

Assignment_4 - Courier Management System

Task1 Database Design

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

```
MySQL 8.0 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.35 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database CourierManagementSystem;
Query OK, 1 row affected (0.05 sec)

mysql> use CourierManagementSystem;
Database changed
mysql> -
```

MySQL 8.0 Command Line Client

```
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 (0.12 sec)
```

```
mysql> desc User;
```

Field	Type	Null	Key	Default	Extra
UserID	int	NO	PRI	NULL	
Name	varchar(255)	YES		NULL	
Email	varchar(255)	YES	UNI	NULL	
Password	varchar(255)	YES		NULL	
ContactNumber	varchar(20)	YES		NULL	
Address	text	YES		NULL	

6 rows in set (0.03 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);
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> desc Courier;
```

Field	Type	Null	Key	Default	Extra
CourierID	int	NO	PRI	NULL	
SenderName	varchar(255)	YES		NULL	
SenderAddress	text	YES		NULL	
ReceiverName	varchar(255)	YES		NULL	
ReceiverAddress	text	YES		NULL	
Weight	decimal(5,2)	YES		NULL	
Status	varchar(50)	YES		NULL	
TrackingNumber	varchar(20)	YES	UNI	NULL	
DeliveryDate	date	YES		NULL	

9 rows in set (0.00 sec)

MySQL 8.0 Command Line Client

```
-> (ServiceID INT PRIMARY KEY,  
-> ServiceName VARCHAR(100),  
-> Cost DECIMAL(8, 2));  
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> desc CourierServices;
```

Field	Type	Null	Key	Default	Extra
ServiceID	int	NO	PRI	NULL	
ServiceName	varchar(100)	YES		NULL	
Cost	decimal(8,2)	YES		NULL	

3 rows in set (0.00 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 (0.05 sec)
```

```
mysql> desc Employee;
```

Field	Type	Null	Key	Default	Extra
EmployeeID	int	NO	PRI	NULL	
Name	varchar(255)	YES		NULL	
Email	varchar(255)	YES	UNI	NULL	
ContactNumber	varchar(20)	YES		NULL	
Role	varchar(50)	YES		NULL	
Salary	decimal(10,2)	YES		NULL	

6 rows in set (0.00 sec)

```
mysql> create table Location(LocationID INT PRIMARY KEY,  
-> LocationName VARCHAR(100), Address TEXT);  
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> desc Location;
```

Field	Type	Null	Key	Default	Extra
LocationID	int	NO	PRI	NULL	
LocationName	varchar(100)	YES		NULL	
Address	text	YES		NULL	

3 rows in set (0.00 sec)

MySQL 8.0 Command Line Client

```
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 (0.06 sec)

mysql> desc Payment;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| PaymentID | int | NO | PRI | NULL |          |
| CourierID | int | YES | MUL | NULL |          |
| LocationId | int | YES | MUL | NULL |          |
| Amount | decimal(10,2) | YES |    | NULL |          |
| PaymentDate | date | YES |    | NULL |          |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> -
```

- Populate Sample Data • Insert sample data into the tables to simulate real-world scenarios.

MySQL 8.0 Command Line Client

```
mysql> INSERT INTO User (UserID, Name, Email, Password, ContactNumber, Address)
-> VALUES
-> (1, 'Astha Raj', 'astha.raj@gmail.com', 'passWord123', '7036987450', '123 Motihari, Bihar'),
-> (2, 'Asmita Si', 'asmita.si@gmail.com', 'passWord123@12', '9002500456', '748 salt lake'),
-> (3, 'Prateeti Maji', 'prateeti.maji@gmail.com', '456passWord', '3960256025', '254 Durgapur'),
-> (4, 'Monu Sharma', 'monu.sharma@gmail.com', 'passWord99#@', '9098885502', '32 Rohini Delhi'),
-> (5, 'Alice Doe', 'alice.doe@gmail.com', 'securepass123', '9934567890', '123 lake St, Village'),
-> (6, 'Bob Smith', 'bob.smith@gmail.com', 'mypassword456##', '9988552233', '456 Main St, Town'),
-> (7, 'John Smith', 'john.smith@gmail.com', 'secret1234@', '9988555333', '123 Pine St'),
-> (8, 'Harry Smith', 'harry.smith@gmail.com', 'harry123456@', '9900552233', '897 Oak St'),
-> (9, 'julie Anthony', 'julie.anthony@gmail.com', 'juliestrong999', '9088552233', '55 Berlin'),
-> (10, 'Cooper Ana', 'cooper.ana@gmail.com', 'cooper123ana#@', '9988550233', '44 London');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from users;
ERROR 1146 (42S02): Table 'couriermanagementsystem.users' doesn't exist
mysql> select * from user;
+-----+-----+-----+-----+-----+
| UserID | Name | Email | Password | ContactNumber | Address |
+-----+-----+-----+-----+-----+
| 1 | Astha Raj | astha.raj@gmail.com | passWord123 | 7036987450 | 123 Motihari, Bihar |
| 2 | Asmita Si | asmita.si@gmail.com | passWord123@12 | 9002500456 | 748 salt lake |
| 3 | Prateeti Maji | prateeti.maji@gmail.com | 456passWord | 3960256025 | 254 Durgapur |
| 4 | Monu Sharma | monu.sharma@gmail.com | passWord99#@ | 9098885502 | 32 Rohini Delhi |
| 5 | Alice Doe | alice.doe@gmail.com | securepass123 | 9934567890 | 123 lake St, Village |
| 6 | Bob Smith | bob.smith@gmail.com | mypassword456## | 9988552233 | 456 Main St, Town |
| 7 | John Smith | john.smith@gmail.com | secret1234@ | 9988555333 | 123 Pine St |
| 8 | Harry Smith | harry.smith@gmail.com | harry123456@ | 9900552233 | 897 Oak St |
| 9 | julie Anthony | julie.anthony@gmail.com | juliestrong999 | 9088552233 | 55 Berlin |
| 10 | Cooper Ana | cooper.ana@gmail.com | cooper123ana#@ | 9988550233 | 44 London |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

```
MySQL 8.0 Command Line Client
->      (19, 'Mia Anderson', '777 Warehouse St, Berlin', 'julie Anthony', '55 Berlin', 4.00, 'Cancelled', 'TN123456','2024-02-28'),
->      (20, 'Oliver Martinez', '999 St, London', 'Cooper Ana', '44 London', 1.90, 'Processing', 'TN567890', '2024-02-07');
Query OK, 4 rows affected (0.00 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> select * from Courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN901234 | 2024-01-10 |
| 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 15 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN445678 | 2024-01-04 |
| 16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 18 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN450789 | 2024-01-06 |
| 19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

```
MySQL 8.0 Command Line Client
->      (56, 'Standard Delivery', 40.00),
->      (57, 'Ekart Delivery', 100.00),
->      (58, 'Standard Delivery', 40.00),
->      (59, 'Ekart Delivery', 100.00),
->      (60, 'Standard Delivery', 40.00);
Query OK, 7 rows affected (0.00 sec)
Records: 7 Duplicates: 0 Warnings: 0

mysql> select * from CourierServices;
+-----+-----+-----+
| ServiceID | ServiceName | Cost |
+-----+-----+-----+
| 51 | Standard Delivery | 40.00 |
| 52 | Ekart Delivery | 100.00 |
| 53 | Same-Day Delivery | 900.00 |
| 54 | Standard Delivery | 40.00 |
| 55 | Standard Delivery | 40.00 |
| 56 | Standard Delivery | 40.00 |
| 57 | Ekart Delivery | 100.00 |
| 58 | Standard Delivery | 40.00 |
| 59 | Ekart Delivery | 100.00 |
| 60 | Standard Delivery | 40.00 |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

MySQL 8.0 Command Line Client

