

Task 2: Select, Where

1. List all customers:

Select * from User;

```
MySQL 8.0 Command Line Client
owners.

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

mysql> use Courier_Management_System
Database changed
mysql> show tables;
+---------------------+
| Tables_in_courier_management_system |
+-----+
| courier               |
| courierservice         |
| employee              |
| location              |
| payment               |
| user                  |
+-----+
6 rows in set (0.00 sec)

mysql> select * from user;
+-----+-----+-----+-----+-----+-----+
| UserID | Name   | Email           | Password | ContactNumber | Address          |
+-----+-----+-----+-----+-----+-----+
| 1     | Rajesh | rajesh@example.com | password1 | 9876543210  | 123 Gandhi Nagar, Delhi
| 2     | Priya   | priya@example.com  | password2 | 9876543210  | 456 Patel Colony, Mumbai
| 3     | Ananya  | ananya@example.com | password3 | 9876543210  | 789 Malhotra Street, Kolkata
| 4     | Deepak  | deepak@example.com | password4 | 9876543210  | 345 Rajput Enclave, Jaipur
| 5     | Laxmi   | laxmi@example.com  | password5 | 9876543210  | 654 Verma Market, New York
| 6     | Aray    | aray@example.com   | password6 | 9876543210  | 987 Jorai Nagar, Pune
| 7     | Meera   | meera@example.com  | password7 | 9876543210  | 741 Khan Street, Hyderabad
| 8     | Rohan   | rohan@example.com | password8 | 9876543210  | 369 Patel Chowk, Ahmedabad
| 9     | Ishita  | ishita@example.com | password9 | 9876543210  | 852 Khan Market, Chennai
| 10    | Arjun   | arjun@example.com | password10 | 9876543210 | 147 Verma Colony, Bangalore
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

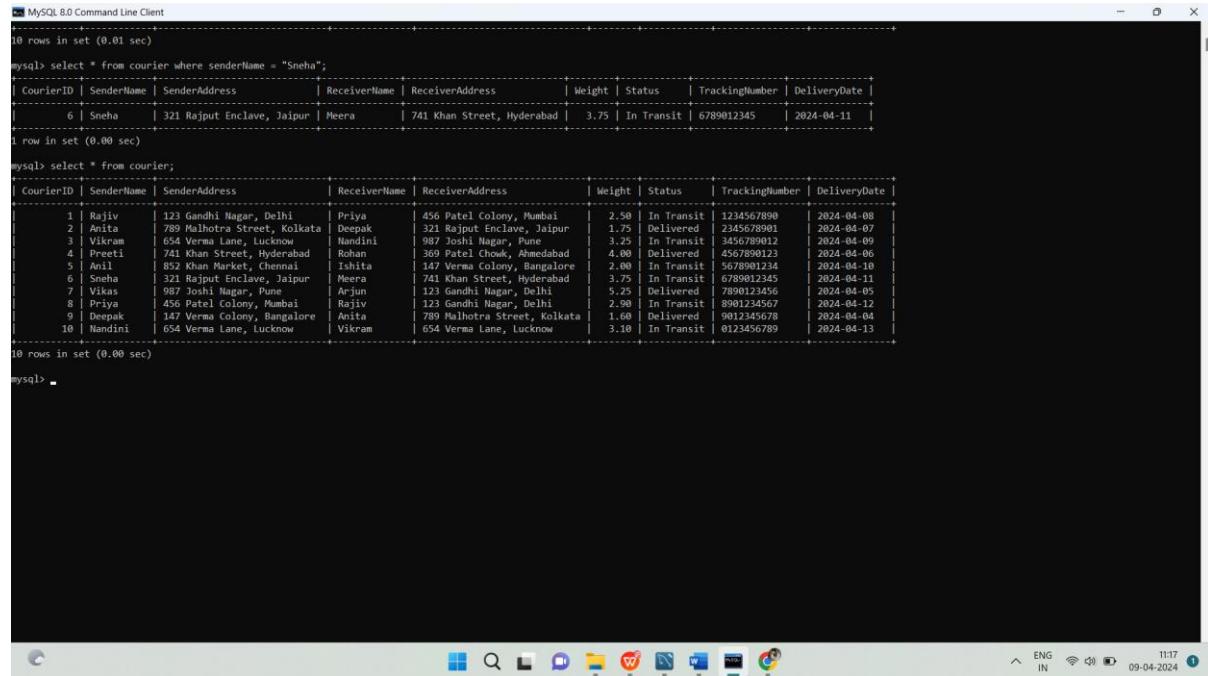
mysql>
```

2. List all orders for a specific customer:

```
select * from courier where senderName = "Sneha";
```

3. List all couriers:

Select * from courier;



MySQL 8.0 Command Line Client

```
10 rows in set (0.01 sec)

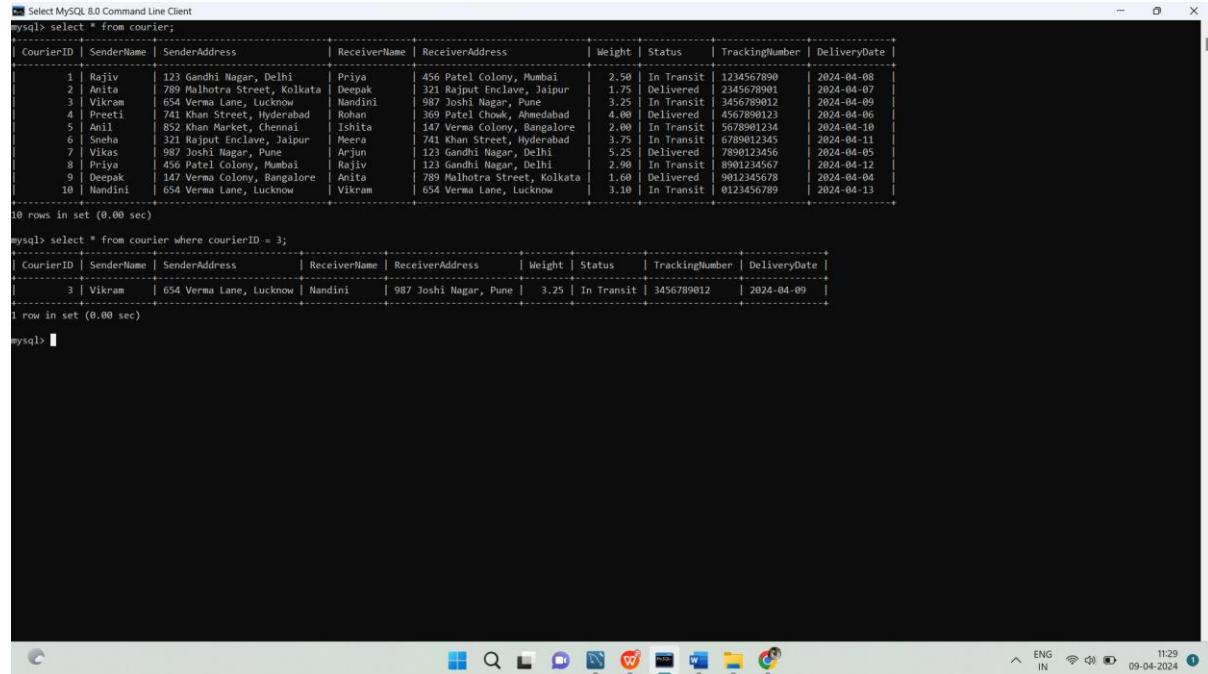
mysql> select * from courier where senderName = "Sneha";
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 123 Gandhi Nagar, Delhi | 2.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | Deepak | 147 Verma colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

4. List all packages for a specific order:

select * from courier where courierID = 3;



Select MySQL 8.0 Command Line Client

```
10 rows in set (0.00 sec)

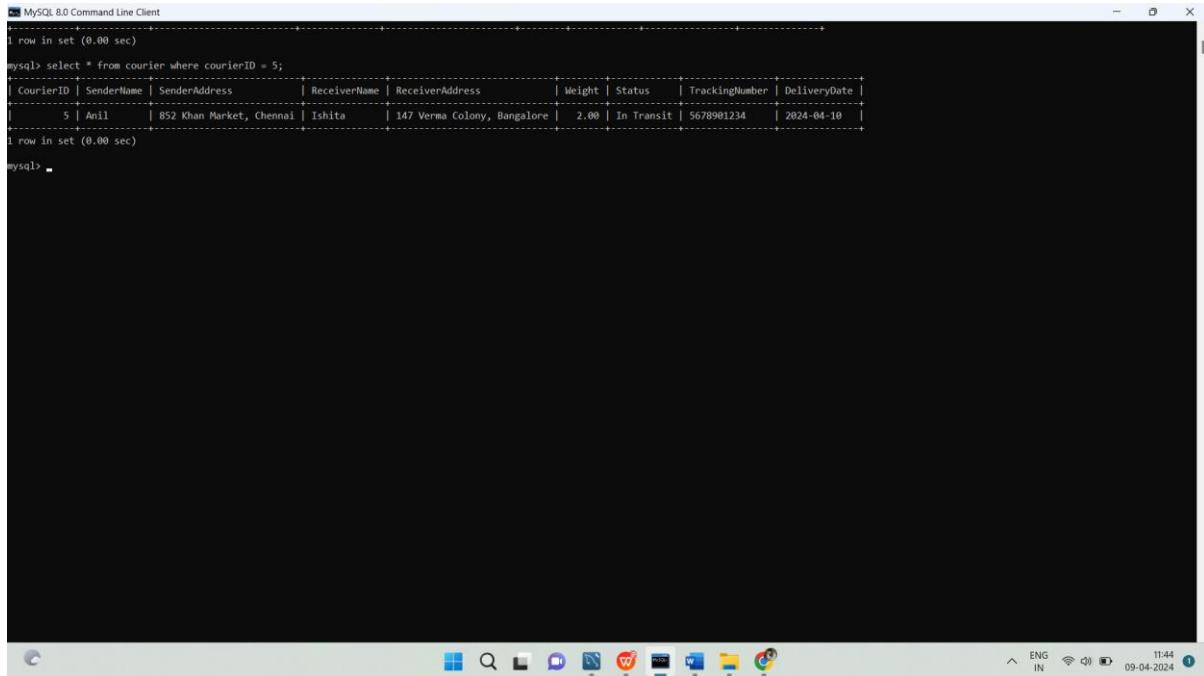
mysql> select * from courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 123 Gandhi Nagar, Delhi | 2.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | Deepak | 147 Verma colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from courier where courierID = 3;
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

5. List all deliveries for a specific courier:

```
select * from courier where courierID = 5;
```



MySQL 8.0 Command Line Client

```
1 row in set (0.00 sec)

mysql> select * from courier where courierID = 5;
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

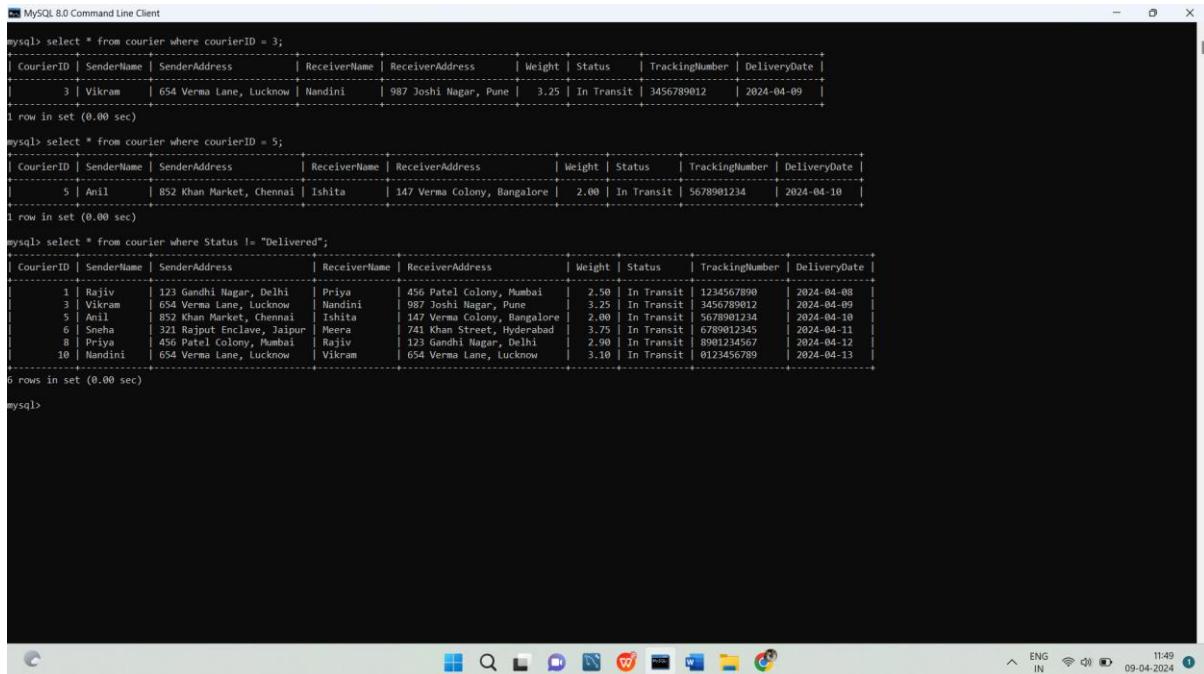
mysql>
```

Windows taskbar icons: File, Search, Task View, Start, Edge, Word, Excel, Powerpoint, File Explorer, File History, Google Chrome.

