

Assignment - 4

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

Customer:

```
MySQL 8.0 Command Line Cli  X  +  ~

mysql> create table customers (customer_id int primary key,
-> customer_name varchar(100),address varchar(255),
-> phone_number varchar(20));
Query OK, 0 rows affected (0.03 sec)

mysql> describe customers;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| customer_id | int   | NO   | PRI | NULL    |
| customer_name | varchar(100) | YES  |     | NULL    |
| address | varchar(255) | YES  |     | NULL    |
| phone_number | varchar(20) | YES  |     | NULL    |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> create table orders (order_id int primary key,
-> customer_id int,order_date date,
-> Foreign key(customer_id) REFERENCES customers(customer_id));
Query OK, 0 rows affected (0.05 sec)

mysql> describe orders;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| order_id | int   | NO   | PRI | NULL    |
| customer_id | int   | YES  | MUL | NULL    |
| order_date | date  | YES  |     | NULL    |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> create table parcels(parcel_id int primary key,order_id int,
-> weight decimal(10, 2),
-> status varchar(50),foreign key(order_id) References orders(order_id));
Query OK, 0 rows affected (0.04 sec)

mysql> describe parcel;
ERROR 1146 (42S02): Table 'couriermanagemnetsystem.parcel' doesn't exist
mysql> describe parcels;
```

Couriers:

```
| MySQL 8.0 Command Line Cli | + | v
--> weight decimal(10, 2),
--> status varchar(50),foreign key(order_id) References orders(order_id));
Query OK, 0 rows affected (0.04 sec)

mysql> describe parcel;
ERROR 1146 (42S02): Table 'couriermanagementsystem.parcel' doesn't exist
mysql> describe parcels;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| parcel_id | int | NO | PRI | NULL |
| order_id | int | YES | MUL | NULL |
| weight | decimal(10,2) | YES | | NULL |
| status | varchar(50) | YES | | NULL |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Courier ( courier_id int primary key, sender_name varchar(255),
--> sender_address TEXT,receiver_name varchar(255),receiver_address text,
--> weight decimal(10, 2),status varchar(50),tracking_number varchar(100) UNIQUE,
--> delivery_date DATE );
Query OK, 0 rows affected (0.04 sec)

mysql> describe Courier;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| courier_id | int | NO | PRI | NULL |
| sender_name | varchar(255) | YES | | NULL |
| sender_address | text | YES | | NULL |
| receiver_name | varchar(255) | YES | | NULL |
| receiver_address | text | YES | | NULL |
| weight | decimal(10,2) | YES | | NULL |
| status | varchar(50) | YES | | NULL |
| tracking_number | varchar(100) | YES | UNI | NULL |
| delivery_date | date | YES | | NULL |
+-----+-----+-----+-----+
9 rows in set (0.01 sec)

mysql> |
```

Order and Parcels:

```
| MySQL 8.0 Command Line Cli | + | v
| customer_name | varchar(100) | YES | | NULL | |
| address | varchar(255) | YES | | NULL | |
| phone_number | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql> create table orders (order_id int primary key,
--> customer_id int,order_date date,
--> Foreign key(customer_id) REFERENCES customers(customer_id));
Query OK, 0 rows affected (0.05 sec)

mysql> describe orders;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| order_id | int | NO | PRI | NULL |
| customer_id | int | YES | MUL | NULL |
| order_date | date | YES | | NULL |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> create table parcels(parcel_id int primary key,order_id int,
--> weight decimal(10, 2),
--> status varchar(50),foreign key(order_id) References orders(order_id));
Query OK, 0 rows affected (0.04 sec)

mysql> describe parcel;
ERROR 1146 (42S02): Table 'couriermanagementsystem.parcel' doesn't exist
mysql> describe parcels;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| parcel_id | int | NO | PRI | NULL |
| order_id | int | YES | MUL | NULL |
| weight | decimal(10,2) | YES | | NULL |
| status | varchar(50) | YES | | NULL |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
```