```
mysql> select * from employee;
+-----+-----+-----+-----+-----+
| EmployeeID | Name      | Email            | ContactNumber | Role        | Salary    |
+-----+-----+-----+-----+-----+
| 101 | Ishita Sharma | ishita.sharma@gmail.com | 9876512365   | Courier Driver | 31000.00 |
| 102 | Advait Kumar  | advait.kumar@gmail.com  | 9876578956   | Customer Support | 34000.00 |
| 103 | Sanvi Khanna  | sanvi.khanna@gmail.com | 9876511124   | Manager       | 53000.00 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> INSERT INTO Employee (EmployeeID, Name, Email, ContactNumber, Role, Salary)
-> VALUES(104, 'Aarav Sharma', 'aarav.sharma@gmail.com', '9876536999', 'Manager', 55000.00),
-> (105, 'Diya Patel', 'diya.patel@gmail.com', '9876514771', 'Courier Driver', 32000.00),
-> (106, 'Arjun Gupta', 'arjun.gupta@gmail.com', '9876525896', 'Customer Support', 35000.00),
-> (107, 'Ananya Das', 'ananya.das@gmail.com', '9876512369', 'Manager', 52000.00),
-> (108, 'John Kapoor', 'john.kapoor@gmail.com', '9876574158', 'Courier Driver', 30000.00),
-> (109, 'Priya Singh', 'priya.singh@gmail.com', '9876598746', 'Customer Support', 33000.00),
-> (110, 'Aryan Patel', 'aryan.patel@gmail.com', '9876514796', 'Courier Driver', 22000.00);
Query OK, 7 rows affected (0.00 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> select * from employee;
+-----+-----+-----+-----+-----+
| EmployeeID | Name      | Email            | ContactNumber | Role        | Salary    |
+-----+-----+-----+-----+-----+
| 101 | Ishita Sharma | ishita.sharma@gmail.com | 9876512365   | Courier Driver | 31000.00 |
| 102 | Advait Kumar  | advait.kumar@gmail.com  | 9876578956   | Customer Support | 34000.00 |
| 103 | Sanvi Khanna  | sanvi.khanna@gmail.com | 9876511124   | Manager       | 53000.00 |
| 104 | Aarav Sharma  | aarav.sharma@gmail.com | 9876536999   | Manager       | 55000.00 |
| 105 | Diya Patel    | diya.patel@gmail.com  | 9876514771   | Courier Driver | 32000.00 |
| 106 | Arjun Gupta   | arjun.gupta@gmail.com | 9876525896   | Customer Support | 35000.00 |
| 107 | Ananya Das    | ananya.das@gmail.com  | 9876512369   | Manager       | 52000.00 |
| 108 | John Kapoor   | john.kapoor@gmail.com | 9876574158   | Courier Driver | 30000.00 |
| 109 | Priya Singh   | priya.singh@gmail.com | 9876598746   | Customer Support | 33000.00 |
| 110 | Aryan Patel   | aryan.patel@gmail.com  | 9876514796   | Courier Driver | 22000.00 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

```

MySQL 8.0 Command Line Client
10 rows in set (0.00 sec)

mysql> INSERT INTO Location (LocationID, LocationName, Address)
-> VALUES
->     (21, 'Central town', '111 Motihari, Bihar'),
->     (22, 'North lake', '333 salt lake'),
->     (23, 'South Branch', '555 St, Durgapur'),
->     (24, 'East Office', '777 Elm St, Delhi'),
->     (25, 'West Maple', '999 Maple St, Village'),
->     (26, 'Cedar St Center', '111 Cedar St, Town'),
->     (27, 'Riverside Pine', '333 Pine St'),
->     (28, 'Oak Facility', '555 Oak St'),
->     (29, 'Berlin Park', '777 Warehouse St, Berlin'),
->     (30, 'London Office', '999 St, London');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from location;
+-----+-----+-----+
| LocationID | LocationName | Address
+-----+-----+-----+
|      21 | Central town | 111 Motihari, Bihar
|      22 | North lake   | 333 salt lake
|      23 | South Branch | 555 St, Durgapur
|      24 | East Office  | 777 Elm St, Delhi
|      25 | West Maple   | 999 Maple St, Village
|      26 | Cedar St Center | 111 Cedar St, Town
|      27 | Riverside Pine | 333 Pine St
|      28 | Oak Facility  | 555 Oak St
|      29 | Berlin Park   | 777 Warehouse St, Berlin
|      30 | London Office | 999 St, London
+-----+-----+-----+
10 rows in set (0.00 sec)

(1005, 19, 2  at line 3)
mysql> INSERT INTO Payment (PaymentID, CourierID, LocationId, Amount, PaymentDate)
-> VALUES
->     (1001, 11, 21, 40.00, '2024-01-05'),
->     (1002, 12, 22, 100.00, '2024-01-06'),
->     (1003, 13, 23, 900.00, '2024-02-08'),
->     (1004, 14, 24, 40.00, '2024-01-03'),
->     (1005, 15, 25, 40.00, '2024-01-01'),
->     (1006, 16, 26, 40.00, '2024-01-04'),
->     (1007, 17, 27, 100.00, '2024-01-17'),
->     (1008, 18, 28, 40.00, '2024-01-02'),
->     (1009, 19, 29, 100.00, '2024-01-11'),
->     (1010, 20, 30, 40.00, '2024-01-16');
Query OK, 10 rows affected (0.01 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from payment;
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+-----+
|    1001 |       11 |        21 |  40.00 | 2024-01-05 |
|    1002 |       12 |        22 | 100.00 | 2024-01-06 |
|    1003 |       13 |        23 | 900.00 | 2024-02-08 |
|    1004 |       14 |        24 |  40.00 | 2024-01-03 |
|    1005 |       15 |        25 |  40.00 | 2024-01-01 |
|    1006 |       16 |        26 |  40.00 | 2024-01-04 |
|    1007 |       17 |        27 | 100.00 | 2024-01-17 |
|    1008 |       18 |        28 |  40.00 | 2024-01-02 |
|    1009 |       19 |        29 | 100.00 | 2024-01-11 |
|   1010 |       20 |        30 |  40.00 | 2024-01-16 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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

Answer - >

In terms of relationships:

1. Customers and Orders : One- to- Many

A customer can place multiple orders and each order is associated with one customer.

2. Couriers and Orders : One-to-Many.

A courier can be associated with multiple orders, but each order is assigned to one courier.

3. Orders and Parcels: One-to-Many.

An order can consist of multiple parcels but each parcel belongs to one specific order.

4. Courier Service Employees and Couriers: One-to-Many.

Each courier service employee is associated with one courier, but a courier can have multiple service employees.

These relationships are established through the use of foreign keys, which link the primary key in one table to the corresponding field in another table, ensuring data integrity and maintaining the relationships between entities in the Courier Management System.

Task 2: Select,Where

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

1. List all customers:

```
mysql> select * from users;
ERROR 1146 (42S02): Table 'couriermanagementsystem.users' doesn't exist
mysql> select * from user;
+-----+-----+-----+-----+-----+-----+
| UserID | Name      | Email           | Password        | ContactNumber | Address         |
+-----+-----+-----+-----+-----+-----+
| 1     | Astha Raj  | astha.raj@gmail.com | passWord123    | 7036987450   | 123 Motihari, Bihar |
| 2     | Asmita Si   | asmita.si@gmail.com | passWord123@12 | 9002500456   | 748 salt lake      |
| 3     | Prateeti Maji | prateeti.maji@gmail.com | 456passWord   | 3960256025   | 254 Durgapur       |
| 4     | Monu Sharma  | monu.sharma@gmail.com | passWord99#@# | 9098885502   | 32 Rohini Delhi    |
| 5     | Alice Doe    | alice.doe@gmail.com | securepass123 | 9934567890   | 123 lake St, Village |
| 6     | Bob Smith    | bob.smith@gmail.com | mypassword456## | 9988552233   | 456 Main St, Town  |
| 7     | John Smith   | john.smith@gmail.com | secret1234@#  | 9988555533   | 123 Pine St        |
| 8     | Harry Smith  | harry.smith@gmail.com | harry123456@# | 9900552233   | 897 Oak St         |
| 9     | Julie Anthony | julie.anthony@gmail.com | juliestrong999 | 9088552233   | 55 Berlin          |
| 10    | Cooper Ana   | cooper.ana@gmail.com | cooper123ana@# | 9988550233   | 44 London          |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

2. List all orders for a specific customer:

```
MySQL 8.0 Command Line Client
```

```
9 rows in set (0.00 sec)
```

```
mysql> select * from courier where receivername = 'Asmita Si';
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status |
+-----+-----+-----+-----+-----+-----+-----+
| 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql>
```

3. List all couriers:

```
MySQL 8.0 Command Line Client
```

```
mysql> select * from courier;
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
11	Mark Anderson	111 Motihari, Bihar	Astha Raj	123 Motihari, Bihar	4.20	Processing	TN345678	2024-01-21
12	Sophia Martinez	333 salt lake	Asmita Si	748 salt lake	1.57	Delivered	TN901234	2024-01-10
13	Alex Turner	555 St, Durgapur	Prateeti Maji	254 Durgapur	2.80	Cancelled	TN234567	2024-02-08
14	Emma Moore	777 Elm St, Delhi	Monu Sharma	32 Rohini Delhi	3.00	Processing	TN678901	2024-02-03
15	Liam Wilson	999 Maple St, Village	Alice Doe	123 lake St, Village	2.50	Delivered	TN445678	2024-01-04
16	Ava Smith	111 Cedar St, Town	Bob Smith	456 Main St, Town	3.80	Cancelled	TN012345	2024-03-08
17	Noah Turner	333 Pine St	John Smith	123 Pine St	1.70	Processing	TN789012	2024-02-05
18	Isabella Wilson	555 Oak St	Harry Smith	897 Oak St	2.20	Delivered	TN450789	2024-01-06
19	Mia Anderson	777 Warehouse St, Berlin	julie Anthony	55 Berlin	4.00	Cancelled	TN123456	2024-02-28
20	Oliver Martinez	999 St, London	Cooper Ana	44 London	1.90	Processing	TN567890	2024-02-07