System tray: ENG IN, 11:44, 09-04-2024.

6. List all undelivered packages:

```
select * from courier where Status != "Delivered";
```



MySQL 8.0 Command Line Client

```
1 row in set (0.00 sec)

mysql> select * from courier where courierID = 3;
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 345678901234 | 2024-04-09 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from courier where courierID = 5;
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select * from courier where Status != "Delivered";
+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.00 | In Transit | 345678901234 | 2024-04-09 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khar Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

Windows taskbar icons: File, Search, Task View, Start, Edge, Word, Excel, Powerpoint, File Explorer, File History, Google Chrome.

System tray: ENG IN, 11:49, 09-04-2024.

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

```
select * from courier where deliverydate = date(now());
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `select * from courier where deliverydate = date(now());` is run, resulting in one row being selected. The output table has columns: CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, TrackingNumber, and DeliveryDate. The single row is: CourierID 3, SenderName Vikram, SenderAddress 654 Verma Lane, Lucknow, ReceiverName Nandini, ReceiverAddress 987 Joshi Nagar, Pune, Weight 3.25, Status In Transit, TrackingNumber 3456789012, and DeliveryDate 2024-04-09.

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
3	Vikram	654 Verma Lane, Lucknow	Nandini	987 Joshi Nagar, Pune	3.25	In Transit	3456789012	2024-04-09

8. List all packages with a specific status:

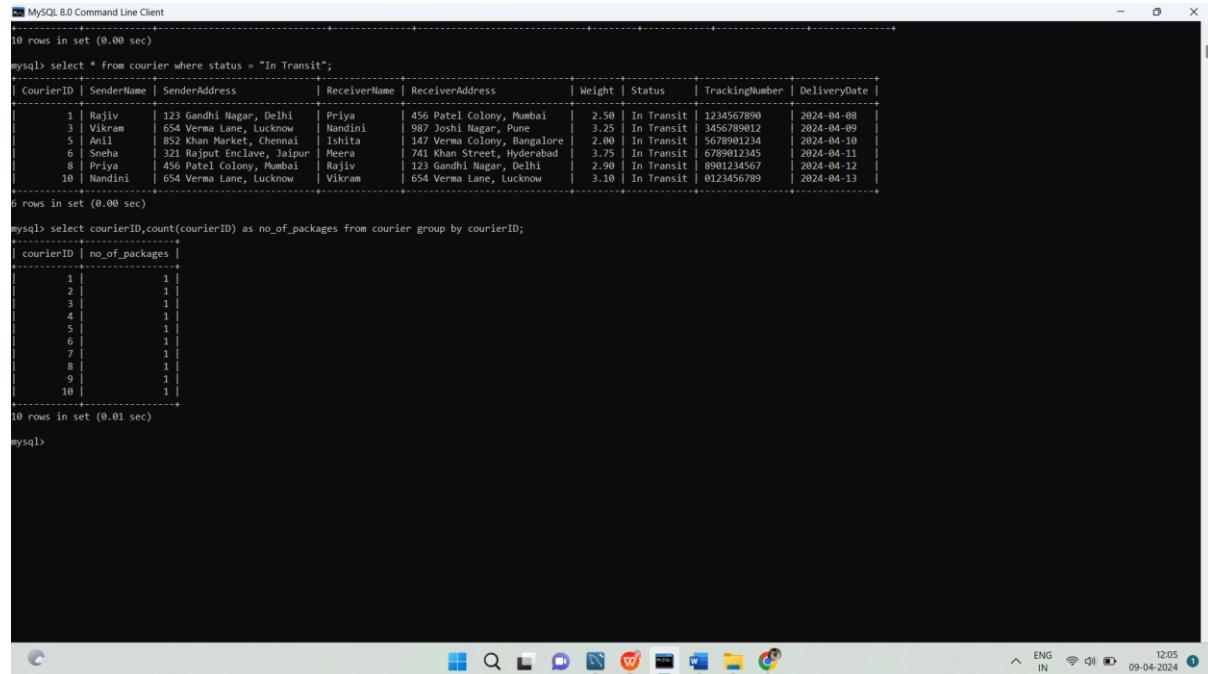
```
select * from courier where status = "In Transit";
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `select * from courier where status = "In Transit";` is run, resulting in ten rows being selected. The output table has columns: CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, TrackingNumber, and DeliveryDate. The rows include various entries such as Rajiv, Anita, Vikram, Preeti, Anil, Sunita, Shikha, Priyanka, Priya, Deepak, and Nandini, with their respective addresses and delivery details.

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	Rajiv	123 Gandhi Nagar, Delhi	Priya	456 Patel Colony, Mumbai	2.50	In Transit	1234567890	2024-04-08
2	Anita	789 Malhotra Street, Kolkata	Deepak	321 Rajput Enclave, Jaipur	1.75	Delivered	2345678901	2024-04-07
3	Vikram	654 Verma Lane, Lucknow	Nandini	987 Joshi Nagar, Pune	3.25	In Transit	3456789012	2024-04-09
4	Preeti	741 Khan Street, Hyderabad	Rohan	369 Patel Chowk, Ahmedabad	4.00	Delivered	4567890123	2024-04-06
5	Anil	852 Khan Market, Chennai	Ishita	147 Verma Colony, Bangalore	2.00	In Transit	567890124	2024-04-10
6	Sunita	789 Malhotra Enclave, Jaipur	Sneha	741 Khan Street, Hyderabad	3.00	In Transit	6789012345	2024-04-11
7	Shikha	897 Joshi Nagar, Pune	Arun	123 Gandhi Nagar, Delhi	2.25	Delivered	7890123456	2024-04-05
8	Priyanka	456 Patel Colony, Mumbai	Rajiv	123 Gandhi Nagar, Delhi	2.90	In Transit	8901234567	2024-04-04
9	Priya	147 Verma Colony, Bangalore	Anita	789 Malhotra Street, Kolkata	1.60	Delivered	98012345678	2024-04-04
10	Nandini	654 Verma Lane, Lucknow	Vikram	654 Verma Lane, Lucknow	3.10	In Transit	0123456789	2024-04-13

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

```
select courierID,count(courierID) as no_of_packages from courier group by courierID;
```



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

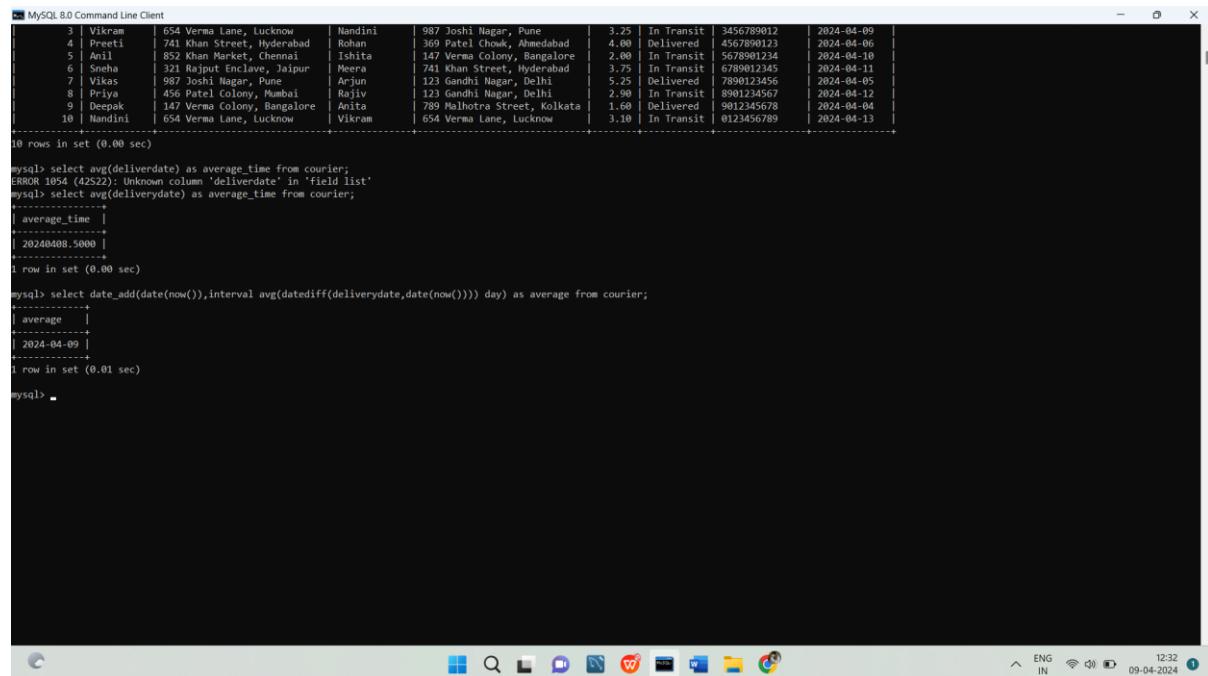
mysql> select * from courier where status = "In Transit";
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 123456789 | 2024-04-08 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 5 | Prachi | 123 Verma Street, Mumbai | Meera | 123 Khan Market, Bangalore | 1.50 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+
0 rows in set (0.00 sec)

mysql> select courierID,count(courierID) as no_of_packages from courier group by courierID;
+-----+-----+
| courierID | no_of_packages |
+-----+-----+
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| 7 | 1 |
| 8 | 1 |
| 9 | 1 |
| 10 | 1 |
+-----+-----+
10 rows in set (0.01 sec)

mysql>
```

10. Find the average delivery time for each courier:

```
select date_add(date(now()),interval avg(datediff(deliverydate,date(now()))) day) as average from courier;
```



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

mysql> select * from courier;
ERROR 1054 (42S22): Unknown column 'deliverdate' in 'field list'
mysql> select avg(deliverydate) as average_time from courier;
+-----+
| average_time |
+-----+
| 2024-04-08.5000 |
+-----+
1 row in set (0.00 sec)

mysql> select date_add(date(now()),interval avg(datediff(deliverydate,date(now()))) day) as average from courier;
+-----+
| average |
+-----+
| 2024-04-09 |
+-----+
1 row in set (0.01 sec)

mysql>
```

11. List all packages with a specific weight range:

```
select * from courier where weight between 2 and 4;
```

```
select * from courier where weight>=2.5 and weight<=4;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. It displays two sets of query results. The first set shows all rows from the 'courier' table. The second set shows rows where the weight is between 2 and 4, and the third set shows rows where the weight is greater than or equal to 2.5 and less than or equal to 4. The results are presented in tables with columns: CourierID, SenderName, SenderAddress, ReceiverName, ReceiverAddress, Weight, Status, TrackingNumber, and DeliveryDate.

```
mysql> select * from courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 2.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678 | 2024-04-04 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from courier where weight between 2 and 4;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 2.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```

12. Retrieve employees whose names contain 'John'

```
select * from employee where name like "%john%";
```

The screenshot shows the MySQL 8.0 Command Line Client interface. It displays two sets of query results. The first set shows all rows from the 'employee' table. The second set shows rows where the name contains 'John'. The results are presented in tables with columns: EmployeeID, Name, Email, ContactNumber, Role, and Salary.

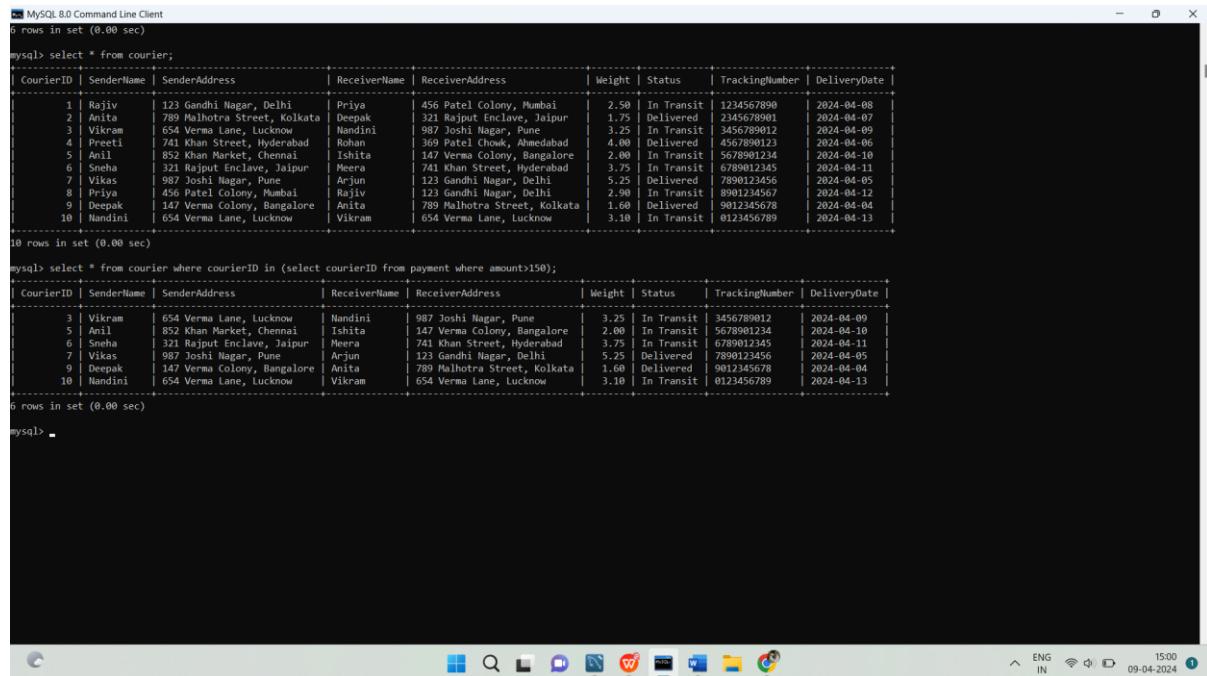
```
mysql> ;
+-----+-----+-----+-----+-----+-----+
| EmployeeID | Name | Email | ContactNumber | Role | Salary |
+-----+-----+-----+-----+-----+-----+
| 1 | Rahul | rahul@example.com | 1234567890 | Courier Driver | 30000.00 |
| 2 | Pooja | pooja@example.com | 9876543210 | Customer Service | 35000.00 |
| 3 | Alok | alok@example.com | 5555555555 | Manager | 50000.00 |
| 4 | Sunmita | sunmita@example.com | 3345678900 | Courier Driver | 30000.00 |
| 5 | Sameer | sameer@example.com | 9998887770 | Customer Service | 35000.00 |
| 6 | Ritu | ritu@example.com | 1112223330 | Courier Driver | 32000.00 |
| 7 | Neeta | neeta@example.com | 4445556660 | Manager | 52000.00 |
| 8 | Ajay | ajay@example.com | 7778889990 | Courier Driver | 31000.00 |
| 9 | Sonali | sonali@example.com | 2223344440 | Customer Service | 36000.00 |
| 10 | Vikram | vikram@example.com | 6667788880 | Courier Driver | 29000.00 |
| 11 | Johniya | joniya123@gmail.com | 6379710776 | Customer Service | 35000.00 |
| 12 | Lekha John | lekhajohn345@gmail.com | 9080873466 | Manager | 50000.00 |
+-----+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> select * from employee where name like "%john%";
+-----+-----+-----+-----+-----+-----+
| EmployeeID | Name | Email | ContactNumber | Role | Salary |
+-----+-----+-----+-----+-----+-----+
| 11 | Johniya | joniya123@gmail.com | 6379710776 | Customer Service | 35000.00 |
| 12 | Lekha John | lekhajohn345@gmail.com | 9080873466 | Manager | 50000.00 |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

