    10 |
|          5 | shefali |                    10 |
|          6 | pooja   |                    10 |
|          7 | radha   |                    10 |
|          8 | priya   |                    10 |
|          9 | taylor  |                    10 |
|         10 | mithali |                    10 |
+------------+---------+-----------------------+
10 rows in set (0.00 sec)
```

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

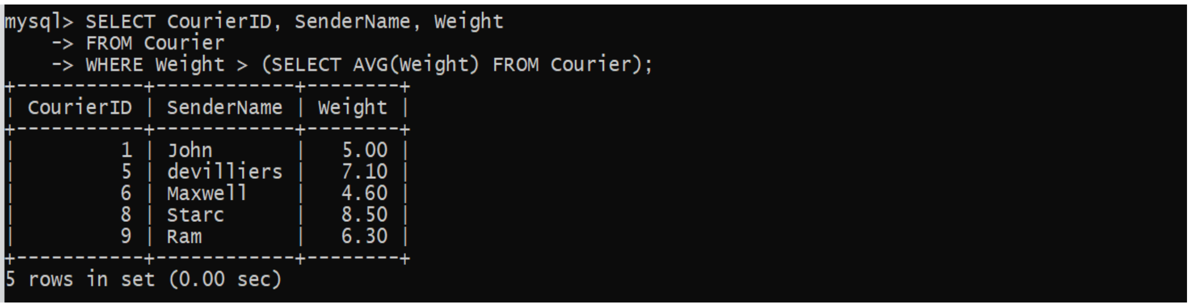


```
mysql> SELECT Courier.CourierID, SenderName, TrackingNumber, Amount, ServiceName, Cost
    -> FROM Payment
    -> JOIN Courier ON Payment.CourierID = Courier.CourierID
    -> JOIN CourierServices ON Courier.ServiceID = CourierServices.ServiceID
    -> WHERE Amount > Cost;
+-----------+------------+----------------+--------+-------------------+-------+
| CourierID | SenderName | TrackingNumber | Amount | ServiceName       | Cost  |
+-----------+------------+----------------+--------+-------------------+-------+
|         3 | Johnson    | TRK987123      |  59.99 | Same-Day Delivery | 15.99 |
|        10 | raina      | TRK254698      |  59.99 | Standard Delivery | 51.99 |
+-----------+------------+----------------+--------+-------------------+-------+
2 rows in set (0.00 sec)
```

Scope: Inner Queries,

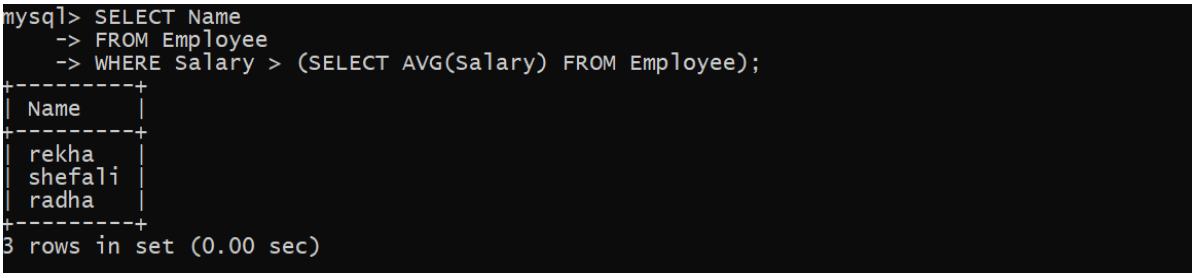
Non Equi Joins, Equi joins,Exist,Any,All

49. Find couriers that have a weight greater than the average weight of all couriers:



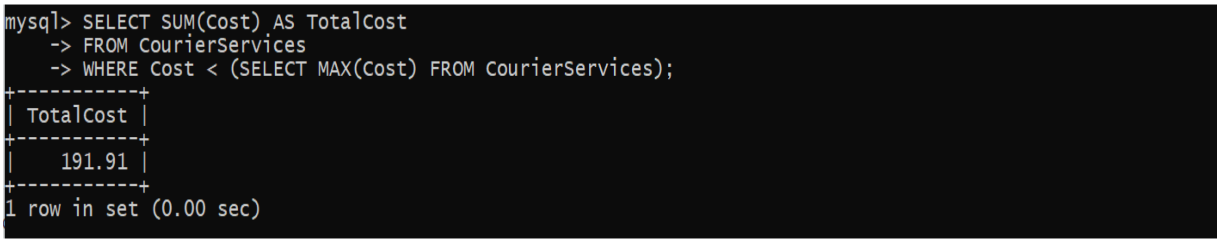
```
mysql> SELECT CourierID, SenderName, Weight
    -> FROM Courier
    -> WHERE Weight > (SELECT AVG(Weight) FROM Courier);
+-----------+------------+--------+
| CourierID | SenderName | Weight |
+-----------+------------+--------+
