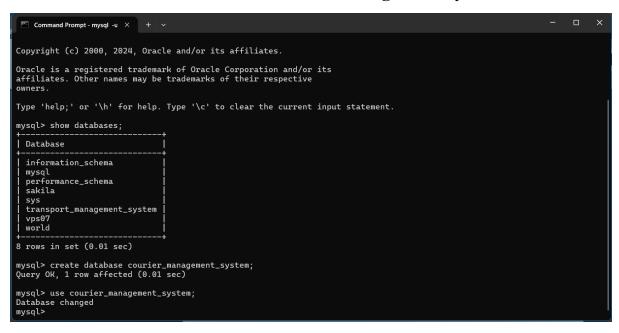# Assignment No 4: Courier Management System

Created Database Courier Management System

Task 1: Database Design. Created Tables i.e User Table, Courier Table, Courier Services Table, Employee Table, Location Table, Payment Table

---

Inserted values in the tables i.e User Table, Courier Table, Courier Services Table, Employee Table, Location Table, Payment Table

1. User Table:

```
mysql> INSERT INTO User (UserID, Name, Email, Password, ContactNumber, Address) VALUES
    -> (1, 'Ravi Kumar', 'ravi.kumar@gmail.com', 'password123', '6598712303', 'Mumbai, Maharashtra'),
    -> (2, 'Sita Sharma', 'sita.sharma@gmail.com', '123456789', '9876543211', 'Delhi, Delhi'),
    -> (3, 'Amit Patel', 'amit.patel@gmail.com', 'pass456', '7985460112', 'Ahmedabad, Gujarat'),
    -> (4, 'Rohit Verma', 'rohit.verma@gmail.com', '456789123', '8054611330', 'Bengaluru, Karnataka'),
    -> (5, 'Priya Singh', 'priya.singh@gmail.com', 'Pass@123', '9876540784', 'Chennai, Tamil Nadu'),
    -> (6, 'Sunil Yadav', 'sunil.yadav@gmail.com', '123789456', '7975133407', 'Kolkata, West Bengal'),
    -> (7, 'Kiran Rao', 'kiran.rao@gmail.com', 'pass002', '9876566697', 'Hyderabad, Telangana'),
    -> (8, 'Anjali Desai', 'anjali.desai@gmail.com', '123456@Pass', '9876543217', 'Pune, Maharashtra');
Query OK, 8 rows affected (0.01 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

2. Courier Table:

```
mysql> INSERT INTO Courier (CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, Trackin
gNumber, DeliveryDate) VALUES
    -> (1, 'Ravi Kumar', 'Mumbai', 'Sita Sharma', 'Delhi', 5.50, 'Delivered', 'T1', '2024-08-02'),
    -> (2, 'Amit Patel', 'Ahmedabad', 'Priya Singh', 'Chennai', 3.25, 'In Transit', 'T2', '2024-07-13'),
    -> (3, 'Rohit Verma', 'Bengaluru', 'Sunil Yadav', 'Kolkata', 4.75, 'Pending', 'T3', '2024-08-30'),
    -> (4, 'Sita Sharma', 'Delhi', 'Anjali Desai', 'Pune', 6.10, 'Delivered', 'T4', '2024-09-24'),
    -> (5, 'Kiran Rao', 'Hyderabad', 'Ravi Kumar', 'Mumbai', 2.80, 'In Transit', 'T5', '2024-06-15'),
    -> (6, 'Anjali Desai', 'Pune', 'Rohit Verma', 'Bengaluru', 3.50, 'Pending', 'T6', '2024-05-06'),
    -> (7, 'Priya Singh', 'Chennai', 'Kiran Rao', 'Hyderabad', 4.00, 'Delivered', 'T7', '2024-06-26'),
    -> (8, 'Sunil Yadav', 'Kolkata', 'Amit Patel', 'Ahmedabad', 3.90, 'Delivered', 'T8', '2024-09-27');
Query OK, 8 rows affected (0.01 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

3. Courier Services:

```
mysql> INSERT INTO CourierServices (ServiceID, ServiceName, Cost) VALUES
    -> (1, 'Standard Delivery', 150.00),
    -> (2, 'Express Delivery', 250.00),
    -> (3, 'Same Day Delivery', 500.00),
    -> (4, 'Overnight Delivery', 300.00),
    -> (5, 'Economy Delivery', 100.00),
    -> (6, 'International Shipping', 1000.00),
    -> (7, 'Local Delivery', 50.00),
    -> (8, 'Premium Delivery', 400.00);
Query OK, 8 rows affected (0.01 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

4. Employee Table:

```
mysql> INSERT INTO Employee (EmployeeID, Name, Email, ContactNumber, Role, Salary) VALUES
    -> (1, 'Rajesh Wagle', rajesh.wagle@gmail.com', '8080521417', 'Manager', 80000.00),
    '> (2, 'Arun Kumar', 'arun.kumar@gmail.com', '7545598110', 'Delivery Person', 30000.00),
    '> (3, 'Ramesh Gupta', 'ramesh.gupta@gmail.com', '9450594550', 'Supervisor', 50000.00),
    '> (4, 'Atharva Singh', 'atharva.singh@gmail.com', '7979777000', 'Warehouse Manager', 45000.00),
    '> (5, 'Suresh Iyer', 'suresh.iyer@gmail.com', '6665990001', 'Logistics Officer', 55000.00),
    '> (6, 'Aman Roy', 'aman.roy@gmail.com', '9766543223', 'Delivery Person', 32000.00),
    '> (7, 'Manoj Pandey', 'manoj.pandey@gmail.com', '9876103224', 'Driver', 28000.00),
    '> (8, 'John Samuel', 'john.samuel@gmail.com', '9876543225', 'Operations Manager', 60000.00)
    '> ;
```

5. Location Table:

```
mysql> INSERT INTO Location (LocationID, LocationName, Address) VALUES
    -> (1, 'Mumbai Hub', 'Mumbai, Maharashtra'),
    -> (2, 'Delhi Headquarters', 'Delhi, Delhi'),
    -> (3, 'Ahmedabad Head Office', 'Ahmedabad, Gujarat'),
    -> (4, 'Bengaluru Office', 'Bengaluru, Karnataka'),
    -> (5, 'Chennai Hub', 'Chennai, Tamil Nadu'),
    -> (6, 'Kolkata Office', 'Kolkata, West Bengal'),
    -> (7, 'Hyderabad Hub', 'Hyderabad, Telangana'),
    -> (8, 'Pune Headquarters', 'Pune, Maharashtra');
Query OK, 8 rows affected (0.01 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

6. Payment Table:

```
mysql> INSERT INTO Payment (PaymentID, CourierID, LocationID, Amount, PaymentDate) VALUES
    -> (1, 1, 1, 200.00, '2024-08-15'),
    -> (2, 2, 2, 150.00, '2024-09-10'),
    -> (3, 3, 3, 180.00, '2024-07-28'),
    -> (4, 4, 4, 250.00, '2024-05-31'),
    -> (5, 5, 5, 100.00, '2024-07-06'),
    -> (6, 6, 6, 400.00, '2024-06-20'),
    -> (7, 7, 7, 500.00, '2024-08-11'),
    -> (8, 8, 8, 300.00, '2024-09-27');
```

Task 2

a. List all the Customers:

```
mysql> SELECT * FROM User;
+--------+--------------+-------------------------+-------------+---------------+------------------------+
| UserID | Name         | Email                   | Password    | ContactNumber | Address                |
+--------+--------------+-------------------------+-------------+---------------+------------------------+
|      1 | Ravi Kumar   | ravi.kumar@gmail.com    | password123 | 6598712303    | Mumbai, Maharashtra    |
|      2 | Sita Sharma  | sita.sharma@gmail.com   | 123456789   | 9876543211    | Delhi, Delhi           |
|      3 | Amit Patel   | amit.patel@gmail.com    | pass456     | 7985460112    | Ahmedabad, Gujarat     |
|      4 | Rohit Verma  | rohit.verma@gmail.com   | 456789123   | 8054611330    | Bengaluru, Karnataka   |
|      5 | Priya Singh  | priya.singh@gmail.com   | Pass@123    | 9876540784    | Chennai, Tamil Nadu    |
|      6 | Sunil Yadav  | sunil.yadav@gmail.com   | 123789456   | 7975133407    | Kolkata, West Bengal   |
|      7 | Kiran Rao    | kiran.rao@gmail.com     | pass002     | 9876566697    | Hyderabad, Telangana   |
|      8 | Anjali Desai | anjali.desai@gmail.com  | 123456@Pass | 9876543217    | Pune, Maharashtra      |
+--------+--------------+-------------------------+-------------+---------------+------------------------+
8 rows in set (0.00 sec)
```

b. List all orders for a specific customer:

```
mysql> SELECT * FROM Courier WHERE SenderName = 'Rohit Verma';
+-----------+-------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
| CourierID | SenderName  | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status  | TrackingNumber | DeliveryDate |
+-----------+-------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
|         3 | Rohit Verma | Bengaluru     | Sunil Yadav  | Kolkata         |   4.75 | Pending | T3             | 2024-08-30   |
+-----------+-------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
1 row in set (0.00 sec)
```

c. List all couriers:

```
mysql> SELECT * FROM Courier;
+-----------+--------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
| CourierID | SenderName   | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status     | TrackingNumber | DeliveryDate |
+-----------+--------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
|         1 | Ravi Kumar   | Mumbai        | Sita Sharma  | Delhi           |   5.50 | Delivered  | T1             | 2024-08-02   |
|         2 | Amit Patel   | Ahmedabad     | Priya Singh  | Chennai         |   3.25 | In Transit | T2             | 2024-07-13   |
|         3 | Rohit Verma  | Bengaluru     | Sunil Yadav  | Kolkata         |   4.75 | Pending    | T3             | 2024-08-30   |
|         4 | Sita Sharma  | Delhi         | Anjali Desai | Pune            |   6.10 | Delivered  | T4             | 2024-09-24   |
|         5 | Kiran Rao    | Hyderabad     | Ravi Kumar   | Mumbai          |   2.80 | In Transit | T5             | 2024-06-15   |
|         6 | Anjali Desai | Pune          | Rohit Verma  | Bengaluru       |   3.50 | Pending    | T6             | 2024-05-06   |
|         7 | Priya Singh  | Chennai       | Kiran Rao    | Hyderabad       |   4.00 | Delivered  | T7             | 2024-06-26   |
|         8 | Sunil Yadav  | Kolkata       | Amit Patel   | Ahmedabad       |   3.90 | Delivered  | T8             | 2024-09-27   |
+-----------+--------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
8 rows in set (0.00 sec)
```

d. List all the packages of specific order:

```
mysql> SELECT * FROM Courier WHERE CourierID = 1;
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
|         1 | Ravi Kumar | Mumbai        | Sita Sharma  | Delhi           |   5.50 | Delivered | T1             | 2024-08-02   |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
1 row in set (0.00 sec)
```

e. List all the deliveries of specific courier:

```
mysql> SELECT * FROM Courier WHERE CourierID = 5;
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
|        5 | Kiran Rao  | Hyderabad     | Ravi Kumar   | Mumbai          |   2.80 | In Transit | T5            | 2024-06-15   |
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
1 row in set (0.00 sec)
```