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

User:

```
MySQL 8.0 Command Line Cli  +  ▾
mysql> CREATE TABLE User(userid int primary key,
-> name varchar(255),
-> email varchar(255),password varchar(255),
-> contact_number varchar(20),address text
-> );
Query OK, 0 rows affected (0.05 sec)

mysql> describe User;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| userid | int  | NO   | PRI | NULL    |       |
| name   | varchar(255) | YES  |     | NULL    |       |
| email  | varchar(255) | YES  |     | NULL    |       |
| password | varchar(255) | YES  |     | NULL    |       |
| contact_number | varchar(20) | YES  |     | NULL    |       |
| address | text  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+
6 rows in set (0.02 sec)

mysql>
```

Courier:

```
MySQL 8.0 Command Line Cli  +  ▾
-> weight decimal(10, 2),
-> status varchar(50),foreign key(order_id) References orders(order_id));
Query OK, 0 rows affected (0.04 sec)

mysql> describe parcel;
ERROR 1146 (42S02): Table 'couriermanagemnetsystem.parcel' doesn't exist
mysql> describe parcels;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| parcel_id | int  | NO   | PRI | NULL    |       |
| order_id  | int  | YES  | MUL | NULL    |       |
| weight    | decimal(10,2) | YES  |     | NULL    |       |
| status    | varchar(50) | YES  |     | NULL    |       |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> CREATE TABLE Courier ( courier_id int primary key, sender_name varchar(255),
-> sender_address TEXT,receiver_name varchar(255),receiver_address text,
-> weight decimal(10, 2),status varchar(50),tracking_number varchar(100) UNIQUE,
-> delivery_date DATE );
Query OK, 0 rows affected (0.04 sec)

mysql> describe Courier;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| courier_id | int  | NO   | PRI | NULL    |       |
| sender_name | varchar(255) | YES  |     | NULL    |       |
| sender_address | text  | YES  |     | NULL    |       |
| receiver_name | varchar(255) | YES  |     | NULL    |       |
| receiver_address | text  | YES  |     | NULL    |       |
| weight    | decimal(10,2) | YES  |     | NULL    |       |
| status    | varchar(50) | YES  |     | NULL    |       |
| tracking_number | varchar(100) | YES  | UNI | NULL    |       |
| delivery_date | date  | YES  |     | NULL    |       |
+-----+-----+-----+-----+
9 rows in set (0.01 sec)

mysql> |
```

Employee:

```
MySQL 8.0 Command Line Cli × + ▾
+-----+-----+-----+-----+-----+
| tracking_number | varchar(100) | YES | UNI | NULL |      |
| delivery_date   | date        | YES |      | NULL |      |
+-----+-----+-----+-----+-----+
9 rows in set (0.01 sec)

mysql> CREATE TABLE CourierServices(service_id int primary key,
-> service_name varchar(100),cost DECIMAL(8,2));
Query OK, 0 rows affected (0.03 sec)

mysql> describe CourierServices;
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| service_id | int      | NO   | PRI | NULL    |       |
| service_name | varchar(100) | YES  |      | NULL    |       |
| cost       | decimal(8,2) | YES  |      | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> CREATE TABLE Employee(
-> employee_id int primary key,
-> name varchar(255),
-> email varchar(255) UNIQUE,
-> contact_number varchar(20),
-> salary DECIMAL(10, 2));
Query OK, 0 rows affected (0.04 sec)

mysql> describe Employee;
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| employee_id | int      | NO   | PRI | NULL    |       |
| name       | varchar(255) | YES  |      | NULL    |       |
| email      | varchar(255) | YES  | UNI | NULL    |       |
| contact_number | varchar(20) | YES  |      | NULL    |       |
| salary     | decimal(10,2) | YES  |      | NULL    |       |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

Location:

```
MySQL 8.0 Command Line Cli × + ▾
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> CREATE TABLE Employee(
-> employee_id int primary key,
-> name varchar(255),
-> email varchar(255) UNIQUE,
-> contact_number varchar(20),
-> salary DECIMAL(10, 2));
Query OK, 0 rows affected (0.04 sec)

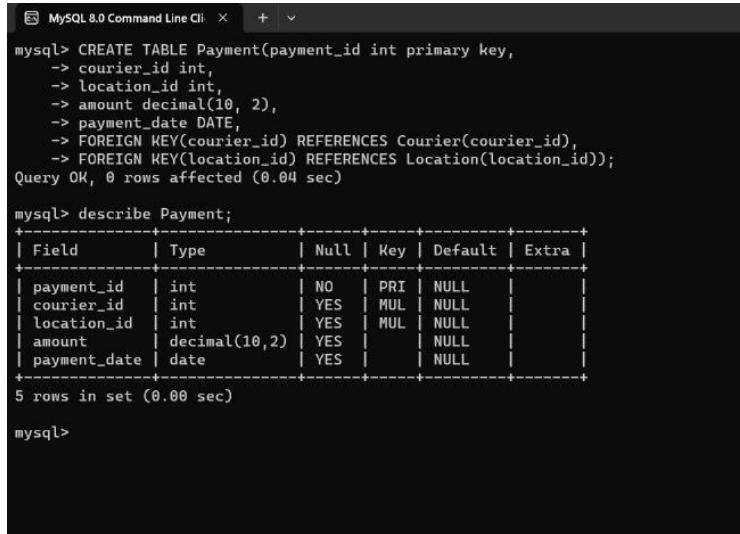
mysql> describe Employee;
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| employee_id | int      | NO   | PRI | NULL    |       |
| name       | varchar(255) | YES  |      | NULL    |       |
| email      | varchar(255) | YES  | UNI | NULL    |       |
| contact_number | varchar(20) | YES  |      | NULL    |       |
| salary     | decimal(10,2) | YES  |      | NULL    |       |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> CREATE TABLE Location(
-> location_id int primary key,
-> location_name varchar(100),
-> address text);
Query OK, 0 rows affected (0.03 sec)

mysql> describe Location;
+-----+-----+-----+-----+-----+
| Field    | Type     | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| location_id | int      | NO   | PRI | NULL    |       |
| location_name | varchar(100) | YES  |      | NULL    |       |
| address    | text     | YES  |      | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

Payment:



```
mysql> CREATE TABLE Payment(payment_id int primary key,
-> courier_id int,
-> location_id int,
-> amount decimal(10, 2),
-> payment_date DATE,
-> FOREIGN KEY(courier_id) REFERENCES Courier(courier_id),
-> FOREIGN KEY(location_id) REFERENCES Location(location_id));
Query OK, 0 rows affected (0.04 sec)

mysql> describe Payment;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| payment_id | int | NO | PRI | NULL |       |
| courier_id | int | YES | MUL | NULL |       |
| location_id | int | YES | MUL | NULL |       |
| amount | decimal(10,2) | YES |       | NULL |       |
| payment_date | date | YES |       | NULL |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

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

- **1. One-to-Many Relationships:**

Customers to Orders: One customer can place multiple orders. This is a one-to-many relationship between the Customers table and the Orders table. Each order belongs to only one customer, but a customer can have multiple orders. Orders to Parcels: One order can consist of multiple parcels. This is a one-to-many relationship between the Orders table and the Parcels table. Each order may contain multiple parcels, but a parcel belongs to only one order.

- **Courier to Couriers:** If you have additional data in the Couriers table (e.g., courier details), it could be a one-to-many relationship with the Courier table where each courier could have multiple courier-related details.

- **2. Many-to-Many Relationships:**

There aren't explicit many-to-many relationships defined in the tables provided. However, in a real-world scenario:

- **Customers to Services:** A customer might use multiple services, and a service might be used by multiple customers. This would create a many-to-many relationship between the Customers and Courier Services tables.

The relationship types can vary based on specific business requirements. For example, additional intermediary tables might be needed to establish many-to-many relationships if such relationships exist in the data model.

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

User:

```
MySQL 8.0 Command Line Cli  + | v
mysql> describe user;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| userid | int | NO | PRI | NULL | 
| name | varchar(255) | YES | | NULL | 
| email | varchar(255) | YES | | NULL | 
| password | varchar(255) | YES | | NULL | 
| contact_number | varchar(20) | YES | | NULL | 
| address | text | YES | | NULL | 
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> INSERT INTO user(userid,name,email,password,contact_number,address)VALUES
-> (1,'RAJA','raja@gmail.com','password123','0321654789','chennai'),
-> (2,'Raju','raju@gmail.com','word123','0321654987','chennai'),
-> (3,'kavitha','kavitha@gmail.com','word987','1230654987','pune'),
-> (4,'Daya','daya@gmail.com','daya0123','9874561230','pune'),
-> (5,'jehta','jehta@gmail.com','pass0123','987450231','hyderabad'),
-> (6,'inthu','inthu@gmail.com','space123','6320150231','banglore');
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> Select * FROM user;
+-----+-----+-----+-----+
| userid | name | email | password | contact_number | address |
+-----+-----+-----+-----+
| 1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |
| 2 | raju | raju@gmail.com | word123 | 0321654987 | chennai |
| 3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |
| 4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |
| 5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |
| 6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

Courier:

```
MySQL 8.0 Command Line Cli  + | v
mysql> describe Courier;
+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| courier_id | int | NO | PRI | NULL | 
| sender_name | varchar(255) | YES | | NULL | 
| sender_address | text | YES | | NULL | 
| receiver_name | varchar(255) | YES | | NULL | 
| receiver_address | text | YES | | NULL | 
| weight | decimal(10,2) | YES | | NULL | 
| status | varchar(50) | YES | | NULL | 
| tracking_number | varchar(100) | YES | UNI | NULL | 
| delivery_date | date | YES | | NULL | 
+-----+-----+-----+-----+
9 rows in set (0.01 sec)

mysql> INSERT INTO Courier (courier_id, sender_name, sender_address, receiver_name,
-> receiver_address, weight, status, tracking_number, delivery_date)VALUES
-> (1,'raja','chennai','jack','pune',5.2,'In-transit','TRACK001','2023-01-20'),
-> (2,'raju','chennai','jehta','hyderabad',3.2,'Delivered','TRACK002','2023-01-03'),
-> (3,'kavitha','pune','raja','chennai',5.0,'Pending','TRACK003','2023-01-12'),
-> (4,'gunjan','chennai','nisha','hyderabad',4.2,'Delivered','TRACK004','2023-01-03'),
-> (5,'inthu','banglore','jehta','hyderabad',5.0,'Pending','TRACK005','2023-01-12'),
-> (6,'inthu','banglore','raja','chennai',3.2,'Delivered','TRACK006','2023-01-03');
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Courier servies:

```
MySQL 8.0 Command Line Cli + ▾
mysql> describe Courierservices;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| service_id | int      | NO   | PRI | NULL    |       |
| service_name | varchar(100) | YES  |     | NULL    |       |
| cost | decimal(8,2) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> INSERT INTO Courierservices(service_id,service_name,cost)VALUES
    -> (1,'Express Delivery',20.00),
    -> (2,'Standard Delivery',10.00),
    -> (3,'International Delivery',50.00),
    -> (4,'Same day Delivery',30.00),
    -> (5,'Next day Delivery',25.00),
    -> (6,'Economy shipping',08.00);
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Courierservices;
+-----+-----+-----+
| service_id | service_name | cost |
+-----+-----+-----+
| 1 | Express Delivery | 20.00 |
| 2 | Standard Delivery | 10.00 |
| 3 | International Delivery | 50.00 |
| 4 | Same day Delivery | 30.00 |
| 5 | Next day Delivery | 25.00 |
| 6 | Economy shipping | 8.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