|         1 | John       |   5.00 |
|         5 | devilliers |   7.10 |
|         6 | Maxwell    |   4.60 |
|         8 | Starc      |   8.50 |
|         9 | Ram        |   6.30 |
+-----------+------------+--------+
5 rows in set (0.00 sec)
```

50. Find the names of all employees who have a salary greater than the average salary:



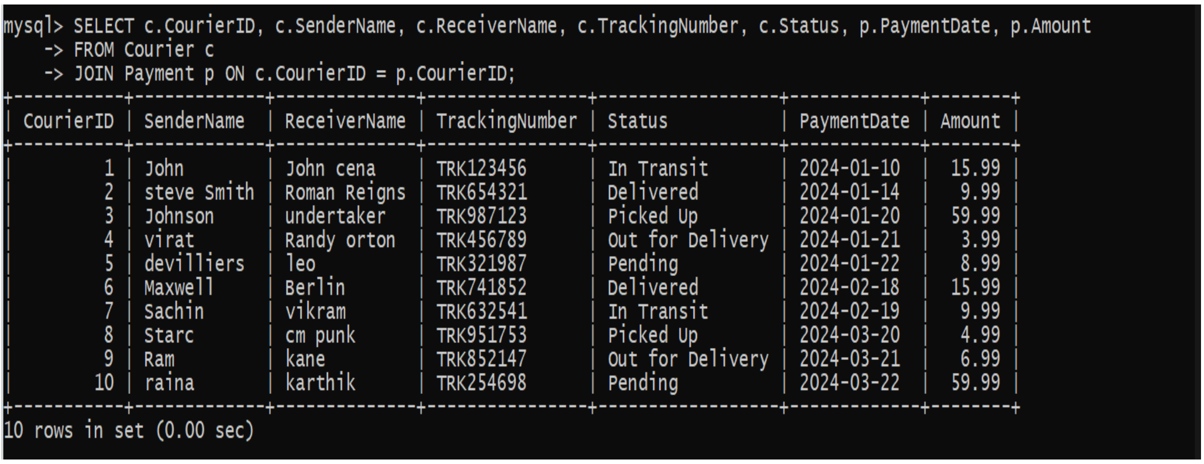
```
mysql> SELECT Name
    -> FROM Employee
    -> WHERE Salary > (SELECT AVG(Salary) FROM Employee);
+---------+
| Name    |
+---------+
| rekha   |
| shefali |
| radha   |
+---------+
3 rows in set (0.00 sec)
```

51. Find the total cost of all courier services where the cost is less than the maximum cost



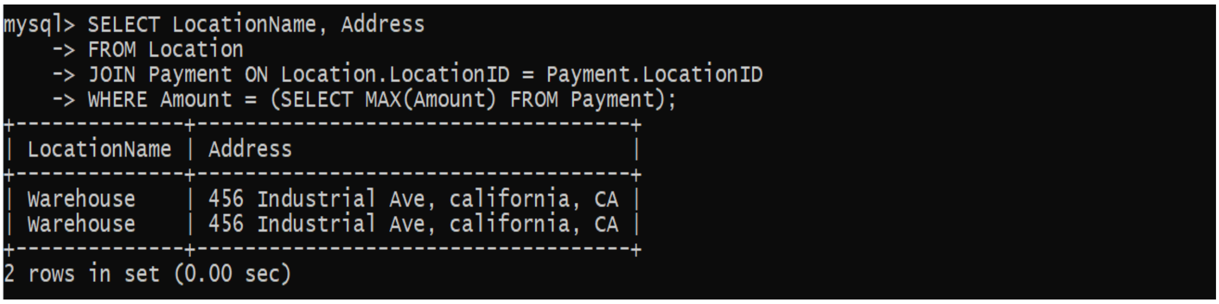
```
mysql> SELECT SUM(Cost) AS TotalCost
    -> FROM CourierServices
    -> WHERE Cost < (SELECT MAX(Cost) FROM CourierServices);
+-----------+
| TotalCost |
+-----------+
|    191.91 |
+-----------+
1 row in set (0.00 sec)
```

52. Find all couriers that have been paid for



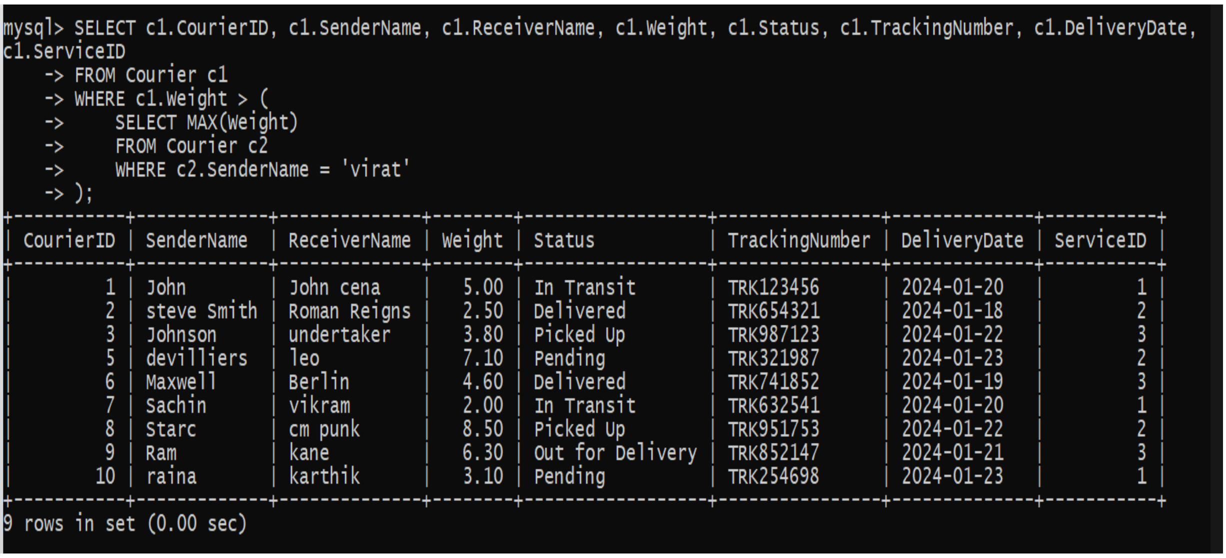
```
mysql> SELECT c.CourierID, c.SenderName, c.ReceiverName, c.TrackingNumber, c.Status, p.PaymentDate, p.Amount
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID;
+-----------+-------------+--------------+----------------+------------------+-------------+--------+
| CourierID | SenderName  | ReceiverName | TrackingNumber | Status           | PaymentDate | Amount |
+-----------+-------------+--------------+----------------+------------------+-------------+--------+
|         1 | John        | John cena    | TRK123456      | In Transit       | 2024-01-10  |  15.99 |
|         2 | steve Smith | Roman Reigns | TRK654321      | Delivered        | 2024-01-14  |   9.99 |