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

```
mysql> SELECT * FROM Courier WHERE DeliveryDate = '2024-08-30';
+----------+-------------+---------------+--------------+----------------+--------+---------+----------------+--------------+
| CourierID | SenderName  | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status  | TrackingNumber | DeliveryDate |
+----------+-------------+---------------+--------------+----------------+--------+---------+----------------+--------------+
|        3 | Rohit Verma | Bengaluru     | Sunil Yadav  | Kolkata         |   4.75 | Pending | T3             | 2024-08-30   |
+----------+-------------+---------------+--------------+----------------+--------+---------+----------------+--------------+
1 row in set (0.00 sec)
```

g. List all packages with a specific status:

```
mysql> SELECT * FROM Courier WHERE Status = 'In Transit';
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
|        2 | Amit Patel | Ahmedabad     | Priya Singh  | Chennai         |   3.25 | In Transit | T2            | 2024-07-13   |
|        5 | Kiran Rao  | Hyderabad     | Ravi Kumar   | Mumbai          |   2.80 | In Transit | T5            | 2024-06-15   |
+----------+------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
2 rows in set (0.00 sec)
```

h. Calculate the total number of packages for each courier:

```
mysql> SELECT SenderName, COUNT(*) AS TotalPackages FROM Courier GROUP BY SenderName;
+---------------+---------------+
| SenderName    | TotalPackages |
+---------------+---------------+
| Ravi Kumar    |             1 |
| Amit Patel    |             1 |
| Rohit Verma   |             1 |
| Sita Sharma   |             1 |
| Kiran Rao     |             1 |
| Anjali Desai  |             1 |
| Priya Singh   |             1 |
| Sunil Yadav   |             1 |
+---------------+---------------+
8 rows in set (0.01 sec)
```

i. Find the average delivery time for each courier:

```
mysql> SELECT SenderName, AVG(DATEDIFF(DeliveryDate, CURDATE())) AS AverageDeliveryTime FROM Courier WHERE Status = 'Delivered' GROUP BY SenderName;
+-------------+---------------------+
| SenderName  | AverageDeliveryTime |
+-------------+---------------------+
| Ravi Kumar  |            -59.0000 |
| Sita Sharma |             -6.0000 |
| Priya Singh |            -96.0000 |
| Sunil Yadav |             -3.0000 |
+-------------+---------------------+
4 rows in set (0.00 sec)
```

j. List all packages with a specific weight range:

```
mysql> SELECT * FROM Courier WHERE Weight BETWEEN 3.0 AND 10.0;
+----------+-------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName  | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+----------+-------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
|        1 | Ravi Kumar  | Mumbai        | Sita Sharma  | Delhi           |   5.50 | Delivered | T1             | 2024-08-02   |
|        2 | Amit Patel  | Ahmedabad     | Priya Singh  | Chennai         |   3.25 | In Transit | T2            | 2024-07-13   |
|        3 | Rohit Verma | Bengaluru     | Sunil Yadav  | Kolkata         |   4.75 | Pending   | T3             | 2024-08-30   |
|        4 | Sita Sharma | Delhi         | Anjali Desai | Pune            |   6.10 | Delivered | T4             | 2024-09-24   |
|        6 | Anjali Desai| Pune          | Rohit Verma  | Bengaluru       |   3.50 | Pending   | T6             | 2024-05-06   |
|        7 | Priya Singh | Chennai       | Kiran Rao    | Hyderabad       |   4.00 | Delivered | T7             | 2024-06-26   |
|        8 | Sunil Yadav | Kolkata       | Amit Patel   | Ahmedabad       |   3.90 | Delivered | T8             | 2024-09-27   |
+----------+-------------+---------------+--------------+----------------+--------+-----------+----------------+--------------+
7 rows in set (0.00 sec)
```

k. Retrieve employees whose names contain 'John':

```
mysql> SELECT * FROM Employee WHERE Name LIKE '%John%';
+------------+--------------+-------------------------+---------------+-------------------+----------+
| EmployeeID | Name         | Email                   | ContactNumber | Role              | Salary   |
+------------+--------------+-------------------------+---------------+-------------------+----------+
|          8 | John Samuel  | john.samuel@gmail.com   | 9876543225    | Operations Manager | 60000.00 |
+------------+--------------+-------------------------+---------------+-------------------+----------+
1 row in set (0.00 sec)
```

l. List of Undelivered packages:

```
mysql> SELECT * FROM Courier WHERE Status != 'Delivered';
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
| CourierID | SenderName   | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status     | TrackingNumber | DeliveryDate |
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
|         2 | Amit Patel   | Ahmedabad     | Priya Singh  | Chennai        | 3.25   | In Transit | T2             | 2024-07-13   |
|         3 | Rohit Verma  | Bengaluru     | Sunil Yadav  | Kolkata        | 4.75   | Pending    | T3             | 2024-08-30   |
|         5 | Kiran Rao    | Hyderabad     | Ravi Kumar   | Mumbai         | 2.80   | In Transit | T5             | 2024-06-15   |
|         6 | Anjali Desai | Pune          | Rohit Verma  | Bengaluru      | 3.50   | Pending    | T6             | 2024-05-06   |
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
4 rows in set (0.00 sec)
```

m. Retrieve all courier records with payments greater than $50:

```
mysql> SELECT * FROM Courier WHERE CourierID IN (SELECT CourierID FROM Payment WHERE Amount > 50.00);
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
| CourierID | SenderName   | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status     | TrackingNumber | DeliveryDate |
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
|         1 | Ravi Kumar   | Mumbai        | Sita Sharma  | Delhi          | 5.50   | Delivered  | T1             | 2024-08-02   |
|         2 | Amit Patel   | Ahmedabad     | Priya Singh  | Chennai        | 3.25   | In Transit | T2             | 2024-07-13   |
|         3 | Rohit Verma  | Bengaluru     | Sunil Yadav  | Kolkata        | 4.75   | Pending    | T3             | 2024-08-30   |
|         4 | Sita Sharma  | Delhi         | Anjali Desai | Pune           | 6.10   | Delivered  | T4             | 2024-09-24   |
|         5 | Kiran Rao    | Hyderabad     | Ravi Kumar   | Mumbai         | 2.80   | In Transit | T5             | 2024-06-15   |
|         6 | Anjali Desai | Pune          | Rohit Verma  | Bengaluru      | 3.50   | Pending    | T6             | 2024-05-06   |
|         7 | Priya Singh  | Chennai       | Kiran Rao    | Hyderabad      | 4.00   | Delivered  | T7             | 2024-06-26   |
|         8 | Sunil Yadav  | Kolkata       | Amit Patel   | Ahmedabad      | 3.90   | Delivered  | T8             | 2024-09-27   |
+-----------+--------------+---------------+--------------+----------------+--------+------------+----------------+--------------+
8 rows in set (0.01 sec)
```