Employee:

```
MySQL 8.0 Command Line Cli X + - mysql> describe Employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| employee_id | int | NO | PRI | NULL | |
| name | varchar(255) | YES | | NULL | |
| email | varchar(255) | YES | UNI | NULL | |
| contact_number | varchar(20) | YES | | NULL | |
| salary | decimal(10,2) | YES | | NULL | |
| Role | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> INSERT INTO Employee(employee_id,name,email,contact_number,salary,Role)VALUES
    -> (1,'Anajli','anjali@gmai.com','0123456789',60000,'manager'),
    -> (2,'Ankita','ankita@gmail.com','630156789',60000,'manager'),
    -> (3,'Isha','isha@gmail.com','6302456789',45000,'supervisor'),
    -> (4,'chintu','chintu@gmail.com','6302450122',30000,'delivery agent'),
    -> (5,'abhishhek','abhishek@gmail.com','987450122',30000,'delivery agent'),
    -> (6,'vickey','vickey@gmail.com','9874500164',32000,'support staff');
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Employee;
+-----+-----+-----+-----+-----+-----+
| employee_id | name | email | contact_number | salary | Role |
+-----+-----+-----+-----+-----+-----+
| 1 | Anajli | anjali@gmai.com | 0123456789 | 60000.00 | manager |
| 2 | Ankita | ankita@gmail.com | 630156789 | 60000.00 | manager |
| 3 | Isha | isha@gmail.com | 6302456789 | 45000.00 | supervisor |
| 4 | chintu | chintu@gmail.com | 6302450122 | 30000.00 | delivery agent |
| 5 | abhishhek | abhishek@gmail.com | 987450122 | 30000.00 | delivery agent |
| 6 | vickey | vickey@gmail.com | 9874500164 | 32000.00 | support staff |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

Location:

```
MySQL 8.0 Command Line Cli  X + v

mysql> describe Location;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| location_id | int    | NO   | PRI | NULL    |       |
| location_name | varchar(100) | YES  |     | NULL    |       |
| address | text   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> INSERT INTO Location(location_id,location_name,address)VALUES
    -> (1,'chennai','main office 123 road'),
    -> (2,'chennai','Branch A main road'),
    -> (3,'pune','main road 45'),
    -> (4,'pune','ring road 50'),
    -> (5,'hyderabad','ring road 12'),
    -> (6,'banglore','main road 82');
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Location;
+-----+-----+-----+
| location_id | location_name | address
+-----+-----+-----+
|      1 | chennai      | main office 123 road
|      2 | chennai      | Branch A main road
|      3 | pune         | main road 45
|      4 | pune         | ring road 50
|      5 | hyderabad    | ring road 12
|      6 | banglore     | main road 82
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