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

```
select * from courier where courierID in (select courierID from payment where amount>50);
```



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

mysql> select * from courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | Lekha | 1234 Verma Colony, Hyderabad | Meera | 567 Khan Market, Hyderabad | 3.00 | In Transit | 456789013 | 2024-04-10 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-18 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | Deepak | 147 Verma colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678 | 2024-04-04 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

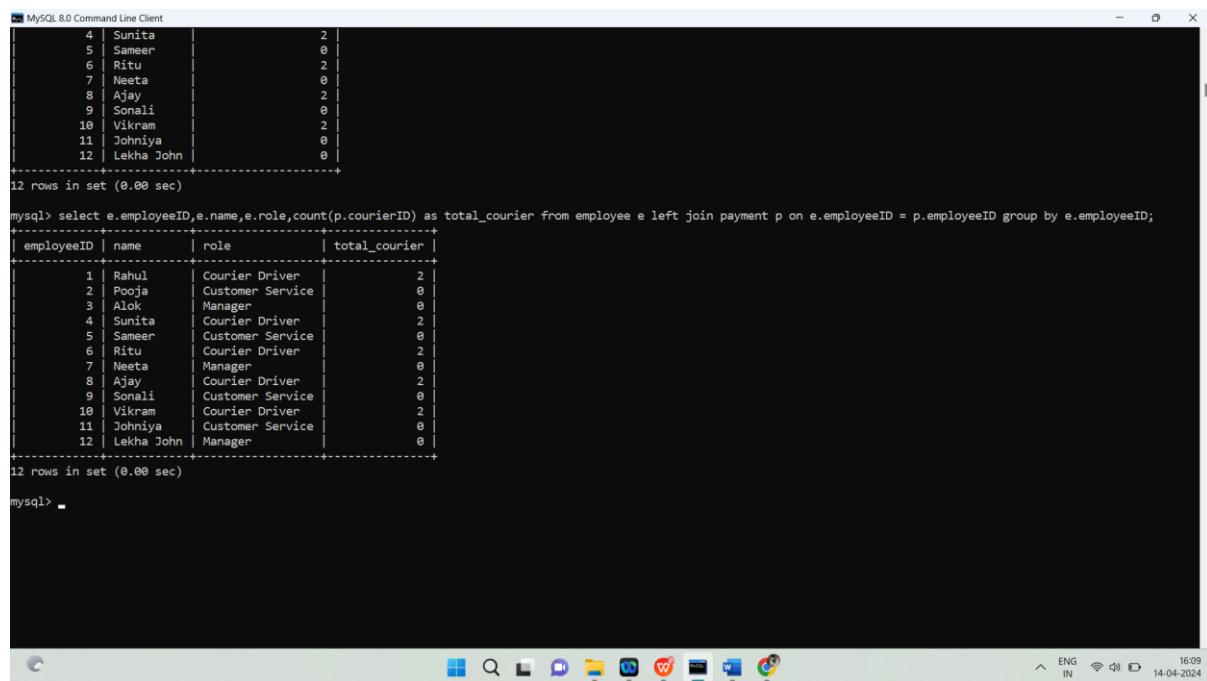
mysql> select * from courier where courierID in (select courierID from payment where amount>150);
+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 9 | Deepak | 147 Verma colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678 | 2024-04-04 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 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:

```
select e.employeeID,e.name,e.role,count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
```



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

mysql> select e.employeeID, e.name, e.role, count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
+-----+-----+-----+-----+
| employeeID | name | role | total_courier |
+-----+-----+-----+-----+
| 1 | Rahul | Courier Driver | 2 |
| 2 | Pooja | Customer Service | 0 |
| 3 | Alok | Manager | 0 |
| 4 | Sunita | Courier Driver | 2 |
| 5 | Sameer | Customer Service | 0 |
| 6 | Ritu | Courier Driver | 2 |
| 7 | Neeta | Manager | 0 |
| 8 | Ajay | Courier Driver | 2 |
| 9 | Sonali | Customer Service | 0 |
| 10 | Vikram | Courier Driver | 2 |
| 11 | Johniya | Customer Service | 0 |
| 12 | Lekha John | Manager | 0 |
+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql>
```

15. Calculate the total revenue generated by each location:

```
select LocationId,sum(Amount) as total_revenue from payment group by LocationId;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line shows the following SQL queries and their results:

```
mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 1 | 150.00 | 2024-04-07 |
| 3 | 3 | 1 | 200.00 | 2024-04-09 |
| 4 | 4 | 1 | 120.00 | 2024-04-06 |
| 5 | 5 | 1 | 250.00 | 2024-04-10 |
| 6 | 6 | 1 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select LocationId,sum(Amount) as total_revenue from payment group by LocationId;
+-----+-----+
| LocationId | total_revenue |
+-----+-----+
| 1 | 300.00 |
| 2 | 145.00 |
| 3 | 150.00 |
| 4 | 175.00 |
| 5 | 200.00 |
| 6 | 160.00 |
| 7 | 120.00 |
| 8 | 185.00 |
| 9 | 250.00 |
+-----+-----+
9 rows in set (0.00 sec)
```

The system tray at the bottom right shows the date as 09-04-2024 and the time as 16:00.

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

```
select LocationId,count(CourierId) from payment group by LocationId;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line shows the following SQL queries and their results:

```
mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 1 | 150.00 | 2024-04-07 |
| 3 | 3 | 1 | 200.00 | 2024-04-09 |
| 4 | 4 | 1 | 120.00 | 2024-04-06 |
| 5 | 5 | 1 | 250.00 | 2024-04-10 |
| 6 | 6 | 1 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select LocationId,count(CourierId) from payment group by locationId;
+-----+-----+
| LocationId | count(CourierId) |
+-----+-----+
| 1 | 2 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| 7 | 1 |
| 8 | 1 |
| 9 | 1 |
+-----+-----+
9 rows in set (0.00 sec)
```

The system tray at the bottom right shows the date as 10-04-2024 and the time as 14:28.

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

```
select LocationId, sum(Amount) from payment group by locationId having sum(Amount)<200;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `group by` is entered at the prompt. The first query selects all columns from the `payment` table, resulting in 10 rows of data. The second query, which includes the `group by` clause and a `having` clause, returns 6 rows where the sum of amounts for each location is less than 200. The system tray at the bottom right shows the date as 10-04-2024 and the time as 14:41.

```
MySQL 8.0 Command Line Client
group by
mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | locationId | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 3 | 150.00 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 130.00 | 2024-04-10 |
| 6 | 6 | 2 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select locationId,sum(Amount) from payment group by locationId having sum(Amount)<200;
+-----+-----+
| locationId | sum(Amount) |
+-----+-----+
| 2 | 145.00 |
| 3 | 150.00 |
| 4 | 175.00 |
| 6 | 160.00 |
| 7 | 120.00 |
| 8 | 185.00 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> -
```

19. Calculate Total Payments per Location

```
select LocationId,sum(amount) as total_amount from payment group by LocationId;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The first query selects `locationId` and `sum(Amount)` from the `payment` table, grouped by `locationId`, and filtered by a `having` clause where the sum is less than 200. The second query selects `locationId` and `total_amount` from the same table and grouping, resulting in 9 rows. The system tray at the bottom right shows the date as 10-04-2024 and the time as 14:43.

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

mysql> select locationId,sum(Amount) from payment group by locationId having sum(Amount)<200;
+-----+-----+
| locationId | sum(Amount) |
+-----+-----+
| 2 | 145.00 |
| 3 | 150.00 |
| 4 | 175.00 |
| 6 | 160.00 |
| 7 | 120.00 |
| 8 | 185.00 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> select locationId,sum(amount) as total_amount from payment group by locationId;
+-----+-----+
| locationId | total_amount |
+-----+-----+
| 1 | 300.00 |
| 2 | 145.00 |
| 3 | 150.00 |
| 4 | 175.00 |
| 5 | 200.00 |
| 6 | 160.00 |
| 7 | 120.00 |
| 8 | 185.00 |
| 9 | 250.00 |
+-----+-----+
9 rows in set (0.00 sec)

mysql> -
```

20. Retrieve couriers who have received payments totaling more than \$1000 in a specific location

(LocationID = X):

select courierid from payment where locationId=9 group by courierId having sum(amount)>200;

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

mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 2 | 150.00 | 2024-04-07 |
| 3 | 3 | 3 | 200.00 | 2024-04-09 |
| 4 | 4 | 4 | 120.00 | 2024-04-15 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select courierid from payment where locationId=9 group by courierId having sum(amount)>200;
+-----+
| courierid |
+-----+
| 5 |
+-----+
1 row in set (0.00 sec)

mysql>
```

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

select courierid from payment where paymentDate>date(now()) group by courierId having sum(amount)>150;

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

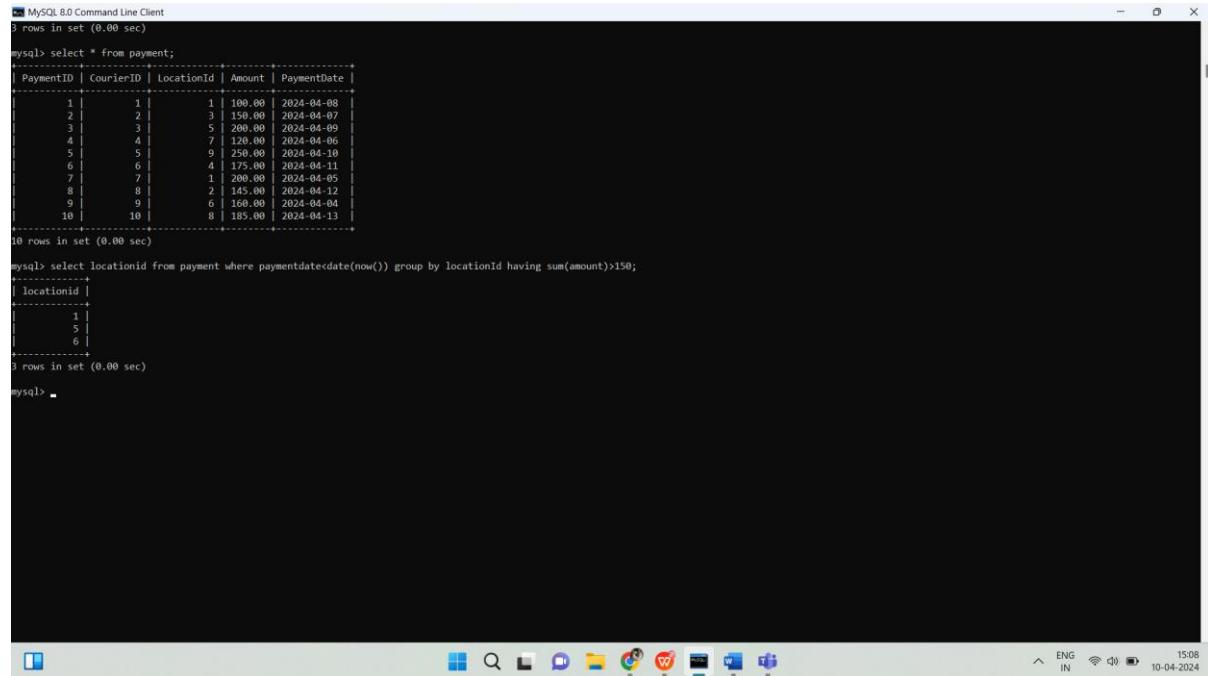
mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 2 | 150.00 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select courierid from payment where paymentDate>date(now()) group by courierId having sum(amount)>150;
+-----+
| courierid |
+-----+
| 6 |
| 10 |
+-----+
2 rows 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'):

select locationid from payment where paymentdate<date(now()) group by locationId having sum(amount)>150;