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

a. Find the total number of couriers handled by each employee:

```
mysql> SELECT e.Name, COUNT(c.CourierID) AS TotalCouriers FROM Employee e JOIN Courier c ON e.EmployeeID = c.EmployeeID GROUP BY e.Name;
+--------------+---------------+
| Name         | TotalCouriers |
+--------------+---------------+
| Arun Kumar   |             1 |
| Ramesh Gupta |             1 |
+--------------+---------------+
2 rows in set (0.00 sec)
```

b. Calculate the total revenue generated by each location:

```
mysql> SELECT l.LocationName, SUM(p.Amount) AS TotalRevenue FROM Payment p JOIN Location l ON p.LocationID = l.LocationID GROUP BY l.LocationName;
+---------------------+--------------+
| LocationName        | TotalRevenue |
+---------------------+--------------+
| Mumbai Hub          |       200.00 |
| Delhi Headquarters  |       150.00 |
| Ahmedabad Head Office |     180.00 |
| Bengaluru Office    |       250.00 |
| Chennai Hub         |       100.00 |
| Kolkata Office      |       400.00 |
| Hyderabad Hub       |       500.00 |
| Pune Headquarters   |       300.00 |
+---------------------+--------------+
8 rows in set (0.00 sec)
```

c. Find the total number of couriers delivered to each location:

```
mysql> SELECT l.LocationName, COUNT(c.CourierID) AS TotalDeliveries FROM Courier c JOIN Location l ON c.ReceiverAddress LIKE CONCAT('%', l.LocationName, '%'
) WHERE c.Status = 'Delivered' GROUP BY l.LocationName;
Empty set (0.00 sec)
```

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

```
mysql> SELECT SenderName, AVG(DATEDIFF(DeliveryDate, CURDATE())) AS AvgDeliveryTime FROM Courier WHERE Status = 'Delivered' GROUP BY SenderName ORDER BY Avg
DeliveryTime DESC LIMIT 1;
+-------------+-----------------+
| SenderName  | AvgDeliveryTime |
+-------------+-----------------+
| Sunil Yadav |         -3.0000 |
+-------------+-----------------+
1 row in set (0.00 sec)
```

e. Find Locations with Total Payments Less Than a Certain Amount:

```
mysql> SELECT SenderName, AVG(DATEDIFF(DeliveryDate, CURDATE())) AS AvgDeliveryTime FROM Courier WHERE Status = 'Delivered' GROUP BY SenderName ORDER BY Avg
DeliveryTime LIMIT 1;SELECT l.LocationName, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Location l ON p.LocationID = l.LocationID GROUP BY l.Location
Name HAVING TotalPayments < 5000;
+-------------+-----------------+
| SenderName  | AvgDeliveryTime |
+-------------+-----------------+
| Priya Singh |        -96.0000 |
+-------------+-----------------+
1 row in set (0.00 sec)

+------------------------+---------------+
| LocationName           | TotalPayments |
+------------------------+---------------+
| Mumbai Hub             |        200.00 |
| Delhi Headquarters     |        150.00 |
| Ahmedabad Head Office  |        180.00 |
| Bengaluru Office       |        250.00 |
| Chennai Hub            |        100.00 |
| Kolkata Office         |        400.00 |
| Hyderabad Hub          |        500.00 |
| Pune Headquarters      |        300.00 |
+------------------------+---------------+
8 rows in set (0.00 sec)
```

f. Calculate Total Payments per Location:

```
mysql> SELECT l.LocationName, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Location l ON p.LocationID = l.LocationID GROUP BY l.LocationName;
+------------------------+---------------+
| LocationName           | TotalPayments |
+------------------------+---------------+
| Mumbai Hub             |        200.00 |
| Delhi Headquarters     |        150.00 |
| Ahmedabad Head Office  |        180.00 |
| Bengaluru Office       |        250.00 |
| Chennai Hub            |        100.00 |
| Kolkata Office         |        400.00 |
| Hyderabad Hub          |        500.00 |
| Pune Headquarters      |        300.00 |
+------------------------+---------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID WHERE p.LocationID = 7 GROUP BY c.Couri
erID HAVING TotalPayments > 1000;
Empty set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID WHERE p.PaymentDate > '2024-08-11' GROU
P BY c.CourierID HAVING TotalPayments > 1000;
Empty set (0.00 sec)
```

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

```
mysql> SELECT l.LocationName, SUM(p.Amount) AS TotalAmount FROM Payment p JOIN Location l ON p.LocationID = l.LocationID WHERE p.PaymentDate < '2024-08-11'
GROUP BY l.LocationName HAVING TotalAmount > 5000;
Empty set (0.00 sec)
```