```
10 rows in set (0.00 sec)
```

```
mysql> ■
```

4. List all packages for a specific order:

```
MySQL 8.0 Command Line Client
```

```
mysql> SELECT *
-> FROM Courier
-> WHERE CourierID = 12;
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
12	Sophia Martinez	333 salt lake	Asmita Si	748 salt lake	1.57	Delivered	TN901234	2024-01-10

```
1 row in set (0.00 sec)
```

```
mysql> ■
```

5. List all deliveries for a specific courier:

```
MySQL 8.0 Command Line Client
```

```
mysql> SELECT * FROM Courier
-> WHERE CourierID = 11;
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
11	Mark Anderson	111 Motihari, Bihar	Astha Raj	123 Motihari, Bihar	4.20	Processing	TN345678	2024-01-21

```
1 row in set (0.00 sec)
```

```
mysql> ■
```

6. List all undelivered packages:

```

MySQL 8.0 Command Line Client
1 row in set (0.00 sec)

mysql> select * from courier where status <> 'Delivered';
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> -

```

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

```

MySQL 8.0 Command Line Client
mysql> SELECT * FROM Courier
   -> WHERE DATE(DeliveryDate) = CURDATE();
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> -

```

8. List all packages with a specific status:

```

MySQL 8.0 Command Line Client
mysql> select * from courier where status = 'Processing';
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> -

```

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

```

MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> SELECT CourierID, COUNT(*) AS TotalPackages
   -> FROM Courier GROUP BY CourierID;
+-----+-----+
| CourierID | TotalPackages |
+-----+-----+
| 11 | 1 |
| 12 | 1 |
| 13 | 1 |
| 14 | 1 |
| 15 | 1 |
| 16 | 1 |
| 17 | 1 |
| 18 | 1 |
| 19 | 1 |
| 20 | 1 |
+-----+-----+
10 rows in set (0.00 sec)

```

10. Find the average delivery time for each courier.

```
MySQL 8.0 Command Line Client
10 rows in set (0.00 sec)

mysql> SELECT p.CourierID, AVG(DATEDIFF(c.DeliveryDate, p.PaymentDate)) AS AverageDeliveryPaymentTime
-> FROM Courier c
-> JOIN Payment p ON c.CourierID = p.CourierID
-> GROUP BY p.CourierID;
+-----+-----+
| CourierID | AverageDeliveryPaymentTime |
+-----+-----+
| 11 | 16.0000 |
| 12 | 4.0000 |
| 13 | 0.0000 |
| 14 | 31.0000 |
| 15 | 3.0000 |
| 16 | 64.0000 |
| 17 | 19.0000 |
| 18 | 4.0000 |
| 19 | 48.0000 |
| 20 | 22.0000 |
+-----+
10 rows in set (0.00 sec)
```

11. List all packages with a specific weight range:

```
MySQL 8.0 Command Line Client
mysql> SELECT * FROM Courier WHERE Weight BETWEEN 1.5 AND 3.0;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN901234 | 2024-01-10 |
| 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 15 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN445678 | 2024-01-04 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 18 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN450789 | 2024-01-06 |
| 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

12. Retrieve employees whose names contain 'John'.

```
MySQL 8.0 Command Line Client
mysql> SELECT * FROM Employee WHERE Name LIKE '%john%';
+-----+-----+-----+-----+-----+
| EmployeeID | Name | Email | ContactNumber | Role | Salary |
+-----+-----+-----+-----+-----+
| 108 | John Kapoor | john.kapoor@gmail.com | 9876574158 | Courier Driver | 30000.00 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

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

```

MySQL 8.0 Command Line Client
1 row in set (0.00 sec)

mysql> SELECT c.* FROM Courier c JOIN Payment p ON c.CourierID = p.CourierID
-> WHERE p.Amount > 50.00;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN901234 | 2024-01-10 |
| 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

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

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

```

MySQL 8.0 Command Line Client
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '_id = c.courier_id' at line 1
mysql> SELECT
->     e.Name AS EmployeeName,
->     COUNT(c.CourierID) AS TotalCouriersHandled
->     FROM
->         Employee e
->     JOIN
->         Courier c ON e.Name = c.SenderName OR e.Name = c.ReceiverName
->     GROUP BY
->     e.Name;
Empty set (0.00 sec)

mysql>
```

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;
+-----+-----+-----+
| LocationID | LocationName | TotalRevenue |
+-----+-----+-----+
| 21 | Central town | 40.00 |
| 22 | North lake | 100.00 |
| 23 | South Branch | 900.00 |
| 24 | East Office | 40.00 |
| 25 | West Maple | 40.00 |
| 26 | Cedar St Center | 40.00 |
| 27 | Riverside Pine | 100.00 |
| 28 | Oak Facility | 40.00 |
| 29 | Berlin Park | 100.00 |
| 30 | London Office | 40.00 |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

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

```
MySQL 8.0 Command Line Client

mysql> SELECT l.LocationID, l.LocationName, COUNT(DISTINCT p.CourierID) AS TotalCouriersDelivered
-> FROM Location l
-> JOIN Payment p ON l.LocationID = p.LocationID
-> JOIN Courier c ON p.CourierID = c.CourierID
-> GROUP BY l.LocationID, l.LocationName;
+-----+-----+-----+
| LocationID | LocationName | TotalCouriersDelivered |
+-----+-----+-----+
|      21 | Central town      |          1 |
|      22 | North lake        |          1 |
|      23 | South Branch       |          1 |
|      24 | East Office         |          1 |
|      25 | West Maple          |          1 |
|      26 | Cedar St Center    |          1 |
|      27 | Riverside Pine      |          1 |
|      28 | Oak Facility         |          1 |
|      29 | Berlin Park         |          1 |
|     30 | London Office        |          1 |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Client

mysql> SELECT p.CourierID, AVG(DATEDIFF(c.DeliveryDate, p.PaymentDate)) AS AverageDeliveryPaymentTime
-> FROM Courier c
-> JOIN Payment p ON c.CourierID = p.CourierID
-> GROUP BY p.CourierID
-> ORDER BY AverageDeliveryPaymentTime DESC
-> LIMIT 1;
+-----+-----+
| CourierID | AverageDeliveryPaymentTime |
+-----+-----+
|      16 |           64.0000 |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Client

9 rows in set (0.00 sec)

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 TotalPayments < 100.00;
+-----+-----+-----+
| LocationID | LocationName | TotalPayments |
+-----+-----+-----+
|      21 | Central town      |      40.00 |
|      24 | East Office         |      40.00 |
|      25 | West Maple          |      40.00 |
|      26 | Cedar St Center    |      40.00 |
|      28 | Oak Facility         |      40.00 |
|     30 | London Office        |      40.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

19. Calculate Total Payments per Location

```

mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments
-> FROM Location l
-> JOIN Payment p ON p.LocationID = l.LocationID
-> GROUP BY l.LocationID, l.LocationName;
+-----+-----+-----+
| LocationID | LocationName | TotalPayments |
+-----+-----+-----+
| 21 | Central town | 40.00 |
| 22 | North lake | 100.00 |
| 23 | South Branch | 900.00 |
| 24 | East Office | 40.00 |
| 25 | West Maple | 40.00 |
| 26 | Cedar St Center | 40.00 |
| 27 | Riverside Pine | 100.00 |
| 28 | Oak Facility | 40.00 |
| 29 | Berlin Park | 100.00 |
| 30 | London Office | 40.00 |
+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> -

```

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

```

ERROR 1054 (42S22): Unknown column 'cReceiverLocationID' in 'where clause'
mysql> SELECT c.CourierID, c.SenderName, c.ReceiverName, c.Status, SUM(p.Amount) AS TotalPayments
-> FROM Courier c
-> JOIN Payment p ON c.CourierID = p.CourierID
-> WHERE p.LocationID = 21
-> GROUP BY c.CourierID, c.SenderName, c.ReceiverName, c.Status
-> HAVING TotalPayments > 1000.00;
Empty set (0.00 sec)

mysql>

```

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, c.ReceiverName, c.Status, SUM(p.Amount) AS TotalPayments
-> FROM Courier c
-> JOIN Payment p ON c.CourierID = p.CourierID
-> WHERE p.PaymentDate > '2024-01-06'
-> GROUP BY c.CourierID, c.SenderName, c.ReceiverName, c.Status
-> HAVING TotalPayments > 100.00;
+-----+-----+-----+-----+
| CourierID | SenderName | ReceiverName | Status | TotalPayments |
+-----+-----+-----+-----+
| 13 | Alex Turner | Prateeti Maji | Cancelled | 900.00 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>