Payment:

```
MySQL 8.0 Command Line Cli  X + v

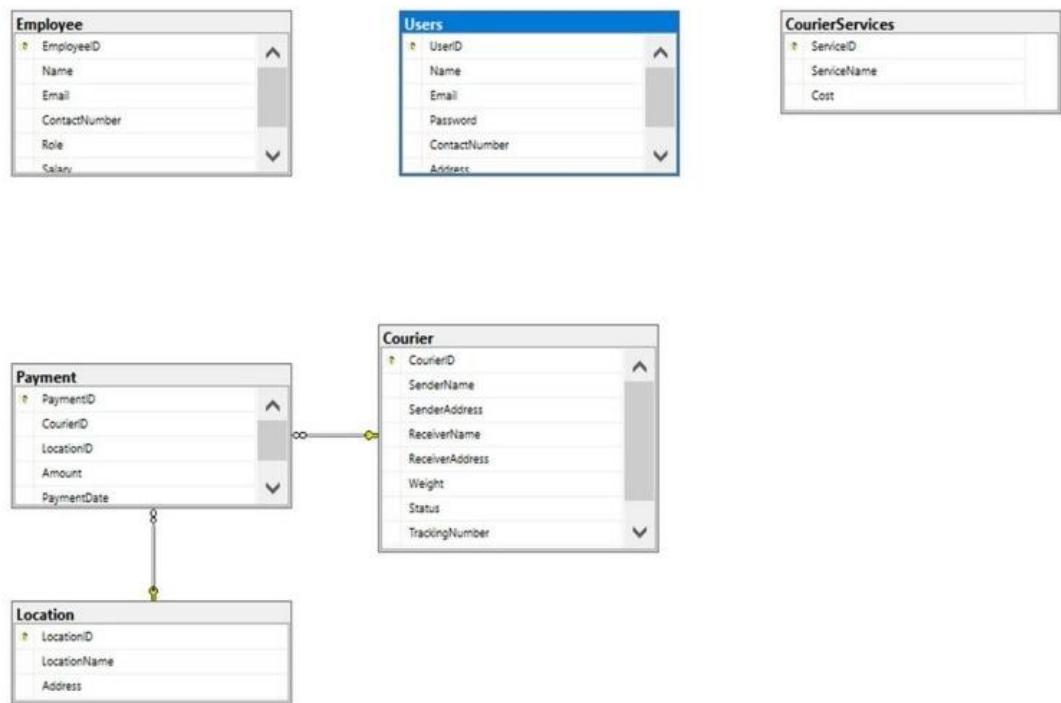
mysql> describe Payment;
+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| payment_id | int    | NO   | PRI | NULL    |       |
| courier_id | int    | YES  | MUL | NULL    |       |
| location_id | int    | YES  | MUL | NULL    |       |
| amount | decimal(10,2) | YES  |     | NULL    |       |
| payment_date | date   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> INSERT INTO Payment(payment_id,courier_id,location_id,amount,payment_date)VALUES
    -> (1,1,2,50.00,'2023-12-01'),
    -> (2,2,1,75.00,'2023-01-01'),
    -> (3,3,3,75.00,'2023-01-05'),
    -> (4,4,2,50.00,'2023-01-15'),
    -> (5,5,6,25.00,'2023-12-08'),
    -> (6,6,4,45.00,'2023-01-15');
Query OK, 6 rows affected (0.01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Payment;
+-----+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date
+-----+-----+-----+-----+-----+
|      1 |          1 |          2 |  50.00 | 2023-12-01
|      2 |          2 |          1 |  75.00 | 2023-01-01
|      3 |          3 |          3 |  75.00 | 2023-01-05
|      4 |          4 |          2 |  50.00 | 2023-01-15
|      5 |          5 |          6 |  25.00 | 2023-12-08
|      6 |          6 |          4 |  45.00 | 2023-01-15
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

5. Create an ERD (Entity Relationship Diagram) for the database.



Task – 2

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

1. List all customers:

```
MySQL 8.0 Command Line Cli  x  +  v

mysql> SELECT * FROM Customers;
Empty set (0.01 sec)

mysql> describe Customers;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| customer_id | int | NO | PRI | NULL |
| customer_name | varchar(100) | YES | | NULL |
| address | varchar(255) | YES | | NULL |
| phone_number | varchar(20) | YES | | NULL |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> INSERT INTO Customers(customer_id,customer_name,address,phone_number)VALUES
-> (1,'anjali','chennai','987456123'),
-> (2,'raja','chennai','632456123'),
-> (3,'raju','pune','6324560231'),
-> (4,'simran','pune','478560231'),
-> (5,'inthu','hyderabad','632456074'),
-> (6,'shyam','banglore','982456074');
Query OK, 6 rows affected (0.01 sec)
Records: 6 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Customers;
+-----+-----+-----+-----+
| customer_id | customer_name | address | phone_number |
+-----+-----+-----+-----+
| 1 | anjali | chennai | 987456123 |
| 2 | raja | chennai | 632456123 |
| 3 | raju | pune | 6324560231 |
| 4 | simran | pune | 478560231 |
| 5 | inthu | hyderabad | 632456074 |
| 6 | shyam | banglore | 982456074 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