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

a. Retrieve Payments with Courier Information:

```
mysql> SELECT p.PaymentID, c.CourierID, c.SenderName, c.ReceiverName, p.Amount FROM Payment p INNER JOIN Courier c ON p.CourierID = c.CourierID;
+-----------+-----------+-------------+--------------+--------+
| PaymentID | CourierID | SenderName  | ReceiverName | Amount |
+-----------+-----------+-------------+--------------+--------+
|         1 |         1 | Ravi Kumar  | Sita Sharma  | 200.00 |
|         2 |         2 | Amit Patel  | Priya Singh  | 150.00 |
|         3 |         3 | Rohit Verma | Sunil Yadav  | 180.00 |
|         4 |         4 | Sita Sharma | Anjali Desai | 250.00 |
|         5 |         5 | Kiran Rao   | Ravi Kumar   | 100.00 |
|         6 |         6 | Anjali Desai| Rohit Verma  | 400.00 |
|         7 |         7 | Priya Singh | Kiran Rao    | 500.00 |
|         8 |         8 | Sunil Yadav | Amit Patel   | 300.00 |
+-----------+-----------+-------------+--------------+--------+
8 rows in set (0.00 sec)
```

b. Retrieve Payments with Location Information:

```
mysql> SELECT p.PaymentID, l.LocationName, p.Amount FROM Payment p INNER JOIN Location l ON p.LocationID = l.LocationID;
+-----------+----------------------+--------+
| PaymentID | LocationName         | Amount |
+-----------+----------------------+--------+
|         1 | Mumbai Hub           | 200.00 |
|         2 | Delhi Headquarters   | 150.00 |
|         3 | Ahmedabad Head Office| 180.00 |
|         4 | Bengaluru Office     | 250.00 |
|         5 | Chennai Hub          | 100.00 |
|         6 | Kolkata Office       | 400.00 |
|         7 | Hyderabad Hub        | 500.00 |
|         8 | Pune Headquarters    | 300.00 |
+-----------+----------------------+--------+
8 rows in set (0.00 sec)
```

c. Retrieve Payments with Courier and Location Information:

```
mysql> SELECT p.PaymentID, c.CourierID, c.SenderName, c.ReceiverName, l.LocationName, p.Amount FROM Payment p INNER JOIN Courier c ON p.CourierID = c.Courie
rID INNER JOIN Location l ON p.LocationID = l.LocationID;
+-----------+-----------+-------------+--------------+----------------------+--------+
| PaymentID | CourierID | SenderName  | ReceiverName | LocationName          | Amount |
+-----------+-----------+-------------+--------------+----------------------+--------+
|         1 |         1 | Ravi Kumar  | Sita Sharma  | Mumbai Hub            | 200.00 |
|         2 |         2 | Amit Patel  | Priya Singh  | Delhi Headquarters    | 150.00 |
|         3 |         3 | Rohit Verma | Sunil Yadav  | Ahmedabad Head Office | 180.00 |
|         4 |         4 | Sita Sharma | Anjali Desai | Bengaluru Office      | 250.00 |
|         5 |         5 | Kiran Rao   | Ravi Kumar   | Chennai Hub           | 100.00 |
|         6 |         6 | Anjali Desai| Rohit Verma  | Kolkata Office        | 400.00 |
|         7 |         7 | Priya Singh | Kiran Rao    | Hyderabad Hub         | 500.00 |
|         8 |         8 | Sunil Yadav | Amit Patel   | Pune Headquarters     | 300.00 |
+-----------+-----------+-------------+--------------+----------------------+--------+
8 rows in set (0.00 sec)
```

d. List all payments with courier details:

```
mysql> SELECT p.PaymentID, p.Amount, c.CourierID, c.SenderName, c.ReceiverName FROM Payment p INNER JOIN Courier c ON p.CourierID = c.CourierID;
+-----------+--------+-----------+-------------+--------------+
| PaymentID | Amount | CourierID | SenderName  | ReceiverName |
+-----------+--------+-----------+-------------+--------------+
|         1 | 200.00 |         1 | Ravi Kumar  | Sita Sharma  |
|         2 | 150.00 |         2 | Amit Patel  | Priya Singh  |
|         3 | 180.00 |         3 | Rohit Verma | Sunil Yadav  |
|         4 | 250.00 |         4 | Sita Sharma | Anjali Desai |
|         5 | 100.00 |         5 | Kiran Rao   | Ravi Kumar   |
|         6 | 400.00 |         6 | Anjali Desai| Rohit Verma  |
|         7 | 500.00 |         7 | Priya Singh | Kiran Rao    |
|         8 | 300.00 |         8 | Sunil Yadav | Amit Patel   |
+-----------+--------+-----------+-------------+--------------+
8 rows in set (0.00 sec)
```

e. Total payments received for each courier:

```
mysql> SELECT c.CourierID, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID GROUP BY c.CourierID;
+-----------+---------------+
| CourierID | TotalPayments |
+-----------+---------------+
|         1 |        200.00 |
|         2 |        150.00 |
|         3 |        180.00 |
|         4 |        250.00 |
|         5 |        100.00 |
|         6 |        400.00 |
|         7 |        500.00 |
|         8 |        300.00 |
+-----------+---------------+
8 rows in set (0.00 sec)
```

f. List payments made on a specific date:

```
mysql> SELECT *  FROM Payment WHERE PaymentDate = '2024-08-15';
+-----------+-----------+------------+--------+--------------+
| PaymentID | CourierID | LocationID | Amount | PaymentDate  |
+-----------+-----------+------------+--------+--------------+
|         1 |         1 |          1 | 200.00 | 2024-08-15   |
+-----------+-----------+------------+--------+--------------+
1 row in set (0.00 sec)
```

g. Get Courier Information for Each Payment:

```
mysql> SELECT p.PaymentID, c.CourierID, c.SenderName, c.ReceiverName FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID;
+-----------+-----------+-------------+--------------+
| PaymentID | CourierID | SenderName  | ReceiverName |
+-----------+-----------+-------------+--------------+
|         1 |         1 | Ravi Kumar  | Sita Sharma  |
|         2 |         2 | Amit Patel  | Priya Singh  |
|         3 |         3 | Rohit Verma | Sunil Yadav  |
|         4 |         4 | Sita Sharma | Anjali Desai |
|         5 |         5 | Kiran Rao   | Ravi Kumar   |
|         6 |         6 | Anjali Desai| Rohit Verma  |
|         7 |         7 | Priya Singh | Kiran Rao    |
|         8 |         8 | Sunil Yadav | Amit Patel   |
+-----------+-----------+-------------+--------------+
8 rows in set (0.00 sec)
```