|         3 | Johnson     | undertaker   | TRK987123      | Picked Up        | 2024-01-20  |  59.99 |
|         4 | virat       | Randy orton  | TRK456789      | Out for Delivery | 2024-01-21  |   3.99 |
|         5 | devilliers  | leo          | TRK321987      | Pending          | 2024-01-22  |   8.99 |
|         6 | Maxwell     | Berlin       | TRK741852      | Delivered        | 2024-02-18  |  15.99 |
|         7 | Sachin      | vikram       | TRK632541      | In Transit       | 2024-02-19  |   9.99 |
|         8 | Starc       | cm punk      | TRK951753      | Picked Up        | 2024-03-20  |   4.99 |
|         9 | Ram         | kane         | TRK852147      | Out for Delivery | 2024-03-21  |   6.99 |
|        10 | raina       | karthik      | TRK254698      | Pending          | 2024-03-22  |  59.99 |
+-----------+-------------+--------------+----------------+------------------+-------------+--------+
10 rows in set (0.00 sec)
```

53. 53. Find the locations where the maximum payment amount was made



```
mysql> SELECT LocationName, Address
    -> FROM Location
    -> JOIN Payment ON Location.LocationID = Payment.LocationID
    -> WHERE Amount = (SELECT MAX(Amount) FROM Payment);
+--------------+-----------------------------------+
| LocationName | Address                           |
+--------------+-----------------------------------+
| Warehouse    | 456 Industrial Ave, california, CA |
| Warehouse    | 456 Industrial Ave, california, CA |
+--------------+-----------------------------------+
2 rows in set (0.00 sec)
```

54. Find all couriers whose weight is greater than the weight of all couriers sent by a specific sender (e.g., 'SenderName'):



```
mysql> SELECT c1.CourierID, c1.SenderName, c1.ReceiverName, c1.Weight, c1.Status, c1.TrackingNumber, c1.DeliveryDate,