```

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 TotalAmountReceived
-> FROM Location l
-> JOIN Payment p ON l.LocationID = p.LocationID
-> WHERE p.PaymentDate > '2024-01-06'
-> GROUP BY l.LocationID, l.LocationName
-> HAVING TotalAmountReceived > 5000.00;
Empty set (0.00 sec)

```

```
mysql>
```

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, p.CourierID, p.LocationID, p.Amount, p.PaymentDate,
-> c.SenderName, c.SenderAddress, c.ReceiverName, c.ReceiverAddress, c.Weight,
-> c.Status, c.TrackingNumber, c.DeliveryDate
-> FROM Payment p
-> JOIN Courier c ON p.CourierID = c.CourierID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 11 | 21 | 40.00 | 2024-01-05 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 1002 | 12 | 22 | 100.00 | 2024-01-06 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN901234 | 2024-01-10 |
| 1003 | 13 | 23 | 900.00 | 2024-02-08 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 1004 | 14 | 24 | 40.00 | 2024-01-03 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 1005 | 15 | 25 | 40.00 | 2024-01-01 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN445678 | 2024-01-04 |
| 1006 | 16 | 26 | 40.00 | 2024-01-04 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 1007 | 17 | 27 | 100.00 | 2024-01-17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 1008 | 18 | 28 | 40.00 | 2024-01-02 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN450789 | 2024-01-06 |
| 1009 | 19 | 29 | 100.00 | 2024-01-11 | Mia Anderson | 777 Warehouse St, Berlin | Julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 1010 | 20 | 30 | 40.00 | 2024-01-16 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

24. Retrieve Payments with Location Information

```

MySQL 8.0 Command Line Client

mysql> SELECT
->     p.PaymentID, p.CourierID, p.LocationID, p.Amount, p.PaymentDate,
->     l.LocationName, l.Address AS LocationAddress
->     FROM Payment p
->     JOIN Location l ON p.LocationID = l.LocationID;
+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate | LocationName | LocationAddress |
+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 11 | 21 | 40.00 | 2024-01-05 | Central town | 111 Motihari, Bihar |
| 1002 | 12 | 22 | 100.00 | 2024-01-06 | North lake | 333 salt lake |
| 1003 | 13 | 23 | 900.00 | 2024-02-08 | South Branch | 555 St, Durgapur |
| 1004 | 14 | 24 | 40.00 | 2024-01-03 | East Office | 777 Elm St, Delhi |
| 1005 | 15 | 25 | 40.00 | 2024-01-01 | West Maple | 999 Maple St, Village |
| 1006 | 16 | 26 | 40.00 | 2024-01-04 | Cedar St Center | 111 Cedar St, Town |
| 1007 | 17 | 27 | 100.00 | 2024-01-17 | Riverside Pine | 333 Pine St |
| 1008 | 18 | 28 | 40.00 | 2024-01-02 | Oak Facility | 555 Oak St |
| 1009 | 19 | 29 | 100.00 | 2024-01-11 | Berlin Park | 777 Warehouse St, Berlin |
| 1010 | 20 | 30 | 40.00 | 2024-01-16 | London Office | 999 St, London |
+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

25. Retrieve Payments with Courier and Location Information

```
-- MySQL 8.0 Command Line Client
mysql> SELECT p.PaymentID, p.CourierID, p.LocationID, p.Amount, p.PaymentDate,
    ->     c(SenderName, c(SenderAddress, c(ReceiverName, c(ReceiverAddress, c.Weight,
    ->     c.Status, c.TrackingNumber,c.DeliveryDate,
    ->     l.LocationName, l.Address AS LocationAddress
    -> ) FROM Payment p
    -> JOIN Courier c ON p.CourierID = c.CourierID
    -> JOIN Location l ON p.LocationID = l.locationID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate | LocationName |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 11 | 21 | 40.00 | 2024-01-05 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 | Central tow
| 1002 | 11 | 22 | 100.00 | 2024-01-06 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN001234 | 2024-01-10 | North lake
| 1003 | 12 | 23 | 90.00 | 2024-02-08 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 | South Brand
| 1004 | 13 | 24 | 40.00 | 2024-01-03 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 | East Office
| 1005 | 14 | 25 | 40.00 | 2024-01-01 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN45678 | 2024-01-04 | West Maple
| 1006 | 15 | 26 | 40.00 | 2024-01-04 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 | Cedar St Ce
| 1007 | 16 | 27 | 100.00 | 2024-01-17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 | Riverside P
| 1008 | 17 | 28 | 40.00 | 2024-01-02 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN458789 | 2024-01-06 | Oak Facilit
| 1009 | 18 | 29 | 100.00 | 2024-01-11 | Mia Anderson | 777 Warehouse St, Berlin | Julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 | Berlin Park
| 1010 | 19 | 30 | 40.00 | 2024-01-16 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 | London Offi
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

26. List all payments with courier details .

```
-- MySQL 8.0 Command Line Client
mysql> SELECT p.PaymentID, p.CourierID, p.LocationID, p.Amount, p.PaymentDate,
    ->     c(SenderName, c(SenderAddress, c(ReceiverName, c(ReceiverAddress, c.Weight,
    ->     c.Status, c.TrackingNumber,c.DeliveryDate
    -> ) FROM Payment p
    -> JOIN Courier c ON p.CourierID = c.CourierID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 11 | 21 | 40.00 | 2024-01-05 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 1002 | 11 | 22 | 100.00 | 2024-01-06 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN001234 | 2024-01-10 |
| 1003 | 12 | 23 | 90.00 | 2024-02-08 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 1004 | 13 | 24 | 40.00 | 2024-01-03 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 1005 | 14 | 25 | 40.00 | 2024-01-01 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN45678 | 2024-01-04 |
| 1006 | 15 | 26 | 40.00 | 2024-01-04 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 1007 | 16 | 27 | 100.00 | 2024-01-17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 1008 | 17 | 28 | 40.00 | 2024-01-02 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN458789 | 2024-01-06 |
| 1009 | 18 | 29 | 100.00 | 2024-01-11 | Mia Anderson | 777 Warehouse St, Berlin | Julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 1010 | 19 | 30 | 40.00 | 2024-01-16 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

27. Total payments received for each courier .

```
-- MySQL 8.0 Command Line Client
mysql> SELECT c.CourierID, c(SenderName, c(ReceiverName, SUM(p.Amount) AS TotalPaymentsReceived
    -> ) FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> GROUP BY c.CourierID, c(SenderName, c(ReceiverName;
+-----+-----+-----+-----+
| CourierID | SenderName | ReceiverName | TotalPaymentsReceived |
+-----+-----+-----+-----+
| 11 | Mark Anderson | Astha Raj | 40.00 |
| 12 | Sophia Martinez | Asmita Si | 100.00 |
| 13 | Alex Turner | Prateeti Maji | 900.00 |
| 14 | Emma Moore | Monu Sharma | 40.00 |
| 15 | Liam Wilson | Alice Doe | 40.00 |
| 16 | Ava Smith | Bob Smith | 40.00 |
| 17 | Noah Turner | John Smith | 100.00 |
| 18 | Isabella Wilson | Harry Smith | 40.00 |
| 19 | Mia Anderson | Julie Anthony | 100.00 |
| 20 | Oliver Martinez | Cooper Ana | 40.00 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

28. List payments made on a specific date

MySQL 8.0 Command Line Client

```
mysql> SELECT
->     PaymentID, CourierID, LocationID, Amount, PaymentDate
->   FROM Payment
-> WHERE PaymentDate = '2024-01-03';
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+
|    1004 |       14 |        24 |  40.00 | 2024-01-03 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> -
```

29. Get Courier Information for Each Payment.

MySQL 8.0 Command Line Client

```
1 row in set (0.00 sec)
```

```
mysql> SELECT p.PaymentID, p.CourierID, c.SenderName, c.SenderAddress, c.ReceiverName, c.ReceiverAddress, c.Weight, c.Status, c.TrackingNumber, c.DeliveryDate
->   FROM Payment p
->   JOIN Courier c ON p.CourierID = c.CourierID;
```

PaymentID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1001	11	Mark Anderson	111 Motihari, Bihar	Astha Raj	123 Motihari, Bihar	4.20	Processing	TN345678	2024-01-21
1002	12	Sophia Martinez	333 salt lake	Asmita Si	748 salt lake	1.57	Delivered	TN901234	2024-01-10
1003	13	Alex Turner	555 St, Durgapur	Prateeti Maji	254 Durgapur	2.80	Cancelled	TN234567	2024-02-08
1004	14	Emma Moore	777 Elm St, Delhi	Monu Sharma	32 Rohini Delhi	3.00	Processing	TN678901	2024-02-03
1005	15	Liam Wilson	999 Maple St, Village	Alice Doe	123 lake St, Village	2.50	Delivered	TN445678	2024-01-04
1006	16	Ava Smith	111 Cedar St, Town	Bob Smith	456 Main St, Town	3.80	Cancelled	TN012345	2024-03-08
1007	17	Noah Turner	333 Pine St	John Smith	123 Pine St	1.70	Processing	TN789012	2024-02-05
1008	18	Isabella Wilson	555 Oak St	Harry Smith	897 Oak St	2.20	Delivered	TN450789	2024-01-06
1009	19	Mia Anderson	777 Warehouse St, Berlin	julie Anthony	55 Berlin	4.00	Cancelled	TN123456	2024-02-28
1010	20	Oliver Martinez	999 St, London	Cooper Ana	44 London	1.90	Processing	TN567890	2024-02-07