h. Get Payment Details with Location:

```
mysql> SELECT p.PaymentID, p.Amount, l.LocationName FROM Payment p JOIN Location l ON p.LocationID = l.LocationID;
+-----------+--------+----------------------+
| PaymentID | Amount | LocationName         |
+-----------+--------+----------------------+
|         1 | 200.00 | Mumbai Hub           |
|         2 | 150.00 | Delhi Headquarters   |
|         3 | 180.00 | Ahmedabad Head Office|
|         4 | 250.00 | Bengaluru Office     |
|         5 | 100.00 | Chennai Hub          |
|         6 | 400.00 | Kolkata Office       |
|         7 | 500.00 | Hyderabad Hub        |
|         8 | 300.00 | Pune Headquarters    |
+-----------+--------+----------------------+
8 rows in set (0.00 sec)
```

i. Calculating Total Payments for Each Courier:

```
mysql> SELECT c.CourierID, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID GROUP BY c.CourierID;
+-----------+---------------+
| CourierID | TotalPayments |
+-----------+---------------+
|         1 |        200.00 |
|         2 |        150.00 |
|         3 |        180.00 |
|         4 |        250.00 |
|         5 |        100.00 |
|         6 |        400.00 |
|         7 |        500.00 |
|         8 |        300.00 |
+-----------+---------------+
8 rows in set (0.00 sec)
```
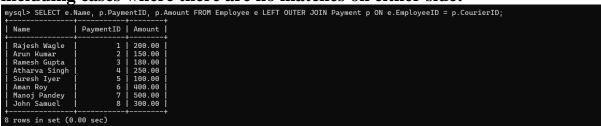
j. List Payments Within a Date Range:

```
mysql> SELECT * FROM Payment WHERE PaymentDate BETWEEN '2024-05-10' AND '2024-09-20';
+-----------+-----------+------------+--------+--------------+
| PaymentID | CourierID | LocationID | Amount | PaymentDate  |
+-----------+-----------+------------+--------+--------------+
|         1 |         1 |          1 | 200.00 | 2024-08-15   |
|         2 |         2 |          2 | 150.00 | 2024-09-10   |
|         3 |         3 |          3 | 180.00 | 2024-07-28   |
|         4 |         4 |          4 | 250.00 | 2024-05-31   |
|         5 |         5 |          5 | 100.00 | 2024-07-06   |
|         6 |         6 |          6 | 400.00 | 2024-06-20   |
|         7 |         7 |          7 | 500.00 | 2024-08-11   |
+-----------+-----------+------------+--------+--------------+
7 rows in set (0.00 sec)
```

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

```
mysql> SELECT u.Name, c.CourierID FROM User u LEFT OUTER JOIN Courier c ON u.UserID = c.UserID;
+---------------+-----------+
| Name          | CourierID |
+---------------+-----------+
| Ravi Kumar    |         1 |
| Sita Sharma   |         2 |
| Amit Patel    |      NULL |
| Rohit Verma   |      NULL |
| Priya Singh   |      NULL |
| Sunil Yadav   |      NULL |
| Kiran Rao     |      NULL |
| Anjali Desai  |      NULL |
+---------------+-----------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, s.ServiceName FROM Courier c LEFT OUTER JOIN CourierServices s ON c.ServiceID = s.ServiceID;
+-----------+-------------------+
| CourierID | ServiceName       |
+-----------+-------------------+
|         1 | Standard Delivery |
|         2 | Express Delivery  |
|         3 | NULL              |
|         4 | NULL              |
|         5 | NULL              |
|         6 | NULL              |
|         7 | NULL              |
|         8 | NULL              |
+-----------+-------------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT e.Name, p.PaymentID, p.Amount FROM Employee e LEFT OUTER JOIN Payment p ON e.EmployeeID = p.CourierID;
+---------------+-----------+--------+
| Name          | PaymentID | Amount |
+---------------+-----------+--------+
| Rajesh Wagle  |         1 | 200.00 |
| Arun Kumar    |         2 | 150.00 |
| Ramesh Gupta  |         3 | 180.00 |
| Atharva Singh |         4 | 250.00 |
| Suresh Iyer   |         5 | 100.00 |
| Aman Roy      |         6 | 400.00 |
| Manoj Pandey  |         7 | 500.00 |
| John Samuel   |         8 | 300.00 |
+---------------+-----------+--------+
8 rows in set (0.00 sec)
```