```

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

mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 2 | 150.00 | 2024-04-07 |
| 3 | 3 | 3 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 190.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select locationid from payment where paymentdate<date(now()) group by locationId having sum(amount)>150;
+-----+
| locationid |
+-----+
| 1 |
| 5 |
| 6 |
+-----+
3 rows in set (0.00 sec)

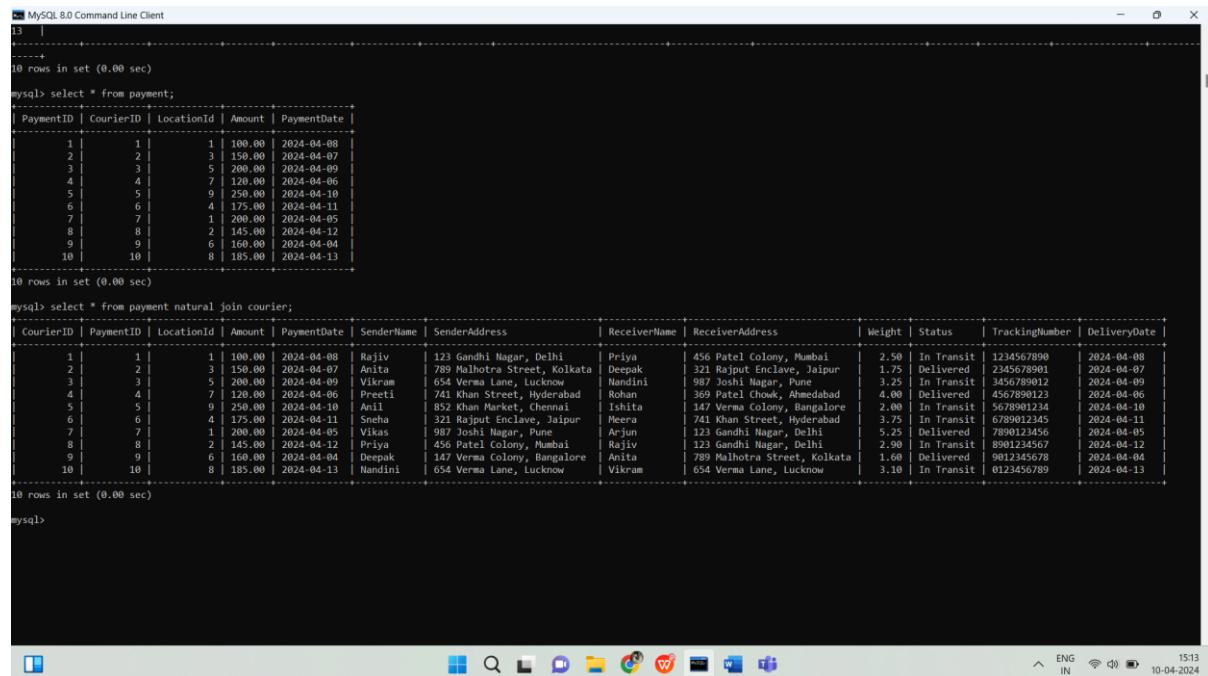
mysql>

```

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

23. Retrieve Payments with Courier Information

select * from payment natural join courier;



```

MySQL 8.0 Command Line Client
13 |
10 rows in set (0.00 sec)

mysql> select * from payment;
+-----+-----+-----+-----+
| PaymentID | CourierID | locationID | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 2 | 150.00 | 2024-04-07 |
| 3 | 3 | 3 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 190.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment natural join courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | PaymentID | LocationID | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 |
| 2 | 2 | 3 | 150.00 | 2024-04-07 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 | Preet | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 | Suresh | 1090 Anna Salai, Chennai | Ishita | 112 Verma Road, Bangalore | 2.80 | In Transit | 5678901234 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 | Sneha | 321 Rajput Enclave, Jaipur | Arjun | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | 7 | 1 | 190.00 | 2024-04-05 | Vikas | 987 Joshi Nagar, Pune | Rajiv | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

24. Retrieve Payments with Location Information

select * from payment natural join location;

```
MySQL 8.0 Command Line Client
+-----+-----+-----+-----+
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment natural join courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | PaymentID | LocationID | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 100.00 | 2024-04-08 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567899 | 2024-04-08 | |
| 2 | 2 | 150.00 | 2024-04-07 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 |
| 3 | 3 | 200.00 | 2024-04-09 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 |
| 4 | 4 | 120.00 | 2024-04-06 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 |
| 5 | 5 | 250.00 | 2024-04-05 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 |
| 6 | 6 | 175.00 | 2024-04-11 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 |
| 7 | 7 | 100.00 | 2024-04-05 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 | Deepak | 789 Malhotra Street, Kolkata | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment natural join location;
+-----+-----+-----+-----+-----+-----+
| LocationID | PaymentID | CourierID | Amount | PaymentDate | LocationName | Address |
+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 | Delhi | 123 Gandhi Nagar, Delhi |
| 2 | 2 | 2 | 150.00 | 2024-04-07 | Kolkata | 789 Malhotra Street, Kolkata |
| 3 | 3 | 3 | 200.00 | 2024-04-09 | Lucknow | 654 Verma Lane, Lucknow |
| 4 | 4 | 4 | 120.00 | 2024-04-06 | Hyderabad | 741 Khan Street, Hyderabad |
| 5 | 5 | 5 | 250.00 | 2024-04-10 | Chennai | 852 Khan Market, Chennai |
| 6 | 6 | 6 | 175.00 | 2024-04-11 | Jaipur | 321 Rajput Enclave, Jaipur |
| 7 | 7 | 7 | 200.00 | 2024-04-05 | Delhi | 123 Gandhi Nagar, Delhi |
| 8 | 8 | 8 | 145.00 | 2024-04-12 | Mumbai | 456 Patel Colony, Mumbai |
| 9 | 9 | 9 | 160.00 | 2024-04-04 | Pune | 987 Joshi Nagar, Pune |
| 10 | 10 | 10 | 185.00 | 2024-04-13 | Ahmedabad | 369 Patel Chowk, Ahmedabad |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.01 sec)

mysql> -
```

25. Retrieve Payments with Courier and Location Information

select p.paymentid,p.amount,p.paymentdate,c.courierid,c.status,l.locationid,l.locationname
from payment p
join courier c on c.courierid = p.courierid
join location l on l.locationid = p.locationid;

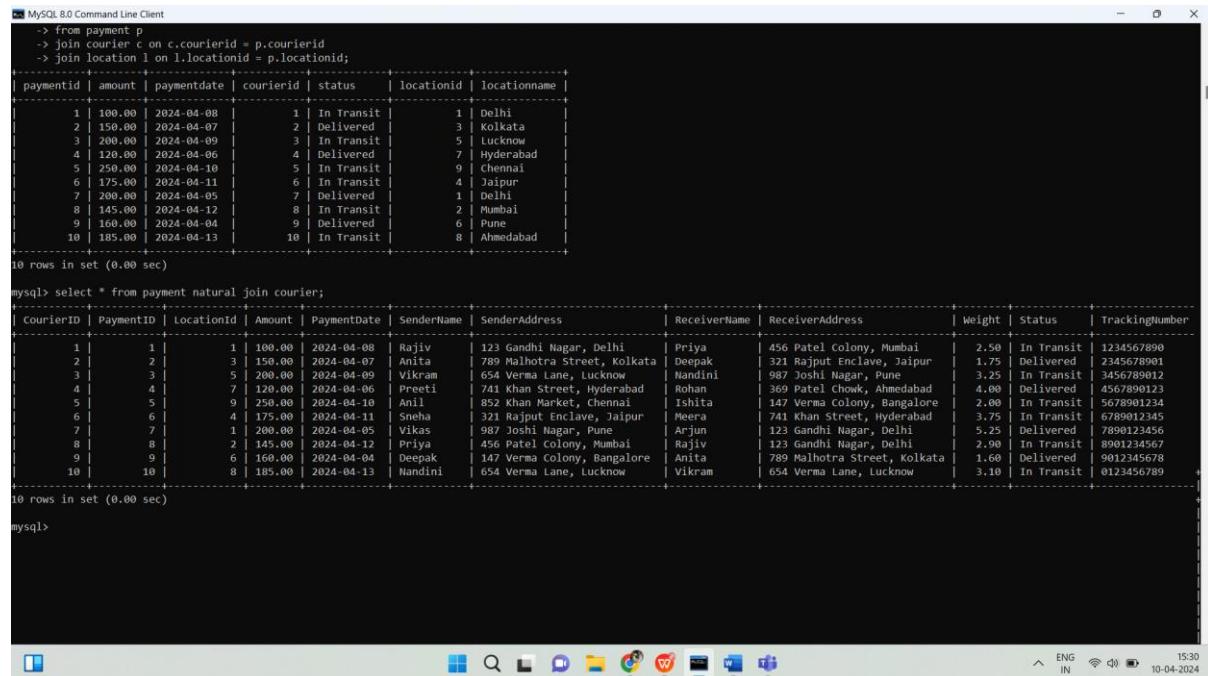
```
MySQL 8.0 Command Line Client
+-----+-----+-----+-----+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 3 | 150.00 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select p.paymentid,p.amount,p.paymentdate,c.courierid,c.status,l.locationid,l.locationname  
> from payment p  
> join courier c on c.courierid = p.courierid  
> join location l on l.locationid = p.locationid;
+-----+-----+-----+-----+-----+-----+-----+
| paymentid | amount | paymentdate | courierid | status | locationid | locationname |
+-----+-----+-----+-----+-----+-----+
| 1 | 100.00 | 2024-04-08 | 1 | In Transit | 1 | Delhi |
| 2 | 150.00 | 2024-04-07 | 2 | Delivered | 3 | Kolkata |
| 3 | 200.00 | 2024-04-09 | 3 | In Transit | 5 | Lucknow |
| 4 | 120.00 | 2024-04-06 | 4 | Delivered | 7 | Hyderabad |
| 5 | 250.00 | 2024-04-10 | 5 | In Transit | 9 | Chennai |
| 6 | 175.00 | 2024-04-11 | 6 | In Transit | 4 | Jaipur |
| 7 | 200.00 | 2024-04-05 | 7 | Delivered | 1 | Delhi |
| 8 | 145.00 | 2024-04-12 | 8 | In Transit | 2 | Mumbai |
| 9 | 160.00 | 2024-04-04 | 9 | Delivered | 6 | Pune |
| 10 | 185.00 | 2024-04-13 | 10 | In Transit | 8 | Ahmedabad |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> -
```