```
10 rows in set (0.00 sec)
```

```
mysql> -
```

30. Get Payment Details with Location

MySQL 8.0 Command Line Client

```
mysql> SELECT
->     p.PaymentID, p.CourierID, p.LocationID, p.Amount, p.PaymentDate,
->     l.LocationName, l.Address AS LocationAddress
->   FROM Payment p
->   JOIN Location l ON p.LocationID = l.LocationID;
```

PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationName	LocationAddress
1001	11	21	40.00	2024-01-05	Central town	111 Motihari, Bihar
1002	12	22	100.00	2024-01-06	North lake	333 salt lake
1003	13	23	900.00	2024-02-08	South Branch	555 St, Durgapur
1004	14	24	40.00	2024-01-03	East Office	777 Elm St, Delhi
1005	15	25	40.00	2024-01-01	West Maple	999 Maple St, Village
1006	16	26	40.00	2024-01-04	Cedar St Center	111 Cedar St, Town
1007	17	27	100.00	2024-01-17	Riverside Pine	333 Pine St
1008	18	28	40.00	2024-01-02	Oak Facility	555 Oak St
1009	19	29	100.00	2024-01-11	Berlin Park	777 Warehouse St, Berlin
1010	20	30	40.00	2024-01-16	London Office	999 St, London

```
10 rows in set (0.00 sec)
```

```
mysql> -
```

31. Calculating Total Payments for Each Courier.

```
mysql> SELECT
    ->     c.CourierID, c.SenderName,c.ReceiverName,SUM(p.Amount) AS TotalPayments
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> GROUP BY c.CourierID, c.SenderName, c.ReceiverName;
+-----+-----+-----+-----+
| CourierID | SenderName      | ReceiverName | TotalPayments |
+-----+-----+-----+-----+
|      11 | Mark Anderson    | Astha Raj    |      40.00   |
|      12 | Sophia Martinez  | Asmita Si    |     100.00   |
|      13 | Alex Turner       | Prateeti Maji |     900.00   |
|      14 | Emma Moore        | Monu Sharma  |      40.00   |
|      15 | Liam Wilson        | Alice Doe    |      40.00   |
|      16 | Ava Smith         | Bob Smith    |      40.00   |
|      17 | Noah Turner        | John Smith   |     100.00   |
|      18 | Isabella Wilson   | Harry Smith  |      40.00   |
|      19 | Mia Anderson       | julie Anthony |     100.00   |
|      20 | Oliver Martinez   | Cooper Ana   |      40.00   |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

32. List Payments Within a Date Range

```
MySQL> SELECT PaymentID, CourierID, LocationID, Amount,PaymentDate
    -> FROM Payment
    -> WHERE PaymentDate BETWEEN '2024-01-04' AND '2024-01-17';
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+-----+
|      1001 |        11 |         21 |   40.00 | 2024-01-05 |
|      1002 |        12 |         22 | 100.00 | 2024-01-06 |
|     1006 |        16 |         26 |   40.00 | 2024-01-04 |
|     1007 |        17 |         27 | 100.00 | 2024-01-17 |
|     1009 |        19 |         29 | 100.00 | 2024-01-11 |
|    1010 |        20 |         30 |   40.00 | 2024-01-16 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

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

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

```
MySQL 8.0 Command Line Client
mysql> SELECT
    ->     c.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     c.Weight,
    ->     c.Status,
    ->     c.TrackingNumber,
    ->     c.DeliveryDate,
    ->     cs.ServiceID,
    ->     cs.ServiceName,
    ->     cs.Cost
    -> FROM
    ->     Courier c
    -> CROSS JOIN
    ->     CourierServices cs;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | ReceiverName | Weight | Status | TrackingNumber | DeliveryDate | ServiceID | ServiceName | Cost |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|      20 | Oliver Martinez | Cooper Ana | 1.90 | Processing | TN567890 | 2024-02-07 |      51 | Standard Delivery | 40.00 |
|      19 | Mia Anderson | julie Anthony | 4.00 | Cancelled | TN123456 | 2024-02-28 |      51 | Standard Delivery | 40.00 |
|      18 | Isabella Wilson | Harry Smith | 2.20 | Delivered | TN450789 | 2024-01-06 |      51 | Standard Delivery | 40.00 |
|      17 | Noah Turner | John Smith | 1.70 | Processing | TN789012 | 2024-02-05 |      51 | Standard Delivery | 40.00 |
|      16 | Ava Smith | Bob Smith | 3.80 | Cancelled | TN012345 | 2024-03-08 |      51 | Standard Delivery | 40.00 |
|      15 | Liam Wilson | Alice Doe | 2.50 | Delivered | TN445678 | 2024-01-04 |      51 | Standard Delivery | 40.00 |
|      14 | Emma Moore | Monu Sharma | 3.00 | Processing | TN678901 | 2024-02-03 |      51 | Standard Delivery | 40.00 |
|      13 | Alex Turner | Prateeti Maji | 2.80 | Cancelled | TN234567 | 2024-02-08 |      51 | Standard Delivery | 40.00 |
|      12 | Sophia Martinez | Asmita Si | 1.57 | Delivered | TN901234 | 2024-01-10 |      51 | Standard Delivery | 40.00 |
|      11 | Mark Anderson | Astha Raj | 4.20 | Processing | TN345678 | 2024-01-21 |      51 | Standard Delivery | 40.00 |
|      20 | Oliver Martinez | Cooper Ana | 1.90 | Processing | TN567890 | 2024-02-07 |      52 | Ekart Delivery | 100.00 |
|      19 | Mia Anderson | julie Anthony | 4.00 | Cancelled | TN123456 | 2024-02-28 |      52 | Ekart Delivery | 100.00 |
|      18 | Isabella Wilson | Harry Smith | 2.20 | Delivered | TN450789 | 2024-01-06 |      52 | Ekart Delivery | 100.00 |
|      17 | Noah Turner | John Smith | 1.70 | Processing | TN789012 | 2024-02-05 |      52 | Ekart Delivery | 100.00 |
|      16 | Ava Smith | Bob Smith | 3.80 | Cancelled | TN012345 | 2024-03-08 |      52 | Ekart Delivery | 100.00 |
|      15 | Liam Wilson | Alice Doe | 2.50 | Delivered | TN445678 | 2024-01-04 |      52 | Ekart Delivery | 100.00 |
|      14 | Emma Moore | Monu Sharma | 3.00 | Processing | TN678901 | 2024-02-03 |      52 | Ekart Delivery | 100.00 |
|      13 | Alex Turner | Prateeti Maji | 2.80 | Cancelled | TN234567 | 2024-02-08 |      52 | Ekart Delivery | 100.00 |
|      12 | Sophia Martinez | Asmita Si | 1.57 | Delivered | TN901234 | 2024-01-10 |      52 | Ekart Delivery | 100.00 |
|      11 | Mark Anderson | Astha Raj | 4.20 | Processing | TN345678 | 2024-01-21 |      52 | Ekart Delivery | 100.00 |
|      20 | Oliver Martinez | Cooper Ana | 1.90 | Processing | TN567890 | 2024-02-07 |      53 | Same-Day Delivery | 900.00 |
|      19 | Mia Anderson | julie Anthony | 4.00 | Cancelled | TN123456 | 2024-02-28 |      53 | Same-Day Delivery | 900.00 |
|      18 | Isabella Wilson | Harry Smith | 2.20 | Delivered | TN450789 | 2024-01-06 |      53 | Same-Day Delivery | 900.00 |
|      17 | Noah Turner | John Smith | 1.70 | Processing | TN789012 | 2024-02-05 |      53 | Same-Day Delivery | 900.00 |
|      16 | Ava Smith | Bob Smith | 3.80 | Cancelled | TN012345 | 2024-03-08 |      53 | Same-Day Delivery | 900.00 |
|      15 | Liam Wilson | Alice Doe | 2.50 | Delivered | TN445678 | 2024-01-04 |      53 | Same-Day Delivery | 900.00 |
|      14 | Emma Moore | Monu Sharma | 3.00 | Processing | TN678901 | 2024-02-03 |      53 | Same-Day Delivery | 900.00 |
|      13 | Alex Turner | Prateeti Maji | 2.80 | Cancelled | TN234567 | 2024-02-08 |      53 | Same-Day Delivery | 900.00 |
|      12 | Sophia Martinez | Asmita Si | 1.57 | Delivered | TN901234 | 2024-01-10 |      53 | Same-Day Delivery | 900.00 |
|      11 | Mark Anderson | Astha Raj | 4.20 | Processing | TN345678 | 2024-01-21 |      53 | Same-Day Delivery | 900.00 |
|      20 | Oliver Martinez | Cooper Ana | 1.90 | Processing | TN567890 | 2024-02-07 |      54 | Standard Delivery | 40.00 |
|      19 | Mia Anderson | julie Anthony | 4.00 | Cancelled | TN123456 | 2024-02-28 |      54 | Standard Delivery | 40.00 |
```

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