c1.ServiceID
    -> FROM Courier c1
    -> WHERE c1.Weight > (
    ->     SELECT MAX(Weight)
    ->     FROM Courier c2
    ->     WHERE c2.SenderName = 'virat'
    -> );
+-----------+-------------+--------------+--------+------------------+----------------+--------------+-----------+
| CourierID | SenderName  | ReceiverName | Weight | Status           | TrackingNumber | DeliveryDate | ServiceID |
+-----------+-------------+--------------+--------+------------------+----------------+--------------+-----------+
|         1 | John        | John cena    |   5.00 | In Transit       | TRK123456      | 2024-01-20   |         1 |
|         2 | steve Smith | Roman Reigns |   2.50 | Delivered        | TRK654321      | 2024-01-18   |         2 |
|         3 | Johnson     | undertaker   |   3.80 | Picked Up        | TRK987123      | 2024-01-22   |         3 |
|         5 | devilliers  | leo          |   7.10 | Pending          | TRK321987      | 2024-01-23   |         2 |
|         6 | Maxwell     | Berlin       |   4.60 | Delivered        | TRK741852      | 2024-01-19   |         3 |
|         7 | Sachin      | vikram       |   2.00 | In Transit       | TRK632541      | 2024-01-20   |         1 |
|         8 | Starc       | cm punk      |   8.50 | Picked Up        | TRK951753      | 2024-01-22   |         2 |
|         9 | Ram         | kane         |   6.30 | Out for Delivery | TRK852147      | 2024-01-21   |         3 |
|        10 | raina       | karthik      |   3.10 | Pending          | TRK254698      | 2024-01-23   |         1 |
+-----------+-------------+--------------+--------+------------------+----------------+--------------+-----------+
9 rows in set (0.00 sec)
```