26. List all payments with courier details

```
select * from payment natural join courier;
```



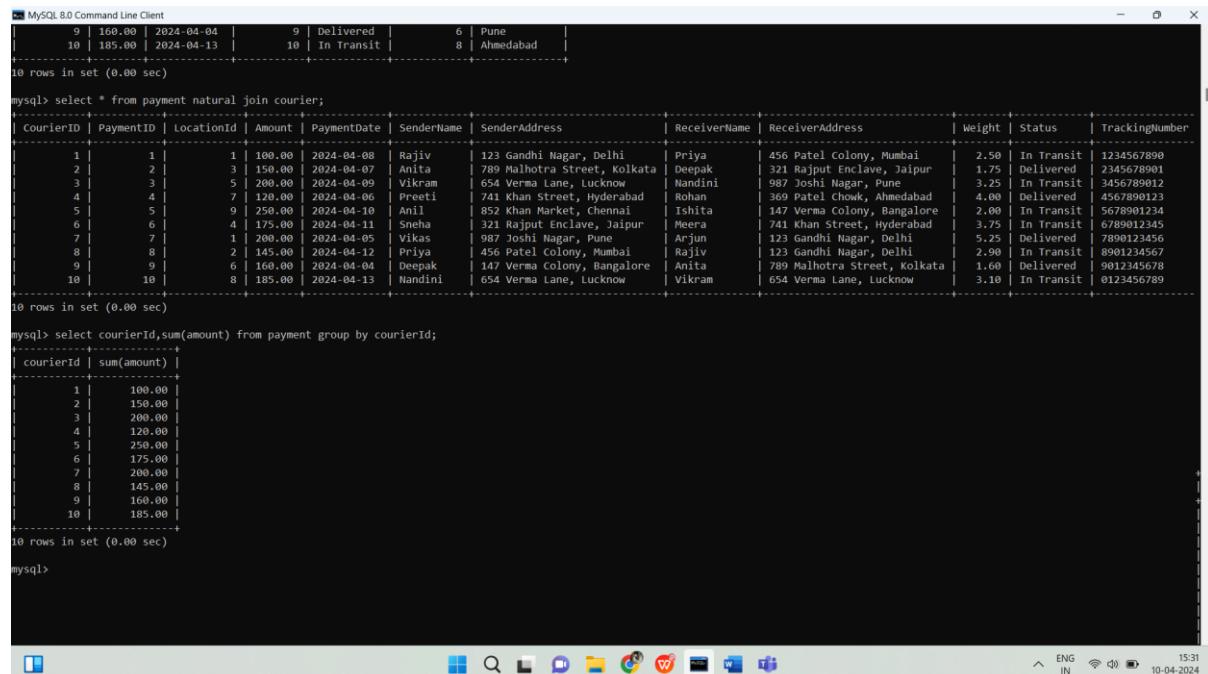
```
--> From payment p
-> join courier c on c.courierid = p.courierid
-> join location l on l.locationid = p.locationid;
+-----+-----+-----+-----+-----+-----+
| paymentid | amount | paymentdate | courierid | status | locationid | locationname |
+-----+-----+-----+-----+-----+-----+
| 1 | 100.00 | 2024-04-08 | 1 | In Transit | 1 | Delhi
| 2 | 150.00 | 2024-04-07 | 2 | Delivered | 3 | Kolkata
| 3 | 200.00 | 2024-04-09 | 3 | In Transit | 5 | Lucknow
| 4 | 120.00 | 2024-04-06 | 4 | Delivered | 7 | Hyderabad
| 5 | 250.00 | 2024-04-10 | 5 | In Transit | 9 | Chennai
| 6 | 175.00 | 2024-04-11 | 6 | In Transit | 4 | Jaipur
| 7 | 200.00 | 2024-04-05 | 7 | Delivered | 1 | Delhi
| 8 | 145.00 | 2024-04-12 | 8 | In Transit | 2 | Mumbai
| 9 | 160.00 | 2024-04-04 | 9 | Delivered | 6 | Pune
| 10 | 185.00 | 2024-04-13 | 10 | In Transit | 8 | Ahmedabad
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment natural join courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | PaymentID | LocationId | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel colony, Mumbai | 2.50 | In Transit | 1234567890
| 2 | 2 | 3 | 150.00 | 2024-04-07 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901
| 3 | 3 | 5 | 200.00 | 2024-04-09 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012
| 4 | 4 | 7 | 120.00 | 2024-04-06 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123
| 5 | 5 | 9 | 250.00 | 2024-04-10 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234
| 6 | 6 | 4 | 175.00 | 2024-04-11 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345
| 7 | 7 | 1 | 200.00 | 2024-04-05 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456
| 8 | 8 | 2 | 145.00 | 2024-04-12 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.00 | In Transit | 8901234567
| 9 | 9 | 6 | 160.00 | 2024-04-04 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678
| 10 | 10 | 8 | 185.00 | 2024-04-13 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

27. Total payments received for each courier

```
select courierid,sum(amount) from payment group by courierid;
```



```
9 | 160.00 | 2024-04-04 | 9 | Delivered | 6 | Pune
10 | 185.00 | 2024-04-13 | 10 | In Transit | 8 | Ahmedabad
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment natural join courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | PaymentID | LocationId | Amount | PaymentDate | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel colony, Mumbai | 2.50 | In Transit | 1234567890
| 2 | 2 | 3 | 150.00 | 2024-04-07 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901
| 3 | 3 | 5 | 200.00 | 2024-04-09 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012
| 4 | 4 | 7 | 120.00 | 2024-04-06 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123
| 5 | 5 | 9 | 250.00 | 2024-04-10 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234
| 6 | 6 | 4 | 175.00 | 2024-04-11 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345
| 7 | 7 | 1 | 200.00 | 2024-04-05 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456
| 8 | 8 | 2 | 145.00 | 2024-04-12 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.00 | In Transit | 8901234567
| 9 | 9 | 6 | 160.00 | 2024-04-04 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678
| 10 | 10 | 8 | 185.00 | 2024-04-13 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select courierid,sum(amount) from payment group by courierid;
+-----+-----+
| courierid | sum(amount) |
+-----+-----+
| 1 | 100.00 |
| 2 | 150.00 |
| 3 | 200.00 |
| 4 | 120.00 |
| 5 | 250.00 |
| 6 | 175.00 |
| 7 | 200.00 |
| 8 | 145.00 |
| 9 | 160.00 |
| 10 | 185.00 |
+-----+-----+
10 rows in set (0.00 sec)

mysql>
```

28. List payments made on a specific date:

```
select * from payment where paymentdate = '2024-04-04';
```

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

mysql> select courierId,sum(amount) from payment group by courierId;
+-----+-----+
| courierId | sum(amount) |
+-----+-----+
| 1 | 100.00 |
| 2 | 150.00 |
| 3 | 200.00 |
| 4 | 120.00 |
| 5 | 250.00 |
| 6 | 175.00 |
| 7 | 200.00 |
| 8 | 145.00 |
| 9 | 160.00 |
| 10 | 185.00 |
+-----+-----+
10 rows in set (0.00 sec)

mysql> select * payment where paymentdate = "2024-04-04";
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 'payment where paymentdate = "2024-04-04"' at line 1
mysql> select * payment where paymentdate = 2024-04-04;
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 'payment where paymentdate = 2024-04-04' at line 1
mysql> select * from payment where paymentdate = '2024-04-04';
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+-----+
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

29. Get Courier Information for Each Payment:

```
select p.paymentid,c.courierid,c.sendername,c.receivername,c.weight,c.status,c.trackingNumber  
from payment p  
inner join courier c  
on p.courierid = c.courierid;
```

30. Get Payment Details with Location:

```
select p.paymentid,p.amount,l.locationid,l.locationname,l.address,p.paymentdate  
from payment p  
inner join location l  
on p.locationid = l.locationid;
```

The screenshot shows the MySQL 8.0 Command Line Client window. The command entered was:

```
select p.paymentid,p.amount,l.locationid,l.locationname,l.address,p.paymentdate  
from payment p  
inner join location l  
on p.locationid = l.locationid;
```

The output displays two sets of data. The first set shows locations with their details:

	Jaipur	Lucknow	Pune	Hyderabad	Ahmedabad	Chennai	Bangalore
4	321 Rajput Enclave, Jaipur	654 Verma Lane, Lucknow	987 Joshi Nagar, Pune	741 Khan Street, Hyderabad	369 Patel Chowk, Ahmedabad	852 Khan Market, Chennai	147 Verma Colony, Bangalore
5							
6							
7							
8							
9							
10							

The second set shows payments with their details:

paymentid	amount	locationid	locationname	address	paymentdate
1	100.00	1	Delhi	123 Gandhi Nagar, Delhi	2024-04-08
2	150.00	3	Kolkata	789 Malhotra Street, Kolkata	2024-04-07
3	200.00	5	Lucknow	654 Verma Lane, Lucknow	2024-04-09
4	120.00	7	Hyderabad	741 Khan Street, Hyderabad	2024-04-06
5	250.00	9	Chennai	852 Khan Market, Chennai	2024-04-10
6	175.00	4	Jaipur	321 Rajput Enclave, Jaipur	2024-04-11
7	200.00	1	Delhi	123 Gandhi Nagar, Delhi	2024-04-05
8	145.00	2	Mumbai	456 Patel Colony, Mumbai	2024-04-12
9	160.00	6	Pune	987 Joshi Nagar, Pune	2024-04-04
10	185.00	8	Ahmedabad	369 Patel Chowk, Ahmedabad	2024-04-13

31. Calculating Total Payments for Each Courier:

```
Select courierId,sum(amount) from payment group by courierId;
```

The screenshot shows the MySQL 8.0 Command Line Client window. The command entered was:

```
Select courierId,sum(amount) from payment group by courierId;
```

The output displays the total amount paid by each courier:

courierId	sum(amount)
1	100.00
2	150.00
3	200.00
4	120.00
5	250.00
6	175.00
7	200.00
8	145.00
9	160.00
10	185.00

32. List Payments Within a Date Range:

```
select * from payment where paymentDate between '2024-04-07' and '2024-04-11';
```

```
mysql> select * from payment;
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 3 | 150.00 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 |
| 4 | 4 | 7 | 120.00 | 2024-04-06 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
| 7 | 7 | 1 | 200.00 | 2024-04-05 |
| 8 | 8 | 2 | 145.00 | 2024-04-12 |
| 9 | 9 | 6 | 160.00 | 2024-04-04 |
| 10 | 10 | 8 | 185.00 | 2024-04-13 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from payment where paymentDate between '2024-04-07' and '2024-04-11';
+-----+-----+-----+-----+-----+
| PaymentID | CourierID | LocationId | Amount | PaymentDate |
+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 100.00 | 2024-04-08 |
| 2 | 2 | 3 | 150.00 | 2024-04-07 |
| 3 | 3 | 5 | 200.00 | 2024-04-09 |
| 5 | 5 | 9 | 250.00 | 2024-04-10 |
| 6 | 6 | 4 | 175.00 | 2024-04-11 |
+-----+-----+-----+-----+-----+
5 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

```
select u.* ,c.courierId,c.status,c.TrackingNumber,c.DeliveryDate from user u left join courier c on u.name = c.senderName;
```

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

```
select * from courier c left join courierservice s on c.serviceld = s.serviceld;
```

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

```
select * from user cross join courierservice;
```