```

mysql> SELECT
    ->     e.EmployeeID,
    ->     e.Name AS EmployeeName,
    ->     e.Email,
    ->     e.ContactNumber,
    ->     e.Role,
    ->     e.Salary,
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     p.LocationID,
    ->     p.Amount,
    ->     p.PaymentDate
    -> FROM
    ->     Employee e
    -> CROSS JOIN
    ->     Payment p;

```

EmployeeID	EmployeeName	Email	ContactNumber	Role	Salary	PaymentID	CourierID	LocationID	Amount	PaymentDate
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	1001	11	21	40.00	2024-01-05
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	1001	11	21	40.00	2024-01-05
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	1001	11	21	40.00	2024-01-05
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	1001	11	21	40.00	2024-01-05
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	1001	11	21	40.00	2024-01-05
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	1001	11	21	40.00	2024-01-05
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	1001	11	21	40.00	2024-01-05
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	1001	11	21	40.00	2024-01-05
102	Advait Kumar	advait.kumar@gmail.com	9876578956	Customer Support	34000.00	1001	11	21	40.00	2024-01-05
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	1001	11	21	40.00	2024-01-05
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	1002	12	22	100.00	2024-01-06
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	1002	12	22	100.00	2024-01-06
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	1002	12	22	100.00	2024-01-06
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	1002	12	22	100.00	2024-01-06
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	1002	12	22	100.00	2024-01-06
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	1002	12	22	100.00	2024-01-06
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	1002	12	22	100.00	2024-01-06
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	1002	12	22	100.00	2024-01-06
102	Advait Kumar	advait.kumar@gmail.com	9876578956	Customer Support	34000.00	1002	12	22	100.00	2024-01-06
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	1002	12	22	100.00	2024-01-06
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	1003	13	23	900.00	2024-02-08
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	1003	13	23	900.00	2024-02-08
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	1003	13	23	900.00	2024-02-08
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	1003	13	23	900.00	2024-02-08
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	1003	13	23	900.00	2024-02-08
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	1003	13	23	900.00	2024-02-08
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	1003	13	23	900.00	2024-02-08
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	1003	13	23	900.00	2024-02-08
102	Advait Kumar	advait.kumar@gmail.com	9876578956	Customer Support	34000.00	1003	13	23	900.00	2024-02-08

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

```

MySQL 8.0 Command Line Client
100 rows in set (0.00 sec)

mysql> SELECT
    ->     u.UserID,
    ->     u.Name AS UserName,
    ->     u.Email,
    ->     u.ContactNumber,
    ->     u.Address AS UserAddress,
    ->     cs.ServiceID,
    ->     cs.ServiceName,
    ->     cs.Cost
    -> FROM
    ->     User u
    -> CROSS JOIN
    ->     CourierServices cs;

```

UserID	UserName	Email	ContactNumber	UserAddress	ServiceID	ServiceName	Cost
10	Cooper Ana	cooper.ana@gmail.com	9988550233	44 London	51	Standard Delivery	40.00
9	Julie Anthony	julie.anthony@gmail.com	9088552233	55 Berlin	51	Standard Delivery	40.00
8	Harry Smith	harry.smith@gmail.com	9900552233	897 Oak St	51	Standard Delivery	40.00
7	John Smith	john.smith@gmail.com	9988555533	123 Pine St	51	Standard Delivery	40.00
6	Bob Smith	bob.smith@gmail.com	9988552233	456 Main St, Town	51	Standard Delivery	40.00
5	Alice Doe	alice.doe@gmail.com	9934567890	123 lake St, Village	51	Standard Delivery	40.00
4	Monu Sharma	monu.sharma@gmail.com	9098885502	32 Rohini Delhi	51	Standard Delivery	40.00
3	Prateeti Maji	prateeti.maji@gmail.com	3960256025	254 Durgapur	51	Standard Delivery	40.00
2	Asmita Si	asmita.si@gmail.com	9002500456	748 salt lake	51	Standard Delivery	40.00
1	Astha Raj	astha.raj@gmail.com	7036987450	123 Motihari, Bihar	51	Standard Delivery	40.00
10	Cooper Ana	cooper.ana@gmail.com	9988550233	44 London	52	Ekart Delivery	100.00
9	Julie Anthony	julie.anthony@gmail.com	9088552233	55 Berlin	52	Ekart Delivery	100.00
8	Harry Smith	harry.smith@gmail.com	9900552233	897 Oak St	52	Ekart Delivery	100.00
7	John Smith	john.smith@gmail.com	9988555533	123 Pine St	52	Ekart Delivery	100.00
6	Bob Smith	bob.smith@gmail.com	9988552233	456 Main St, Town	52	Ekart Delivery	100.00
5	Alice Doe	alice.doe@gmail.com	9934567890	123 lake St, Village	52	Ekart Delivery	100.00
4	Monu Sharma	monu.sharma@gmail.com	9098885502	32 Rohini Delhi	52	Ekart Delivery	100.00
3	Prateeti Maji	prateeti.maji@gmail.com	3960256025	254 Durgapur	52	Ekart Delivery	100.00
2	Asmita Si	asmita.si@gmail.com	9002500456	748 salt lake	52	Ekart Delivery	100.00
1	Astha Raj	astha.raj@gmail.com	7036987450	123 Motihari, Bihar	52	Ekart Delivery	100.00
10	Cooper Ana	cooper.ana@gmail.com	9988550233	44 London	53	Same-Day Delivery	900.00
9	Julie Anthony	julie.anthony@gmail.com	9088552233	55 Berlin	53	Same-Day Delivery	900.00
8	Harry Smith	harry.smith@gmail.com	9900552233	897 Oak St	53	Same-Day Delivery	900.00
7	John Smith	john.smith@gmail.com	9988555533	123 Pine St	53	Same-Day Delivery	900.00
6	Bob Smith	bob.smith@gmail.com	9988552233	456 Main St, Town	53	Same-Day Delivery	900.00
5	Alice Doe	alice.doe@gmail.com	9934567890	123 lake St, Village	53	Same-Day Delivery	900.00
4	Monu Sharma	monu.sharma@gmail.com	9098885502	32 Rohini Delhi	53	Same-Day Delivery	900.00
3	Prateeti Maji	prateeti.maji@gmail.com	3960256025	254 Durgapur	53	Same-Day Delivery	900.00
2	Asmita Si	asmita.si@gmail.com	9002500456	748 salt lake	53	Same-Day Delivery	900.00
1	Astha Raj	astha.raj@gmail.com	7036987450	123 Motihari, Bihar	53	Same-Day Delivery	900.00
10	Cooper Ana	cooper.ana@gmail.com	9988550233	44 London	54	Standard Delivery	40.00
9	Julie Anthony	julie.anthony@gmail.com	9088552233	55 Berlin	54	Standard Delivery	40.00

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