n. List all users and all courier services, showing all possible combinations:

```
mysql> SELECT u.Name, s.ServiceName FROM User u CROSS JOIN CourierServices s;
+--------------+------------------------+
| Name         | ServiceName            |
+--------------+------------------------+
| Anjali Desai | Standard Delivery      |
| Kiran Rao    | Standard Delivery      |
| Sunil Yadav  | Standard Delivery      |
| Priya Singh  | Standard Delivery      |
| Rohit Verma  | Standard Delivery      |
| Amit Patel   | Standard Delivery      |
| Sita Sharma  | Standard Delivery      |
| Ravi Kumar   | Standard Delivery      |
| Anjali Desai | Express Delivery       |
| Kiran Rao    | Express Delivery       |
| Sunil Yadav  | Express Delivery       |
| Priya Singh  | Express Delivery       |
| Rohit Verma  | Express Delivery       |
| Amit Patel   | Express Delivery       |
| Sita Sharma  | Express Delivery       |
| Ravi Kumar   | Express Delivery       |
| Anjali Desai | Same Day Delivery      |
| Kiran Rao    | Same Day Delivery      |
| Sunil Yadav  | Same Day Delivery      |
| Priya Singh  | Same Day Delivery      |
| Rohit Verma  | Same Day Delivery      |
| Amit Patel   | Same Day Delivery      |
| Sita Sharma  | Same Day Delivery      |
| Ravi Kumar   | Same Day Delivery      |
| Anjali Desai | Overnight Delivery     |
| Kiran Rao    | Overnight Delivery     |
| Sunil Yadav  | Overnight Delivery     |
| Priya Singh  | Overnight Delivery     |
| Rohit Verma  | Overnight Delivery     |
| Amit Patel   | Overnight Delivery     |
| Sita Sharma  | Overnight Delivery     |
| Ravi Kumar   | Overnight Delivery     |
| Anjali Desai | Economy Delivery       |
| Kiran Rao    | Economy Delivery       |
| Sunil Yadav  | Economy Delivery       |
| Priya Singh  | Economy Delivery       |
```

```
| Priya Singh  | Economy Delivery       |
| Rohit Verma  | Economy Delivery       |
| Amit Patel   | Economy Delivery       |
| Sita Sharma  | Economy Delivery       |
| Ravi Kumar   | Economy Delivery       |
| Anjali Desai | International Shipping  |
| Kiran Rao    | International Shipping  |
| Sunil Yadav  | International Shipping  |
| Priya Singh  | International Shipping  |
| Rohit Verma  | International Shipping  |
| Amit Patel   | International Shipping  |
| Sita Sharma  | International Shipping  |
| Ravi Kumar   | International Shipping  |
| Anjali Desai | Local Delivery         |
| Kiran Rao    | Local Delivery         |
| Sunil Yadav  | Local Delivery         |
| Priya Singh  | Local Delivery         |
| Rohit Verma  | Local Delivery         |
| Amit Patel   | Local Delivery         |
| Sita Sharma  | Local Delivery         |
| Ravi Kumar   | Local Delivery         |
| Anjali Desai | Premium Delivery       |
| Kiran Rao    | Premium Delivery       |
| Sunil Yadav  | Premium Delivery       |
| Priya Singh  | Premium Delivery       |
| Rohit Verma  | Premium Delivery       |
| Amit Patel   | Premium Delivery       |
| Sita Sharma  | Premium Delivery       |
| Ravi Kumar   | Premium Delivery       |
+--------------+------------------------+
64 rows in set (0.00 sec)
```

o. **List all employees and all locations, showing all possible combinations:**

```
mysql> SELECT e.Name, l.LocationName FROM Employee e CROSS JOIN Location l;
+---------------+----------------------+
| Name          | LocationName         |
+---------------+----------------------+
| John Samuel   | Mumbai Hub           |
| Manoj Pandey  | Mumbai Hub           |
| Aman Roy      | Mumbai Hub           |
| Suresh Iyer   | Mumbai Hub           |
| Atharva Singh | Mumbai Hub           |
| Ramesh Gupta  | Mumbai Hub           |
| Arun Kumar    | Mumbai Hub           |
| Rajesh Wagle  | Mumbai Hub           |
| John Samuel   | Delhi Headquarters   |
| Manoj Pandey  | Delhi Headquarters   |
| Aman Roy      | Delhi Headquarters   |
| Suresh Iyer   | Delhi Headquarters   |
| Atharva Singh | Delhi Headquarters   |
| Ramesh Gupta  | Delhi Headquarters   |
| Arun Kumar    | Delhi Headquarters   |
| Rajesh Wagle  | Delhi Headquarters   |
| John Samuel   | Ahmedabad Head Office |
| Manoj Pandey  | Ahmedabad Head Office |
| Aman Roy      | Ahmedabad Head Office |
| Suresh Iyer   | Ahmedabad Head Office |
| Atharva Singh | Ahmedabad Head Office |
| Ramesh Gupta  | Ahmedabad Head Office |
| Arun Kumar    | Ahmedabad Head Office |
| Rajesh Wagle  | Ahmedabad Head Office |
| John Samuel   | Bengaluru Office      |
| Manoj Pandey  | Bengaluru Office      |
| Aman Roy      | Bengaluru Office      |
| Suresh Iyer   | Bengaluru Office      |
| Atharva Singh | Bengaluru Office      |
| Ramesh Gupta  | Bengaluru Office      |
| Arun Kumar    | Bengaluru Office      |
| Rajesh Wagle  | Bengaluru Office      |
| John Samuel   | Chennai Hub           |
| Manoj Pandey  | Chennai Hub           |
| Aman Roy      | Chennai Hub           |
| Suresh Iyer   | Chennai Hub           |
```

```
| Atharva Singh | Chennai Hub          |
| Ramesh Gupta  | Chennai Hub          |
| Arun Kumar    | Chennai Hub          |
| Rajesh Wagle  | Chennai Hub          |
| John Samuel   | Kolkata Office       |
| Manoj Pandey  | Kolkata Office       |
| Aman Roy      | Kolkata Office       |
| Suresh Iyer   | Kolkata Office       |
| Atharva Singh | Kolkata Office       |
| Ramesh Gupta  | Kolkata Office       |
| Arun Kumar    | Kolkata Office       |
| Rajesh Wagle  | Kolkata Office       |
| John Samuel   | Hyderabad Hub        |
| Manoj Pandey  | Hyderabad Hub        |
| Aman Roy      | Hyderabad Hub        |
| Suresh Iyer   | Hyderabad Hub        |
| Atharva Singh | Hyderabad Hub        |
| Ramesh Gupta  | Hyderabad Hub        |
| Arun Kumar    | Hyderabad Hub        |
| Rajesh Wagle  | Hyderabad Hub        |
| John Samuel   | Pune Headquarters    |
| Manoj Pandey  | Pune Headquarters    |
| Aman Roy      | Pune Headquarters    |
| Suresh Iyer   | Pune Headquarters    |
| Atharva Singh | Pune Headquarters    |
| Ramesh Gupta  | Pune Headquarters    |
| Arun Kumar    | Pune Headquarters    |
| Rajesh Wagle  | Pune Headquarters    |
+---------------+----------------------+
64 rows in set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, c.SenderName, c.SenderAddress FROM Courier c;
+-----------+--------------+--------------+
| CourierID | SenderName   | SenderAddress |
+-----------+--------------+--------------+
|         1 | Ravi Kumar   | Mumbai       |
|         2 | Amit Patel   | Ahmedabad    |
|         3 | Rohit Verma  | Bengaluru    |
|         4 | Sita Sharma  | Delhi        |
|         5 | Kiran Rao    | Hyderabad    |
|         6 | Anjali Desai | Pune         |
|         7 | Priya Singh  | Chennai      |
|         8 | Sunil Yadav  | Kolkata      |
+-----------+--------------+--------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, c.SenderName, s.ServiceName, s.Cost FROM Courier c LEFT JOIN CourierServices s ON c.ServiceID = s.ServiceID;
+-----------+--------------+------------------+--------+
| CourierID | SenderName   | ServiceName      | Cost   |
+-----------+--------------+------------------+--------+
|         1 | Ravi Kumar   | Standard Delivery | 150.00 |
|         2 | Amit Patel   | Express Delivery  | 250.00 |
|         3 | Rohit Verma  | NULL             |   NULL |
|         4 | Sita Sharma  | NULL             |   NULL |
|         5 | Kiran Rao    | NULL             |   NULL |
|         6 | Anjali Desai | NULL             |   NULL |
|         7 | Priya Singh  | NULL             |   NULL |
|         8 | Sunil Yadav  | NULL             |   NULL |
+-----------+--------------+------------------+--------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT e.Name, COUNT(c.CourierID) AS TotalCouriers FROM Employee e LEFT JOIN Courier c ON e.EmployeeID = c.EmployeeID GROUP BY e.Name;
+--------------+---------------+
| Name         | TotalCouriers |
+--------------+---------------+
| Rajesh Wagle |             0 |
| Arun Kumar   |             1 |
| Ramesh Gupta |             1 |
| Atharva Singh |            0 |
| Suresh Iyer  |             0 |
| Aman Roy     |             0 |
| Manoj Pandey |             0 |
| John Samuel  |             0 |
+--------------+---------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT l.LocationName, SUM(p.Amount) AS TotalPayments FROM Payment p JOIN Location l ON p.LocationID = l.LocationID GROUP BY l.LocationName;
+----------------------+---------------+
| LocationName         | TotalPayments |
+----------------------+---------------+
| Mumbai Hub           |        200.00 |
| Delhi Headquarters   |        150.00 |
| Ahmedabad Head Office |       180.00 |
| Bengaluru Office     |        250.00 |
| Chennai Hub          |        100.00 |
| Kolkata Office       |        400.00 |
| Hyderabad Hub        |        500.00 |
| Pune Headquarters    |        300.00 |
+----------------------+---------------+
8 rows in set (0.01 sec)
```