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

mysql>
mysql> select * from user cross join courierservices;
+-----+-----+-----+-----+-----+-----+-----+-----+
| UserID | Name  | Email   | Password | ContactNumber | Address          | ServiceID | ServiceName    | cost  |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1     | Rajesh| rajesh@example.com| password1| 9876543210  | 123 Gandhi Nagar, Delhi | 5         | International Delivery | 25.00 |
| 1     | Rajesh| rajesh@example.com| password1| 9876543210  | 123 Gandhi Nagar, Delhi | 4         | Overnight Delivery | 12.00 |
| 1     | Rajesh| rajesh@example.com| password1| 9876543210  | 123 Gandhi Nagar, Delhi | 3         | Same-day Delivery | 10.00 |
| 1     | Rajesh| rajesh@example.com| password1| 9876543210  | 123 Gandhi Nagar, Delhi | 2         | Express Delivery  | 15.00 |
| 1     | Rajesh| rajesh@example.com| password1| 9876543210  | 123 Gandhi Nagar, Delhi | 1         | Standard Delivery | 10.00 |
| 2     | Priya  | priy@example.com   | password2| 9876543210  | 456 Patel Colony, Mumbai | 5         | International Delivery | 25.00 |
| 2     | Priya  | priy@example.com   | password2| 9876543210  | 456 Patel Colony, Mumbai | 4         | Overnight Delivery | 12.00 |
| 2     | Priya  | priy@example.com   | password2| 9876543210  | 456 Patel Colony, Mumbai | 3         | Same-day Delivery | 10.00 |
| 2     | Priya  | priy@example.com   | password2| 9876543210  | 456 Patel Colony, Mumbai | 1         | Standard Delivery | 10.00 |
| 2     | Priya  | priy@example.com   | password2| 9876543210  | 456 Patel Colony, Mumbai | 2         | Express Delivery  | 15.00 |
| 3     | Anyanya| anyanya@example.com| password3| 9876543210  | 789 Mahalaxmi Street, Kolkata | 5         | International Delivery | 25.00 |
| 3     | Anyanya| anyanya@example.com| password3| 9876543210  | 789 Mahalaxmi Street, Kolkata | 4         | Overnight Delivery | 12.00 |
| 3     | Anyanya| anyanya@example.com| password3| 9876543210  | 789 Mahalaxmi Street, Kolkata | 3         | Same-day Delivery | 10.00 |
| 3     | Anyanya| anyanya@example.com| password3| 9876543210  | 789 Mahalaxmi Street, Kolkata | 2         | Express Delivery  | 15.00 |
| 3     | Anyanya| anyanya@example.com| password3| 9876543210  | 789 Mahalaxmi Street, Kolkata | 1         | Standard Delivery | 10.00 |
| 4     | Deepak | deepak@example.com| password4| 9876543210  | 321 Rajput Enclave, Jaipur | 5         | International Delivery | 25.00 |
| 4     | Deepak | deepak@example.com| password4| 9876543210  | 321 Rajput Enclave, Jaipur | 4         | Overnight Delivery | 12.00 |
| 4     | Deepak | deepak@example.com| password4| 9876543210  | 321 Rajput Enclave, Jaipur | 3         | Same-day Delivery | 10.00 |
| 4     | Deepak | deepak@example.com| password4| 9876543210  | 321 Rajput Enclave, Jaipur | 2         | Express Delivery  | 15.00 |
| 4     | Deepak | deepak@example.com| password4| 9876543210  | 321 Rajput Enclave, Jaipur | 1         | Standard Delivery | 10.00 |
| 5     | Nandini| nandini@example.com| password5| 9876543210  | 654 Verma Lane, Lucknow | 5         | International Delivery | 25.00 |
| 5     | Nandini| nandini@example.com| password5| 9876543210  | 654 Verma Lane, Lucknow | 4         | Overnight Delivery | 12.00 |
| 5     | Nandini| nandini@example.com| password5| 9876543210  | 654 Verma Lane, Lucknow | 3         | Same-day Delivery | 10.00 |
| 5     | Nandini| nandini@example.com| password5| 9876543210  | 654 Verma Lane, Lucknow | 2         | Express Delivery  | 15.00 |
| 5     | Nandini| nandini@example.com| password5| 9876543210  | 654 Verma Lane, Lucknow | 1         | Standard Delivery | 10.00 |
| 6     | Aarav  | aarav@example.com  | password6| 9876543210  | 987 Joshi Nagar, Pune | 5         | International Delivery | 25.00 |
| 6     | Aarav  | aarav@example.com  | password6| 9876543210  | 987 Joshi Nagar, Pune | 4         | Overnight Delivery | 12.00 |
| 6     | Aarav  | aarav@example.com  | password6| 9876543210  | 987 Joshi Nagar, Pune | 3         | Same-day Delivery | 10.00 |
| 6     | Aarav  | aarav@example.com  | password6| 9876543210  | 987 Joshi Nagar, Pune | 2         | Express Delivery  | 15.00 |
| 6     | Aarav  | aarav@example.com  | password6| 9876543210  | 987 Joshi Nagar, Pune | 1         | Standard Delivery | 10.00 |
| 7     | Heera  | heera@example.com | password7| 9876543210  | 741 Khan Street, Hyderabad | 4         | Overnight Delivery | 12.00 |
| 7     | Heera  | heera@example.com | password7| 9876543210  | 741 Khan Street, Hyderabad | 3         | Same-day Delivery | 10.00 |
| 7     | Heera  | heera@example.com | password7| 9876543210  | 741 Khan Street, Hyderabad | 2         | Express Delivery  | 15.00 |
| 7     | Heera  | heera@example.com | password7| 9876543210  | 741 Khan Street, Hyderabad | 1         | Standard Delivery | 10.00 |
| 8     | Rohan  | rohan@example.com | password8| 9876543210  | 369 Patel Chowk, Ahmedabad | 5         | International Delivery | 25.00 |
| 8     | Rohan  | rohan@example.com | password8| 9876543210  | 369 Patel Chowk, Ahmedabad | 4         | Overnight Delivery | 12.00 |
| 8     | Rohan  | rohan@example.com | password8| 9876543210  | 369 Patel Chowk, Ahmedabad | 3         | Same-day Delivery | 10.00 |
| 8     | Rohan  | rohan@example.com | password8| 9876543210  | 369 Patel Chowk, Ahmedabad | 2         | Express Delivery  | 15.00 |
| 8     | Rohan  | rohan@example.com | password8| 9876543210  | 369 Patel Chowk, Ahmedabad | 1         | Standard Delivery | 10.00 |
| 9     | Ishita | ishita@example.com | password9| 9876543210  | 852 Khan Market, Chennai | 5         | International Delivery | 25.00 |
| 9     | Ishita | ishita@example.com | password9| 9876543210  | 852 Khan Market, Chennai | 4         | Overnight Delivery | 12.00 |
| 9     | Ishita | ishita@example.com | password9| 9876543210  | 852 Khan Market, Chennai | 3         | Same-day Delivery | 10.00 |
| 9     | Ishita | ishita@example.com | password9| 9876543210  | 852 Khan Market, Chennai | 2         | Express Delivery  | 15.00 |
| 9     | Ishita | ishita@example.com | password9| 9876543210  | 852 Khan Market, Chennai | 1         | Standard Delivery | 10.00 |
| 10    | Arjun  | arjun@example.com | password10| 9876543210 | 147 Verma Colony, Bangalore | 4         | Overnight Delivery | 12.00 |
| 10    | Arjun  | arjun@example.com | password10| 9876543210 | 147 Verma Colony, Bangalore | 3         | Same-day Delivery | 10.00 |
| 10    | Arjun  | arjun@example.com | password10| 9876543210 | 147 Verma Colony, Bangalore | 2         | Express Delivery  | 15.00 |
| 10    | Arjun  | arjun@example.com | password10| 9876543210 | 147 Verma Colony, Bangalore | 1         | Standard Delivery | 10.00 |

```

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

Select * from employee cross join location

MySQL 8.0 Command Line Client								
Employee Data Analysis								
EmployeeID	Name	Email	ContactNumber	Role	Salary	LocationID	LocationName	Address
12	Lekha John	lekhajohn34@gmail.com	9808873466	Manager	50000	1	Delhi	123 Gandhi Nagar, Delhi
11	Johniya	jonyiya12@gmail.com	6379710776	Customer Service	35000	1	Delhi	123 Gandhi Nagar, Delhi
10	Vikram	vikram@example.com	6667778880	Courier Driver	29000	1	Delhi	123 Gandhi Nagar, Delhi
9	Sonali	sonali@example.com	2223334440	Customer Service	36000	1	Delhi	123 Gandhi Nagar, Delhi
8	Ajay	ajay@example.com	7778889990	Courier Driver	31000	1	Delhi	123 Gandhi Nagar, Delhi
7	Neeta	neeta@example.com	1112223330	Manager	52000	2	Mumbai	456 Patel Colony, Mumbai
6	Ritu	ritu@example.com	1112223330	Courier Driver	32000	2	Mumbai	456 Patel Colony, Mumbai
5	Sameer	sameer@example.com	9998887770	Customer Service	35000	1	Delhi	123 Gandhi Nagar, Delhi
4	Sunita	sunita@example.com	3334567890	Courier Driver	28000	1	Delhi	123 Gandhi Nagar, Delhi
3	Alok	alok@example.com	5551234567	Manager	50000	1	Delhi	123 Gandhi Nagar, Delhi
2	Pooja	pooja@example.com	9876543210	Customer Service	35000	1	Delhi	123 Gandhi Nagar, Delhi
1	Rahul	rahul@example.com	1234567890	Courier Driver	30000	1	Delhi	123 Gandhi Nagar, Delhi
12	Lekha John	lekhajohn34@gmail.com	9808873466	Manager	50000	2	Mumbai	456 Patel Colony, Mumbai
11	Johniya	jonyiya12@gmail.com	6379710776	Customer Service	35000	2	Mumbai	456 Patel Colony, Mumbai
10	Vikram	vikram@example.com	6667778880	Courier Driver	29000	2	Mumbai	456 Patel Colony, Mumbai
9	Sonali	sonali@example.com	2223334440	Customer Service	36000	2	Mumbai	456 Patel Colony, Mumbai
8	Ajay	ajay@example.com	7778889990	Courier Driver	31000	2	Mumbai	456 Patel Colony, Mumbai
7	Neeta	neeta@example.com	4445556660	Manager	52000	2	Mumbai	456 Patel Colony, Mumbai
6	Ritu	ritu@example.com	1112223330	Courier Driver	32000	2	Mumbai	456 Patel Colony, Mumbai
5	Sameer	sameer@example.com	9998887770	Customer Service	35000	2	Mumbai	456 Patel Colony, Mumbai
4	Sunita	sunita@example.com	3334567890	Courier Driver	28000	2	Mumbai	456 Patel Colony, Mumbai
3	Alok	alok@example.com	5551234567	Manager	50000	2	Mumbai	456 Patel Colony, Mumbai
2	Pooja	pooja@example.com	9876543210	Customer Service	35000	2	Mumbai	456 Patel Colony, Mumbai
1	Rahul	rahul@example.com	1234567890	Courier Driver	30000	2	Mumbai	456 Patel Colony, Mumbai
12	Lekha John	lekhajohn34@gmail.com	9808873466	Manager	50000	3	Kolkata	789 Malhotra Street, Kolkata
11	Johniya	jonyiya12@gmail.com	6379710776	Customer Service	35000	3	Kolkata	789 Malhotra Street, Kolkata
10	Vikram	vikram@example.com	6667778880	Courier Driver	29000	3	Kolkata	789 Malhotra Street, Kolkata
9	Sonali	sonali@example.com	2223334440	Customer Service	36000	3	Kolkata	789 Malhotra Street, Kolkata
8	Ajay	ajay@example.com	7778889990	Courier Driver	31000	3	Kolkata	789 Malhotra Street, Kolkata
7	Neeta	neeta@example.com	4445556660	Manager	52000	3	Kolkata	789 Malhotra Street, Kolkata
6	Ritu	ritu@example.com	1112223330	Courier Driver	32000	3	Kolkata	789 Malhotra Street, Kolkata
5	Sameer	sameer@example.com	9998887770	Customer Service	35000	3	Kolkata	789 Malhotra Street, Kolkata
4	Sunita	sunita@example.com	3334567890	Courier Driver	28000	3	Kolkata	789 Malhotra Street, Kolkata
3	Alok	alok@example.com	5551234567	Manager	50000	3	Kolkata	789 Malhotra Street, Kolkata
2	Pooja	pooja@example.com	9876543210	Customer Service	35000	3	Kolkata	789 Malhotra Street, Kolkata
1	Rahul	rahul@example.com	1234567890	Courier Driver	30000	3	Kolkata	789 Malhotra Street, Kolkata
12	Lekha John	lekhajohn34@gmail.com	9808873466	Manager	50000	4	Jaipur	321 Rajput Enclave, Jaipur
11	Johniya	jonyiya12@gmail.com	6379710776	Customer Service	35000	4	Jaipur	321 Rajput Enclave, Jaipur
10	Vikram	vikram@example.com	6667778880	Courier Driver	29000	4	Jaipur	321 Rajput Enclave, Jaipur
9	Sonali	sonali@example.com	2223334440	Customer Service	36000	4	Jaipur	321 Rajput Enclave, Jaipur
8	Ajay	ajay@example.com	7778889990	Courier Driver	31000	4	Jaipur	321 Rajput Enclave, Jaipur
7	Neeta	neeta@example.com	4445556660	Manager	52000	4	Jaipur	321 Rajput Enclave, Jaipur
6	Ritu	ritu@example.com	1112223330	Courier Driver	32000	4	Jaipur	321 Rajput Enclave, Jaipur
5	Sameer	sameer@example.com	9998887770	Customer Service	35000	4	Jaipur	321 Rajput Enclave, Jaipur
4	Sunita	sunita@example.com	3334567890	Courier Driver	28000	4	Jaipur	321 Rajput Enclave, Jaipur
3	Alok	alok@example.com	5551234567	Manager	50000	4	Jaipur	321 Rajput Enclave, Jaipur
2	Pooja	pooja@example.com	9876543210	Customer Service	35000	4	Jaipur	321 Rajput Enclave, Jaipur
1	Rahul	rahul@example.com	1234567890	Courier Driver	30000	4	Jaipur	321 Rajput Enclave, Jaipur
12	Lekha John	lekhajohn34@gmail.com	9808873466	Manager	50000	5	Lucknow	654 Verma Lane, Lucknow
11	Johniya	jonyiya12@gmail.com	6379710776	Customer Service	35000	5	Lucknow	654 Verma Lane, Lucknow

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

```
select c.courierId,u.* from courier c inner join user u on c.senderName = u.name;
```

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

```
select c.courierId,u.* from courier c inner join user u on c.receiverName = u.name;
```

```

MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 | 3 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 | 4 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 | 1 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 | 3 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 | 2 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 | 4 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 | 1 |
| 9 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 | 3 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 | 2 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select c.courierId,u.* from courier c inner join user u on c.senderName = u.name;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courierId | UserID | Name | Email | Password | ContactNumber | Address |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 8 | 2 | Priya | priya@example.com | password2 | 9876543210 | 456 Patel Colony, Mumbai |
| 9 | 4 | Deepak | deepak@example.com | password4 | 9876543210 | 321 Rajput Enclave, Jaipur |
| 10 | 5 | Nandini | nandini@example.com | password5 | 9876543210 | 654 Verma Lane, Lucknow |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select c.courierId,u.* from courier c inner join user u on c.receiverName = u.name;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courierId | UserID | Name | Email | Password | ContactNumber | Address |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 2 | Priya | priya@example.com | password2 | 9876543210 | 456 Patel Colony, Mumbai |
| 2 | 4 | Deepak | deepak@example.com | password4 | 9876543210 | 321 Rajput Enclave, Jaipur |
| 3 | 5 | Nandini | nandini@example.com | password5 | 9876543210 | 654 Verma Lane, Lucknow |
| 6 | 7 | Meera | meera@example.com | password7 | 9876543210 | 741 Khan Street, Hyderabad |
| 4 | 8 | Rohan | rohan@example.com | password8 | 9876543210 | 369 Patel Chowk, Ahmedabad |
| 5 | 9 | Ishita | ishita@example.com | password9 | 9876543210 | 852 Khan Market, Chennai |
| 7 | 10 | Arjun | arjun@example.com | password10 | 9876543210 | 147 Verma Colony, Bangalore |
+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql>

```

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

```
select c.courierID,s.* from courier c left join courierservice s on c.serviceID = s.serviceID;
```

```

MySQL 8.0 Command Line Client
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 | 4 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 | 1 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 | 3 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 | 2 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 | 4 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 | 1 |
| 9 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 | 3 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 | 2 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> select * from courierservice;
+-----+-----+-----+
| ServiceID | ServiceName | cost |
+-----+-----+-----+
| 1 | Standard Delivery | 10.00 |
| 2 | Express Delivery | 15.00 |
| 3 | Same-day Delivery | 20.00 |
| 4 | Overnight Delivery | 12.00 |
| 5 | International Delivery | 25.00 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select c.courierID,s.* from courier c left join courierservice s on c.serviceID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courierID | ServiceID | ServiceName | cost |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 2 | Express Delivery | 15.00 |
| 2 | 3 | Same-day Delivery | 20.00 |
| 3 | 4 | Overnight Delivery | 12.00 |
| 4 | 1 | Standard Delivery | 10.00 |
| 5 | 3 | Same-day Delivery | 20.00 |
| 6 | 2 | Express Delivery | 15.00 |
| 7 | 4 | Overnight Delivery | 12.00 |
| 8 | 1 | Standard Delivery | 10.00 |
| 9 | 3 | Same-day Delivery | 20.00 |
| 10 | 2 | Express Delivery | 15.00 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql>

```

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

```
select e.employeeID,e.name,e.role,count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command entered was:

```
select e.employeeID,e.name,e.role,count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
```

The output displays two sets of results. The first set lists employees with their names and roles, and the second set shows the total number of couriers assigned to each employee.

employeeID	name	role	total_courier
1	Rahul	Courier Driver	2
2	Pooja	Customer Service	0
3	Alok	Manager	0
4	Sunita	Courier Driver	2
5	Sameer	Customer Service	0
6	Ritu	Courier Driver	2
7	Neeta	Manager	0
8	Ajay	Courier Driver	2
9	Sonali	Customer Service	0
10	Vikram	Courier Driver	2
11	Johniya	Customer Service	0
12	Lekha John	Manager	0

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

```
select p.locationId,l.locationName,sum(p.Amount) from payment p left join location l on p.locationId = l.locationId group by p.locationId;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command entered was:

```
select p.locationId,l.locationName,sum(p.Amount) from payment p left join location l on p.locationId = l.locationId group by p.locationId;
```

The output displays two sets of results. The first set lists payment details, and the second set shows the total payment amount received at each location.

locationId	locationName	sum(p.Amount)
1	Delhi	300.00
3	Kolkata	150.00
5	Lucknow	200.00
7	Hyderabad	120.00
9	Chennai	250.00
4	Jaipur	175.00
2	Mumbai	145.00
6	Pune	160.00
8	Ahmedabad	185.00

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

```
select * from courier where senderName in (select senderName from courier group by senderName having count(courierId)>1);
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `update courier set senderName ="Anita" where courierId = 11;` is run, followed by `select * from courier;` which displays a table of courier records. The results show multiple entries for sender 'Anita' with different IDs and addresses. A second `select *` statement is run, filtering for senders with more than one entry, resulting in a subset of the original data.