```
mysql> SELECT
->     e.EmployeeID,
->     e.Name AS EmployeeName,
->     e.Email,
->     e.ContactNumber,
->     e.Role,
->     e.Salary,
->     l.LocationID,
->     l.LocationName,
->     l.Address AS LocationAddress
->  FROM
->     Employee e
->  CROSS JOIN
->     Location l;
```

EmployeeID	EmployeeName	Email	ContactNumber	Role	Salary	LocationID	LocationName	LocationAddress
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	21	Central town	111 Motihari, Bihar
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	21	Central town	111 Motihari, Bihar
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	21	Central town	111 Motihari, Bihar
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	21	Central town	111 Motihari, Bihar
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	21	Central town	111 Motihari, Bihar
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	21	Central town	111 Motihari, Bihar
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	21	Central town	111 Motihari, Bihar
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	21	Central town	111 Motihari, Bihar
102	Adwait Kumar	adwait.kumar@gmail.com	9876578956	Customer Support	34000.00	21	Central town	111 Motihari, Bihar
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	21	Central town	111 Motihari, Bihar
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	22	North lake	333 salt lake
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	22	North lake	333 salt lake
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	22	North lake	333 salt lake
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	22	North lake	333 salt lake
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	22	North lake	333 salt lake
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	22	North lake	333 salt lake
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	22	North lake	333 salt lake
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	22	North lake	333 salt lake
102	Adwait Kumar	adwait.kumar@gmail.com	9876578956	Customer Support	34000.00	22	North lake	333 salt lake
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	22	North lake	333 salt lake
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	23	South Branch	555 St, Durgapur
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	23	South Branch	555 St, Durgapur
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	23	South Branch	555 St, Durgapur
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	23	South Branch	555 St, Durgapur
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	23	South Branch	555 St, Durgapur
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	23	South Branch	555 St, Durgapur
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	23	South Branch	555 St, Durgapur
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	23	South Branch	555 St, Durgapur
102	Adwait Kumar	adwait.kumar@gmail.com	9876578956	Customer Support	34000.00	23	South Branch	555 St, Durgapur
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	23	South Branch	555 St, Durgapur
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	24	East Office	777 Elm St, Delhi
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	24	East Office	777 Elm St, Delhi

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

```
MySQL 8.0 Command Line Client
mysql> SELECT
->     c.CourierID,
->     c.SenderName AS CourierSenderName,
->     c.SenderAddress AS CourierSenderAddress,
->     c.ReceiverName,
->     c.ReceiverAddress,
->     c.Weight,
->     c.Status,
->     c.TrackingNumber,
->     c.DeliveryDate,
->     u.UserID AS SenderUserID,
->     u.Name AS SenderName,
->     u.Email AS SenderEmail,
->     u.ContactNumber AS SenderContactNumber,
->     u.Address AS SenderAddress
->  FROM
->     Courier c
->  LEFT JOIN
->     User u ON c.SenderName = u.Name;
```

CourierID	CourierSenderName	CourierSenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	SenderUserID	SenderName	SenderEmail	SenderContactNumber
11	Mark Anderson	111 Motihari, Bihar	Astha Raj	123 Motihari, Bihar	4.20	Processing	TN345678	2024-01-21	NULL	NULL	NULL	NULL
12	Sophia Martinez	333 salt lake	Asmita Si	748 salt lake	1.57	Delivered	TN9801234	2024-01-10	NULL	NULL	NULL	NULL
13	Alex Turner	555 St, Durgapur	Prateeti Maji	254 Durgapur	2.80	Cancelled	TN234567	2024-02-08	NULL	NULL	NULL	NULL
14	Emma Moore	777 Elm St, Delhi	Monu Sharma	32 Rohini Delhi	3.00	Processing	TN678901	2024-02-03	NULL	NULL	NULL	NULL
15	Liam Wilson	999 Maple St, Village	Alice Doe	123 lake St, Village	2.50	Delivered	TN445678	2024-01-04	NULL	NULL	NULL	NULL
16	Ava Smith	111 Cedar St, Town	Bob Smith	456 Main St, Town	3.80	Cancelled	TN012345	2024-03-08	NULL	NULL	NULL	NULL
17	Noah Turner	333 Pine St	John Smith	123 Pine St	1.70	Processing	TN789012	2024-02-05	NULL	NULL	NULL	NULL
18	Isabella Wilson	555 Oak St	Harry Smith	897 Oak St	2.20	Delivered	TN450789	2024-01-06	NULL	NULL	NULL	NULL
19	Mia Anderson	777 Warehouse St, Berlin	julie Anthony	55 Berlin	4.00	Cancelled	TN123456	2024-02-28	NULL	NULL	NULL	NULL
20	Oliver Martinez	999 St, London	Cooper Ana	44 London	1.90	Processing	TN567890	2024-02-07	NULL	NULL	NULL	NULL

10 rows in set (0.00 sec)

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

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

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

```

mysql> SELECT
->     e.EmployeeID,
->     e.Name AS EmployeeName,
->     e.Email,
->     e.ContactNumber,
->     e.Role,
->     e.Salary,
->     COUNT(c.CourierID) AS NumberOfCouriers
-> FROM
->     Employee e
-> LEFT JOIN
->     Courier c ON e.Name = c.SenderName
-> GROUP BY
->     e.EmployeeID, e.Name, e.Email, e.ContactNumber, e.Role, e.Salary;
+-----+-----+-----+-----+-----+-----+-----+-----+
| EmployeeID | EmployeeName | Email           | ContactNumber | Role        | Salary       | NumberOfCouriers |
+-----+-----+-----+-----+-----+-----+-----+
| 101 | Ishita Sharma | ishita.sharma@gmail.com | 9876512365   | Courier Driver | 31000.00    | 0             |
| 102 | Advait Kumar | advait.kumar@gmail.com | 9876578956   | Customer Support | 34000.00    | 0             |
| 103 | Sanvi Khanna | sanvi.khanna@gmail.com | 9876511124   | Manager       | 53000.00    | 0             |
| 104 | Aarav Sharma | aarav.sharma@gmail.com | 9876536999   | Manager       | 55000.00    | 0             |
| 105 | Diya Patel   | diya.patel@gmail.com  | 9876514771   | Courier Driver | 32000.00    | 0             |
| 106 | Arjun Gupta  | arjun.gupta@gmail.com | 9876525896   | Customer Support | 35000.00    | 0             |
| 107 | Ananya Das   | ananya.das@gmail.com | 9876512369   | Manager       | 52000.00    | 0             |
| 108 | John Kapoor   | john.kapoor@gmail.com | 9876574158   | Courier Driver | 30000.00    | 0             |
| 109 | Priya Singh   | priya.singh@gmail.com | 9876598746   | Customer Support | 33000.00    | 0             |
| 110 | Aryan Patel  | aryan.patel@gmail.com | 9876514796   | Courier Driver | 22000.00    | 0             |
+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

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

```

MySQL 8.0 Command Line Client

mysql> SELECT
->     l.LocationID,
->     l.LocationName,
->     l.Address,
->     SUM(p.Amount) AS TotalPaymentAmount
-> FROM
->     Location l
-> LEFT JOIN
->     Payment p ON l.LocationID = p.LocationID
-> GROUP BY
->     l.LocationID, l.LocationName, l.Address;
+-----+-----+-----+-----+
| LocationID | LocationName | Address          | TotalPaymentAmount |
+-----+-----+-----+-----+
| 21 | Central town | 111 Motihari, Bihar | 40.00            |
| 22 | North lake   | 333 salt lake      | 100.00           |
| 23 | South Branch | 555 St, Durgapur   | 900.00           |
| 24 | East Office   | 777 Elm St, Delhi   | 40.00            |
| 25 | West Maple    | 999 Maple St, Village | 40.00            |
| 26 | Cedar St Center | 111 Cedar St, Town | 40.00            |
| 27 | Riverside Pine | 333 Pine St         | 100.00           |
| 28 | Oak Facility   | 555 Oak St          | 40.00            |
| 29 | Berlin Park   | 777 Warehouse St, Berlin | 100.00           |
| 30 | London Office  | 999 St, London       | 40.00            |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

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

MySQL 8.0 Command Line Client

```
mysql> SELECT * FROM Courier
   -> WHERE SenderName = 'Mark Anderson';
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar |  4.20 | Processing | TN345678 | 2024-01-21 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

44. List all employees who share the same role.

MySQL 8.0 Command Line Client

```
mysql> SELECT
   ->     Role,
   ->     COUNT(*) AS EmployeeCount,
   ->     GROUP_CONCAT(Name) AS EmployeeNames
   ->   FROM
   ->     Employee
   -> GROUP BY
   ->     Role
   -> HAVING
   ->     COUNT(*) > 1;
+-----+-----+-----+
| Role          | EmployeeCount | EmployeeNames           |
+-----+-----+-----+
| Courier Driver |            4 | Ishita Sharma,Diya Patel,John Kapoor,Aryan Patel |
| Customer Support |        3 | Advait Kumar,Arjun Gupta,Priya Singh |
| Manager       |            3 | Sanvi Khanna,Aarav Sharma,Ananya Das |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> -
```