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

```
mysql>  SELECT * FROM Courier WHERE SenderName = 'Anjali Desai';
+-----------+--------------+--------------+--------------+----------------+--------+---------+----------------+--------------+------------+--------+-------
-----+
| CourierID | SenderName   | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status  | TrackingNumber | DeliveryDate | EmployeeID | UserID | Servi
ceID |
+-----------+--------------+--------------+--------------+----------------+--------+---------+----------------+--------------+------------+--------+-------
-----+
|         6 | Anjali Desai | Pune         | Rohit Verma  | Bengaluru       |   3.50 | Pending | T6             | 2024-05-06   |       NULL |   NULL |
NULL |
+-----------+--------------+--------------+--------------+----------------+--------+---------+----------------+--------------+------------+--------+-------
-----+
1 row in set (0.00 sec)
```

u. List all employees who share the same role:

```
mysql> SELECT Role, GROUP_CONCAT(Name) AS Employees FROM Employee GROUP BY Role;
+--------------------+---------------------+
| Role               | Employees           |
+--------------------+---------------------+
| Delivery Person    | Arun Kumar,Aman Roy  |
| Driver             | Manoj Pandey        |
| Logistics Officer  | Suresh Iyer         |
| Manager            | Rajesh Wagle        |
| Operations Manager | John Samuel         |
| Supervisor         | Ramesh Gupta        |
| Warehouse Manager  | Atharva Singh       |
+--------------------+---------------------+
7 rows in set (0.01 sec)
```

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

```
mysql> SELECT p.PaymentID, c.CourierID, p.Amount FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID WHERE c.SenderAddress = 'Pune';
+-----------+-----------+--------+
| PaymentID | CourierID | Amount |
+-----------+-----------+--------+
|         6 |         6 | 400.00 |
+-----------+-----------+--------+
1 row in set (0.00 sec)
```

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

```
mysql> SELECT * FROM Courier WHERE SenderAddress = 'Mumbai';
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+------------+--------+--------
-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate | EmployeeID | UserID | Servi
ceID |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+------------+--------+--------
-----+
|         1 | Ravi Kumar | Mumbai        | Sita Sharma  | Delhi           |   5.50 | Delivered | T1             | 2024-08-02   |          2 |      1 |
   1 |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+------------+--------+--------
-----+
1 row in set (0.00 sec)
```

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

```
mysql> SELECT e.Name, COUNT(c.CourierID) AS CouriersDelivered FROM Employee e LEFT JOIN Courier c ON e.EmployeeID = c.EmployeeID GROUP BY e.Name;
+---------------+-------------------+
| Name          | CouriersDelivered |
+---------------+-------------------+
| Rajesh Wagle  |                 0 |
| Arun Kumar    |                 1 |
| Ramesh Gupta  |                 1 |
| Atharva Singh |                 0 |
| Suresh Iyer   |                 0 |
| Aman Roy      |                 0 |
| Manoj Pandey  |                 0 |
| John Samuel   |                 0 |
+---------------+-------------------+
8 rows in set (0.00 sec)
```

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

```
mysql> SELECT c.CourierID, p.Amount, s.Cost FROM Payment p JOIN Courier c ON p.CourierID = c.CourierID JOIN CourierServices s ON c.ServiceID = s.ServiceID W
HERE p.Amount > s.Cost;
+-----------+--------+--------+
| CourierID | Amount | Cost   |
+-----------+--------+--------+
|         1 | 200.00 | 150.00 |
+-----------+--------+--------+
1 row in set (0.00 sec)
```