CourierID	SenderId	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	serviceId
1	Rajiv	123 Gandhi Nagar, Delhi	Priya	456 Patel Colony, Mumbai	2.50	In Transit	1234567890	2024-04-08	2	
2	Anita	789 Malhotra Street, Kolkata	Deepak	321 Rajput Enclave, Jaipur	1.75	Delivered	2345678901	2024-04-07	3	
3	Vikram	654 Verma Lane, Lucknow	Nandini	987 Joshi Nagar, Pune	3.25	In Transit	3456789012	2024-04-09	4	
4	Preeti	741 Khan Street, Hyderabad	Rohan	369 Patel Chowk, Ahmedabad	4.00	Delivered	4567890123	2024-04-06	1	
5	Anil	852 Khan Market, Chennai	Ishita	147 Verma Colony, Bangalore	2.00	In Transit	5678901234	2024-04-10	3	
6	Sneha	321 Rajput Enclave, Jaipur	Meera	741 Khan Street, Hyderabad	3.75	In Transit	6789012345	2024-04-11	2	
7	Vikas	987 Joshi Nagar, Pune	Arjun	123 Gandhi Nagar, Delhi	5.25	Delivered	7890123456	2024-04-05	4	
8	Priya	456 Patel Colony, Mumbai	Rajiv	123 Gandhi Nagar, Delhi	2.90	In Transit	8901234567	2024-04-12	1	
9	Deepak	147 Verma Colony, Bangalore	Anita	789 Malhotra Street, Kolkata	1.60	Delivered	9812345678	2024-04-04	3	
10	Nandini	654 Verma Lane, Lucknow	Vikram	654 Verma Lane, Lucknow	3.10	In Transit	0123456789	2024-04-13	2	
11	Anita	789 Malhotra Street, Kolkata	Vikram	654 Verma Lane, Lucknow	5.34	In Transit	6738573930	2024-04-14	3	
12	Preeti	741 Khan Street, Hyderabad	Rajiv	123 Gandhi Nagar, Delhi	5.34	Delivered	8738573930	2024-04-06	1	

12 rows in set (0.00 sec)

```
mysql> select * from courier where senderName in (select senderName from courier group by senderName having count(courierId)>1);
```

CourierID	SenderId	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	serviceId
2	Anita	789 Malhotra Street, Kolkata	Deepak	321 Rajput Enclave, Jaipur	1.75	Delivered	2345678901	2024-04-07	3	
4	Preeti	741 Khan Street, Hyderabad	Rohan	369 Patel Chowk, Ahmedabad	4.00	Delivered	4567890123	2024-04-06	1	
11	Anita	789 Malhotra Street, Kolkata	Vikram	654 Verma Lane, Lucknow	5.34	In Transit	6738573930	2024-04-14	3	
12	Preeti	741 Khan Street, Hyderabad	Rajiv	123 Gandhi Nagar, Delhi	5.34	Delivered	8738573930	2024-04-06	1	

4 rows in set (0.00 sec)

```
mysql>
```

44. List all employees who share the same role.

```
select * from employee e where Role in (select role from employee group by role having count(*)>1);
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `select * from employee e where Role in (select role from employee group by role having count(*)>1);` is run, followed by `select * from employee;` which displays a table of employee records. The results show multiple entries for roles like 'Courier Driver', 'Customer Service', and 'Manager'. A second `select *` statement is run, filtering for roles with more than one entry, resulting in a subset of the original data.

EmployeeID	Name	Email	ContactNumber	Role	Salary
1	Rahul	rahul@example.com	1234567890	Courier Driver	30000.00
2	Pooja	pooja@example.com	9876543210	Customer Service	35000.00
3	Alok	alok@example.com	5551234567	Manager	50000.00
4	Sunita	sunita@example.com	334567890	Courier Driver	28000.00
5	Sameer	sameer@example.com	9998887770	Customer Service	35000.00
6	Ritu	ritu@example.com	1112223330	Courier Driver	32000.00
7	Neeta	neeta@example.com	4445556660	Manager	52000.00
8	Ajay	ajay@example.com	7778889990	Courier Driver	31000.00
9	Sonali	sonali@example.com	2223334440	Customer Service	36000.00
10	Vikram	vikram@example.com	6667778880	Courier Driver	29000.00
11	Johniya	johniya123@gmail.com	6379710776	Customer Service	35000.00
12	Lekha John	lekhajohn343@gmail.com	9088873466	Manager	50000.00

12 rows in set (0.00 sec)

```
mysql>
```

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

```
select p1.* from payment p1 inner join payment p2 on p1.locationID = p2.locationID where p1.paymentID!=p2.paymentId;
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `select * from payment;` is run, resulting in 10 rows of payment data. Then, the query `select p1.* from payment p1 inner join payment p2 on p1.locationID = p2.locationID where p1.paymentID!=p2.paymentId;` is run, resulting in 2 rows where payment IDs 1 and 7 are joined based on the same location ID 1.

PaymentID	CourierID	LocationID	Amount	PaymentDate
1	1	1	100.00	2024-04-08
2	2	3	150.00	2024-04-07
3	3	5	200.00	2024-04-09
4	4	7	120.00	2024-04-06
5	5	9	250.00	2024-04-10
6	6	4	175.00	2024-04-11
7	7	1	200.00	2024-04-05
8	8	2	145.00	2024-04-12
9	9	6	160.00	2024-04-04
10	10	8	185.00	2024-04-13

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

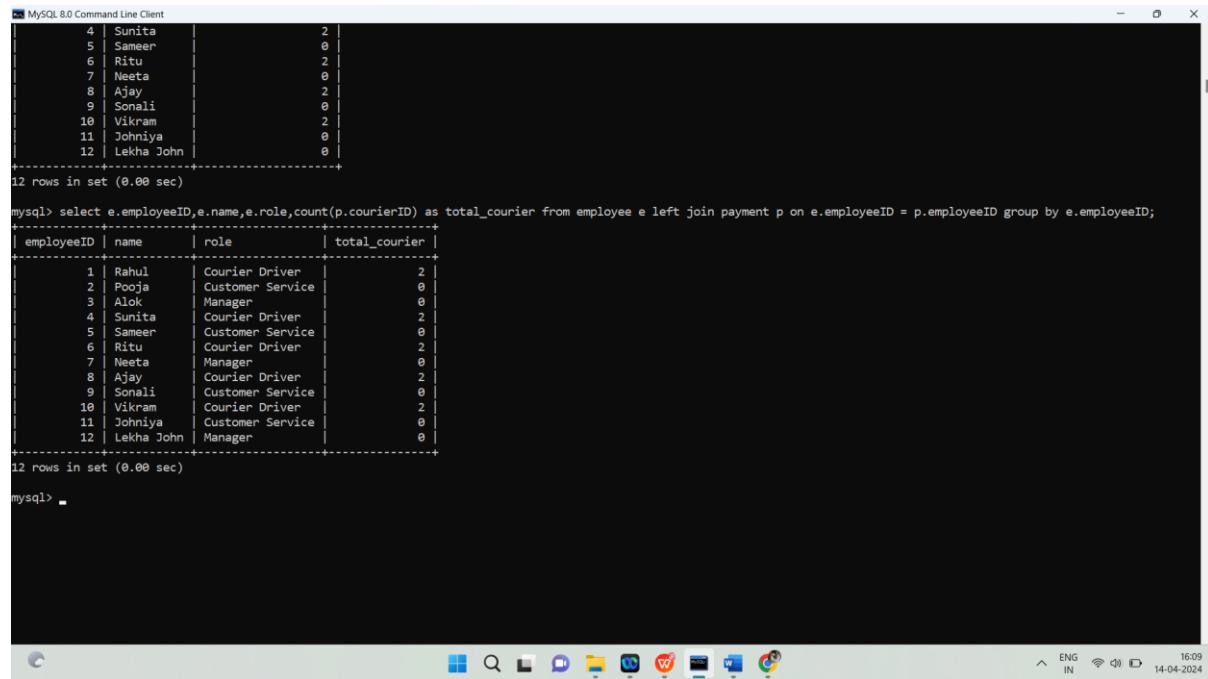
```
select * from courier where senderAddress in (select senderAddress from courier group by senderAddress having count(*)>1);
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command `select * from courier;` is run, resulting in 12 rows of courier data. Then, the query `select * from courier where senderAddress in (select senderAddress from courier group by senderAddress having count(*)>1);` is run, resulting in 4 rows where sender addresses 123 Gandhi Nagar, Delhi and 654 Verma Lane, Lucknow appear more than once.

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	serviceId
1	Rajiv	123 Gandhi Nagar, Delhi	Priya	456 Patel Colony, Mumbai	2.50	In Transit	1234567890	2024-04-08	2
2	Anita	789 Malhotra Street, Kolkata	Deepak	321 Rajput Enclave, Jaipur	1.75	Delivered	2345678901	2024-04-07	3
3	Vikram	654 Verma Lane, Lucknow	Nandini	987 Joshi Nagar, Pune	3.25	In Transit	3456789012	2024-04-09	4
4	Preeti	741 Khan Street, Hyderabad	Rohan	369 Patel Chowk, Ahmedabad	4.00	Delivered	4567890123	2024-04-06	1
5	Anil	852 Khan Market, Chennai	Ishita	147 Verma Colony, Bangalore	2.00	In Transit	5678901234	2024-04-10	3
6	Sneha	321 Rajput Enclave, Jaipur	Meera	741 Khan Street, Hyderabad	3.75	In Transit	6789012345	2024-04-11	2
7	Vikas	987 Joshi Nagar, Pune	Arjun	123 Gandhi Nagar, Delhi	5.25	Delivered	7890123456	2024-04-05	4
8	Priya	456 Patel Colony, Mumbai	Rajiv	123 Gandhi Nagar, Delhi	2.90	In Transit	8901234567	2024-04-12	1
9	Deepak	147 Verma Colony, Bangalore	Anita	789 Malhotra Street, Kolkata	1.60	Delivered	9012345678	2024-04-04	3
10	Nandini	654 Verma Lane, Lucknow	Vikram	654 Verma Lane, Lucknow	3.10	In Transit	0123456789	2024-04-13	2
11	Anita	789 Malhotra Street, Kolkata	Vikram	654 Verma Lane, Lucknow	5.34	In Transit	6738573930	2024-04-14	3
12	Preeti	741 Khan Street, Hyderabad	Rajiv	123 Gandhi Nagar, Delhi	5.34	Delivered	8738573930	2024-04-06	1

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