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

MySQL 8.0 Command Line Client

```
mysql>
mysql> SELECT
   ->     p.PaymentID, p.CourierID, l.LocationID, p.Amount, p.PaymentDate, c.CourierID, c(SenderName),
   ->     c.SenderAddress, c.ReceiverName, c.ReceiverAddress, c.Weight, c.Status, c.TrackingNumber, c.DeliveryDate
   ->   FROM Payment p
   ->   JOIN Courier c ON p.CourierID = c.CourierID
   ->   JOIN
   ->     Location l ON p.LocationID = l.LocationID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate | CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | 11 | 21 | 40.00 | 2024-01-05 | 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 1002 | 12 | 22 | 100.00 | 2024-01-06 | 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN001234 | 2024-01-10 |
| 1003 | 13 | 23 | 900.00 | 2024-02-08 | 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 1004 | 14 | 24 | 40.00 | 2024-01-03 | 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 1005 | 15 | 25 | 40.00 | 2024-01-01 | 15 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN445678 | 2024-01-04 |
| 1006 | 16 | 26 | 40.00 | 2024-01-04 | 16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 1007 | 17 | 27 | 100.00 | 2024-01-17 | 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 1008 | 18 | 28 | 40.00 | 2024-01-02 | 18 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN450789 | 2024-01-06 |
| 1009 | 19 | 29 | 100.00 | 2024-01-11 | 19 | Mia Anderson | 777 Warehouse St, Berlin | Julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 1010 | 20 | 30 | 40.00 | 2024-01-16 | 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Client
```

```
mysql> SELECT
->     c.CourierID,
->     c.SenderName,
->     c.SenderAddress,
->     c.ReceiverName,
->     c.ReceiverAddress,
->     c.Weight,
->     c.Status,
->     c.TrackingNumber,
->     c.DeliveryDate
-> FROM
->     Courier c
-> JOIN
->     User u ON c.SenderAddress = u.Address
-> WHERE
->     c.SenderAddress IS NOT NULL;
Empty set (0.00 sec)
```

```
mysql> -
```

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

```
MySQL 8.0 Command Line Client
```

```
ERROR 1054 (42S22): Unknown column 'c.EmployeeID' in 'on clause'
```

```
mysql> SELECT
->     e.EmployeeID,
->     e.Name AS EmployeeName,
->     e.Email,
->     e.ContactNumber,
->     e.Role,
->     e.Salary,
->     COUNT(c.CourierID) AS DeliveredCouriers
-> FROM
->     Employee e
-> LEFT JOIN
->     Courier c ON e.Name = c.SenderName OR e.Name = c.ReceiverName
-> GROUP BY
->     e.EmployeeID, e.Name, e.Email, e.ContactNumber, e.Role, e.Salary;
```

EmployeeID	EmployeeName	Email	ContactNumber	Role	Salary	DeliveredCouriers
101	Ishita Sharma	ishita.sharma@gmail.com	9876512365	Courier Driver	31000.00	0
102	Advait Kumar	advait.kumar@gmail.com	9876578956	Customer Support	34000.00	0
103	Sanvi Khanna	sanvi.khanna@gmail.com	9876511124	Manager	53000.00	0
104	Aarav Sharma	aarav.sharma@gmail.com	9876536999	Manager	55000.00	0
105	Diya Patel	diya.patel@gmail.com	9876514771	Courier Driver	32000.00	0
106	Arjun Gupta	arjun.gupta@gmail.com	9876525896	Customer Support	35000.00	0
107	Ananya Das	ananya.das@gmail.com	9876512369	Manager	52000.00	0
108	John Kapoor	john.kapoor@gmail.com	9876574158	Courier Driver	30000.00	0
109	Priya Singh	priya.singh@gmail.com	9876598746	Customer Support	33000.00	0
110	Aryan Patel	aryan.patel@gmail.com	9876514796	Courier Driver	22000.00	0

```
10 rows in set (0.00 sec)
```

```
mysql> -
```

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

```
MySQL 8.0 Command Line Client
```

```
mysql> SELECT
->     c.*,
->     c.DeliveryDate,
->     p.PaymentID,
->     p.Amount AS PaymentAmount,
->     cs.Cost AS ServiceCost
-> FROM
->     Courier c
-> JOIN
->     Payment p ON c.CourierID = p.CourierID
-> JOIN
->     CourierServices cs ON c.SenderName = cs.ServiceName
-> WHERE
->     p.Amount > cs.Cost;
Empty set (0.00 sec)
```

```
mysql> -
```

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 8.0 Command Line Client
```

```
mysql> SELECT
->     CourierID,
->     SenderName,
->     SenderAddress,
->     ReceiverName,
->     ReceiverAddress,
->     Weight,
->     Status,
->     TrackingNumber,
->     DeliveryDate
-> FROM
->     Courier
-> WHERE
->     Weight > (SELECT AVG(Weight) FROM Courier);
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
|    11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
|    13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
|    14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
|    16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
|    19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql>
```

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

```
mysql> SELECT
->     e.*
->     FROM
->     Employee e
-> WHERE
->     Salary > (SELECT AVG(Salary) FROM Employee);
```

```
+-----+-----+-----+-----+-----+
| EmployeeID | Name | Email | ContactNumber | Role | Salary |
+-----+-----+-----+-----+-----+
|    103 | Sanvi Khanna | sanvi.khanna@gmail.com | 9876511124 | Manager | 53000.00 |
|    104 | Aarav Sharma | aarav.sharma@gmail.com | 9876536999 | Manager | 55000.00 |
|    107 | Ananya Das | ananya.das@gmail.com | 9876512369 | Manager | 52000.00 |
+-----+-----+-----+-----+-----+
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 8.0 Command Line Client
mysql> SELECT
->      SUM(Cost) AS TotalCost
->   FROM
->     CourierServices
-> WHERE
->   Cost < (SELECT MAX(Cost) FROM CourierServices);
+-----+
| TotalCost |
+-----+
| 540.00 |
+-----+
1 row in set (0.00 sec)

mysql>
```

52. Find all couriers that have been paid for

```
MySQL 8.0 Command Line Client
mysql> SELECT
->      c.*
->   FROM
->     Courier c
-> JOIN
->   Payment p ON c.CourierID = p.CourierID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |
| 12 | Sophia Martinez | 333 salt lake | Asmita Si | 748 salt lake | 1.57 | Delivered | TN901234 | 2024-01-10 |
| 13 | Alex Turner | 555 St, Durgapur | Prateeti Maji | 254 Durgapur | 2.80 | Cancelled | TN234567 | 2024-02-08 |
| 14 | Emma Moore | 777 Elm St, Delhi | Monu Sharma | 32 Rohini Delhi | 3.00 | Processing | TN678901 | 2024-02-03 |
| 15 | Liam Wilson | 999 Maple St, Village | Alice Doe | 123 lake St, Village | 2.50 | Delivered | TN445678 | 2024-01-04 |
| 16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |
| 17 | Noah Turner | 333 Pine St | John Smith | 123 Pine St | 1.70 | Processing | TN789012 | 2024-02-05 |
| 18 | Isabella Wilson | 555 Oak St | Harry Smith | 897 Oak St | 2.20 | Delivered | TN450789 | 2024-01-06 |
| 19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |
| 20 | Oliver Martinez | 999 St, London | Cooper Ana | 44 London | 1.90 | Processing | TN567890 | 2024-02-07 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Client
mysql> SELECT
->      l.LocationID,
->      l.LocationName,
->      l.Address,
->      p.MaximumPaymentAmount
->   FROM
->     Location l
-> JOIN
->   (SELECT LocationID, MAX(Amount) AS MaximumPaymentAmount
->    FROM Payment
->    GROUP BY LocationID) p ON l.LocationID = p.LocationID;
+-----+-----+-----+-----+
| LocationID | LocationName | Address | MaximumPaymentAmount |
+-----+-----+-----+-----+
| 21 | Central town | 111 Motihari, Bihar | 40.00 |
| 22 | North lake | 333 salt lake | 100.00 |
| 23 | South Branch | 555 St, Durgapur | 900.00 |
| 24 | East Office | 777 Elm St, Delhi | 40.00 |
| 25 | West Maple | 999 Maple St, Village | 40.00 |
| 26 | Cedar St Center | 111 Cedar St, Town | 40.00 |
| 27 | Riverside Pine | 333 Pine St | 100.00 |
| 28 | Oak Facility | 555 Oak St | 40.00 |
| 29 | Berlin Park | 777 Warehouse St, Berlin | 100.00 |
| 30 | London Office | 999 St, London | 40.00 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Client

mysql> SELECT c.*  
-> FROM Courier c  
-> WHERE c.Weight > (  
->     SELECT MAX(c2.Weight)  
->     FROM Courier c2  
->     WHERE c2.SenderName = 'Emma Moore');  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 11 | Mark Anderson | 111 Motihari, Bihar | Astha Raj | 123 Motihari, Bihar | 4.20 | Processing | TN345678 | 2024-01-21 |  
| 16 | Ava Smith | 111 Cedar St, Town | Bob Smith | 456 Main St, Town | 3.80 | Cancelled | TN012345 | 2024-03-08 |  
| 19 | Mia Anderson | 777 Warehouse St, Berlin | julie Anthony | 55 Berlin | 4.00 | Cancelled | TN123456 | 2024-02-28 |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql>
```