```
select e.employeeID,e.name,e.role,count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
```



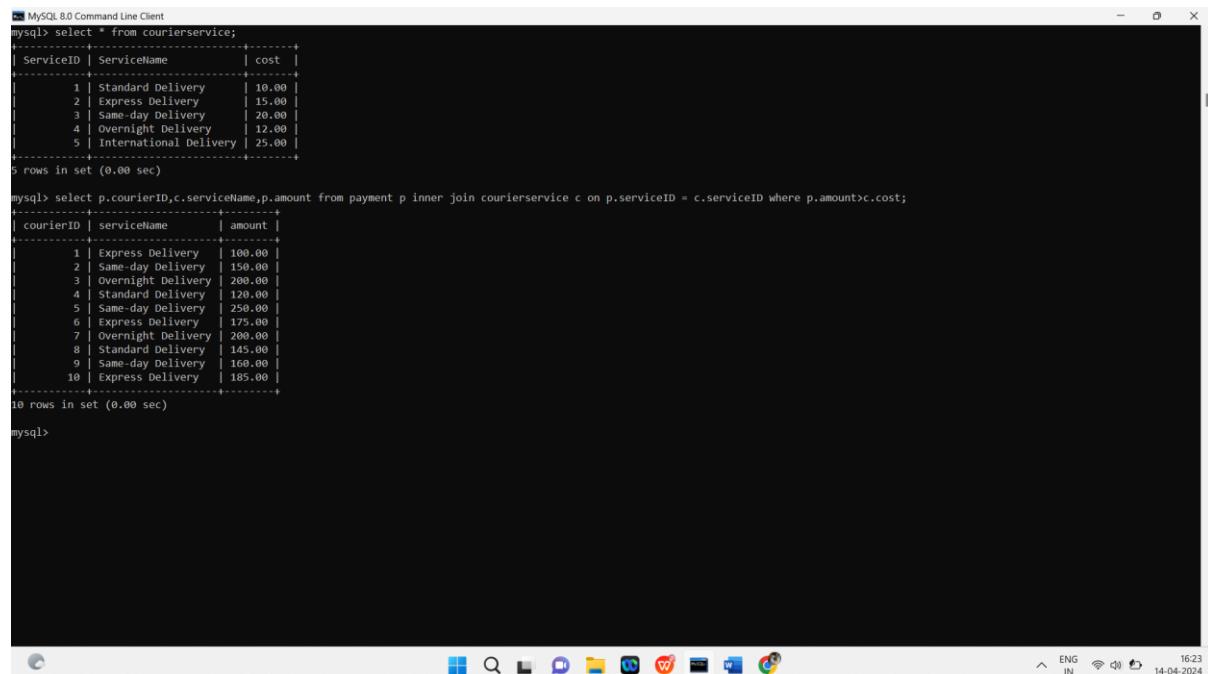
```
MySQL 8.0 Command Line Client
+-----+-----+-----+
| 4 | Sunita | 2 |
| 5 | Sameer | 0 |
| 6 | Ritu   | 2 |
| 7 | Neeta  | 0 |
| 8 | Ajay   | 2 |
| 9 | Sonali | 0 |
| 10 | Vikram | 2 |
| 11 | Johniya | 0 |
| 12 | Lekha John | 0 |
+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> select e.employeeID,e.name,e.role,count(p.courierID) as total_courier from employee e left join payment p on e.employeeID = p.employeeID group by e.employeeID;
+-----+-----+-----+-----+
| employeeID | name      | role        | total_courier |
+-----+-----+-----+-----+
| 1 | Rahul    | Courier Driver | 2 |
| 2 | Pooja    | Customer Service | 0 |
| 3 | Alok     | Manager       | 0 |
| 4 | Sunita   | Courier Driver | 2 |
| 5 | Sameer   | Customer Service | 0 |
| 6 | Ritu     | Courier Driver | 2 |
| 7 | Neeta    | Manager       | 0 |
| 8 | Ajay     | Courier Driver | 2 |
| 9 | Sonali   | Customer Service | 0 |
| 10 | Vikram   | Courier Driver | 2 |
| 11 | Johniya  | Customer Service | 0 |
| 12 | Lekha John | Manager       | 0 |
+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> -
```

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

```
select p.courierID,c.serviceName,p.amount from payment p inner join courierservice c on p.serviceID = c.serviceID where p.amount > c.cost;
```



```
MySQL 8.0 Command Line Client
mysql> select * from courierservice;
+-----+-----+-----+
| ServiceID | ServiceName | cost |
+-----+-----+-----+
| 1 | Standard Delivery | 10.00 |
| 2 | Express Delivery | 15.00 |
| 3 | Same-day Delivery | 20.00 |
| 4 | Overnight Delivery | 12.00 |
| 5 | International Delivery | 25.00 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select p.courierID,c.serviceName,p.amount from payment p inner join courierservice c on p.serviceID = c.serviceID where p.amount > c.cost;
+-----+-----+-----+
| courierID | serviceName | amount |
+-----+-----+-----+
| 1 | Express Delivery | 100.00 |
| 2 | Same-day Delivery | 150.00 |
| 3 | Overnight Delivery | 200.00 |
| 4 | Standard Delivery | 120.00 |
| 5 | Same-day Delivery | 250.00 |
| 6 | Express Delivery | 175.00 |
| 7 | Overnight Delivery | 200.00 |
| 8 | Standard Delivery | 145.00 |
| 9 | Same-day Delivery | 160.00 |
| 10 | Express Delivery | 185.00 |
+-----+-----+-----+
10 rows in 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

select courierID from courier where weight > (select avg(weight) from courier);

```
MySQL 8.0 Command Line Client

mysql> select * from courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate | serviceId |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel Colony, Mumbai | 2.50 | In Transit | 1234567890 | 2024-04-08 | 2 |
| 2 | Anita | 789 Malhotra Street, Kolkata | Deepak | 321 Rajput Enclave, Jaipur | 1.75 | Delivered | 2345678901 | 2024-04-07 | 3 |
| 3 | Vikram | 654 Verma Lane, Lucknow | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 3456789012 | 2024-04-09 | 4 |
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 | 1 |
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 | 3 |
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 | 2 |
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 | 4 |
| 8 | Priya | 456 Patel Colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.90 | In Transit | 8901234567 | 2024-04-12 | 1 |
| 9 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9812345678 | 2024-04-04 | 3 |
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 | 2 |
| 11 | Anita | 789 Malhotra Street, Kolkata | Vikram | 654 Verma Lane, Lucknow | 5.34 | In Transit | 6789012345 | 2024-04-14 | 3 |
| 12 | Preeti | 741 Khan Street, Hyderabad | Rajiv | 123 Gandhi Nagar, Delhi | 5.34 | Delivered | 8738573930 | 2024-04-06 | 1 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> select courierID from courier where weight > (select avg(weight) from courier);
+-----+
| courierID |
+-----+
| 4 |
| 6 |
| 7 |
| 11 |
| 12 |
+-----+
5 rows in set (0.00 sec)

mysql>
```

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

select name from employee where salary > (select avg(salary) from employee);

```
MySQL 8.0 Command Line Client

mysql> select * from employee;
+-----+-----+-----+-----+-----+
| EmployeeID | Name | Email | ContactNumber | Role | Salary |
+-----+-----+-----+-----+-----+
| 1 | Rahul | rahul@example.com | 1234567890 | Courier Driver | 30000.00 |
| 2 | Pooja | pooja@example.com | 9876543210 | Customer Service | 35000.00 |
| 3 | Alok | alok@example.com | 5551234567 | Manager | 50000.00 |
| 4 | Sunita | sunita@example.com | 3334567890 | Courier Driver | 28000.00 |
| 5 | Sameer | sameer@example.com | 999887770 | Customer Service | 35000.00 |
| 6 | Ritu | ritu@example.com | 1112223330 | Courier Driver | 32000.00 |
| 7 | Neeta | neeta@example.com | 444556666 | Manager | 52000.00 |
| 8 | Ajay | ajay@example.com | 7778889990 | Courier Driver | 31000.00 |
| 9 | Sonali | sonali@example.com | 2223334448 | Customer Service | 36000.00 |
| 10 | Vikram | vikram@example.com | 6667778880 | Courier Driver | 29000.00 |
| 11 | Johniya | joniya123@gmail.com | 6379710776 | Customer Service | 35000.00 |
| 12 | Lekha John | lekhajohn343@gmail.com | 90880873466 | Manager | 50000.00 |
+-----+-----+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> select name from employee where salary > (select avg(salary) from employee);
+-----+
| name |
+-----+
| Alok |
| Neeta |
| Lekha John |
+-----+
3 rows in set (0.00 sec)

mysql>
```

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

```
select sum(cost) as total_cost from courierservice where cost < (select max(cost) from courierservice);
```

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

mysql> select * from courierservice;
+-----+-----+-----+
| ServiceID | ServiceName      | cost   |
+-----+-----+-----+
| 1          | Standard Delivery | 10.00 |
| 2          | Express Delivery  | 15.00 |
| 3          | Same-day Delivery | 20.00 |
| 4          | Overnight Delivery| 12.00 |
| 5          | International Delivery | 25.00 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select sum(cost) as total_cost from courierservice where cost < (select max(cost) from courierservice);
+-----+
| total_cost |
+-----+
|      57.00 |
+-----+
1 row in set (0.00 sec)

mysql>
```

52. Find all couriers that have been paid for

```
select c.* from courier c inner join payment p where c.courierID = p.courierId;
```

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

```
select locationID from payment where amount = (select max(amount) from payment);
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line displays the following SQL queries and their results:

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
mysql> use courier_management_system;  
Database changed  
mysql> select * from payment;  
+-----+-----+-----+-----+-----+-----+  
| PaymentID | CourierID | LocationId | Amount | PaymentDate | EmployeeId | serviceID |  
+-----+-----+-----+-----+-----+-----+  
| 1 | 1 | 1 | 100.00 | 2024-04-08 | 1 | 2 |  
| 2 | 2 | 2 | 150.00 | 2024-04-07 | 4 | 3 |  
| 3 | 3 | 5 | 200.00 | 2024-04-09 | 10 | 4 |  
| 4 | 4 | 7 | 120.00 | 2024-04-06 | 8 | 1 |  
| 5 | 5 | 9 | 250.00 | 2024-04-10 | 6 | 3 |  
| 6 | 6 | 4 | 175.00 | 2024-04-11 | 10 | 2 |  
| 7 | 7 | 1 | 200.00 | 2024-04-05 | 4 | 4 |  
| 8 | 8 | 2 | 145.00 | 2024-04-12 | 1 | 1 |  
| 9 | 9 | 6 | 160.00 | 2024-04-04 | 8 | 3 |  
| 10 | 10 | 8 | 185.00 | 2024-04-13 | 6 | 2 |  
+-----+-----+-----+-----+-----+-----+  
10 rows in set (0.03 sec)  
  
mysql> select locationID from payment where amount = (select max(amount) from payment);  
+-----+  
| locationID |  
+-----+  
| 9 |  
+-----+  
1 row in set (0.02 sec)  
  
mysql>
```

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

```
select * from courier where weight > all(select weight from courier where senderName = "Vikram");
```

The screenshot shows the MySQL 8.0 Command Line Client interface. The command line displays the following SQL queries and their results:

```
5 rows in set (0.01 sec)  
mysql> select * from courier;  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate | serviceId |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 1 | Rajiv | 123 Gandhi Nagar, Delhi | Priya | 456 Patel colony, Mumbai | 2.50 | In Transit | 123457890123 | 2024-04-08 | 2 |  
| 2 | Anita | 654 Verma Lane, Lucknow | Deepak | 321 Rajput Enclave, Jaipur | 1.20 | Delivered | 234567890123 | 2024-04-09 | 3 |  
| 3 | Vikram | 789 Malhotra Street, Kolkata | Nandini | 987 Joshi Nagar, Pune | 3.25 | In Transit | 34567890123 | 2024-04-09 | 3 |  
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 | 1 |  
| 5 | Anil | 852 Khan Market, Chennai | Ishita | 147 Verma Colony, Bangalore | 2.00 | In Transit | 5678901234 | 2024-04-10 | 3 |  
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.75 | In Transit | 6789012345 | 2024-04-11 | 2 |  
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 | 4 |  
| 8 | Priya | 456 Patel colony, Mumbai | Rajiv | 123 Gandhi Nagar, Delhi | 2.00 | In Transit | 8901234567 | 2024-04-12 | 1 |  
| 9 | Deepak | 147 Verma Colony, Bangalore | Anita | 789 Malhotra Street, Kolkata | 1.60 | Delivered | 9012345678 | 2024-04-04 | 3 |  
| 10 | Nandini | 654 Verma Lane, Lucknow | Vikram | 654 Verma Lane, Lucknow | 3.10 | In Transit | 0123456789 | 2024-04-13 | 2 |  
| 11 | Anita | 789 Malhotra Street, Kolkata | Vikram | 654 Verma Lane, Lucknow | 5.34 | In Transit | 6738573930 | 2024-04-14 | 3 |  
| 12 | Preeti | 741 Khan Street, Hyderabad | Rajiv | 123 Gandhi Nagar, Delhi | 5.34 | Delivered | 8738573930 | 2024-04-06 | 1 |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
12 rows in set (0.00 sec)  
  
mysql> select * from courier where weight > all(select weight from courier where senderName = "Vikram");  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status | TrackingNumber | DeliveryDate | serviceId |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 4 | Preeti | 741 Khan Street, Hyderabad | Rohan | 369 Patel Chowk, Ahmedabad | 4.00 | Delivered | 4567890123 | 2024-04-06 | 1 |  
| 6 | Sneha | 321 Rajput Enclave, Jaipur | Meera | 741 Khan Street, Hyderabad | 3.25 | In Transit | 7890123456 | 2024-04-11 | 2 |  
| 7 | Vikas | 987 Joshi Nagar, Pune | Arjun | 123 Gandhi Nagar, Delhi | 5.25 | Delivered | 7890123456 | 2024-04-05 | 4 |  
| 11 | Anita | 789 Malhotra Street, Kolkata | Vikram | 654 Verma Lane, Lucknow | 5.34 | In Transit | 6738573930 | 2024-04-14 | 3 |  
| 12 | Preeti | 741 Khan Street, Hyderabad | Rajiv | 123 Gandhi Nagar, Delhi | 5.34 | Delivered | 8738573930 | 2024-04-06 | 1 |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
5 rows in set (0.00 sec)  
  
mysql>
```