2. List all orders for a specific customer:

```
MySQL 8.0 Command Line Cli  x  +  v

mysql> SELECT * FROM Orders WHERE customer_id = 1;
+-----+-----+-----+
| order_id | customer_id | order_date |
+-----+-----+-----+
| 1 | 1 | 2023-01-01 |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```

3. List all couriers:

```
MySQL 8.0 Command Line Cli + ▾
mysql> SELECT * FROM Orders WHERE customer_id = 1;
+-----+-----+
| order_id | customer_id | order_date |
+-----+-----+
| 1 | 1 | 2023-01-01 |
+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM Courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

4. List all packages for a specific order:

```
MySQL 8.0 Command Line Cli + ▾
mysql> SELECT * FROM Courier;
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Parcels WHERE order_id = '2';
Empty set (0.00 sec)

mysql> SELECT * FROM Parcels
-> ;
Empty set (0.00 sec)

mysql> INSERT INTO Parcels(parcel_id,order_id,weight,status)VALUES
-> (1,1,2.5,'shipped'),
-> (2,2,5.5,'shipped'),
-> (3,3,5.0,'In Transit'),
-> (4,4,1.0,'In Transit'),
-> (5,5,2.5,'Processing'),
-> (6,6,3.5,'Processing');
Query OK, 6 rows affected (0.01 sec)
Records: 6 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Parcels WHERE order_id = '2';
+-----+-----+-----+
| parcel_id | order_id | weight | status |
+-----+-----+-----+
| 2 | 2 | 5.50 | shipped |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

```
MySQL 8.0 Command Line Cli + ▾
mysql> SELECT * FROM Courier WHERE courier_id = '2';
+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

5. List all deliveries for a specific courier:

6. List all undelivered packages:

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

8. List all packages with a specific status:

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

```
MySQL 8.0 Command Line Cli + ▾
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Courier WHERE delivery_date = '2023-01-20';
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM Courier WHERE Status = 'Pending';
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT courier_id, COUNT(*) AS TotalPackages FROM Courier GROUP BY courier_id;
+-----+-----+
| courier_id | TotalPackages |
+-----+-----+
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

11 . List all packages with a specific weight range:

```
MySQL 8.0 Command Line Cli + ▾
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM Courier WHERE Status = 'Pending';
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT courier_id, COUNT(*) AS TotalPackages FROM Courier GROUP BY courier_id;
+-----+-----+
| courier_id | TotalPackages |
+-----+-----+
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Courier WHERE weight BETWEEN '1.0' AND '5.0';
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> |
```

12. Retrieve employees whose names contain 'John'

```
MySQL 8.0 Command Line Cli x + v
+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Courier WHERE weight BETWEEN '1.0' AND '5.0';
+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+
5 rows in set (0.00 sec)

mysql> SELECT * FROM Employee WHERE name LIKE '%inthu';
Empty set (0.01 sec)

mysql> SELECT * FROM Employee;
+-----+
| employee_id | name | email | contact_number | salary | Role |
+-----+
| 1 | Anajli | anjali@gmai.com | 0123456789 | 60000.00 | manager |
| 2 | Ankita | ankita@gmail.com | 630156789 | 60000.00 | manager |
| 3 | Isha | isha@gmail.com | 6302456789 | 45000.00 | supervisor |
| 4 | chintu | chintu@gmail.com | 6302450122 | 30000.00 | delivery agent |
| 5 | abhishek | abhishek@gmail.com | 987450122 | 30000.00 | delivery agent |
| 6 | vickey | vickey@gmail.com | 9874500164 | 32000.00 | support staff |
+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Employee WHERE name LIKE '%Anajli';
+-----+
| employee_id | name | email | contact_number | salary | Role |
+-----+
| 1 | Anajli | anjali@gmai.com | 0123456789 | 60000.00 | manager |
+-----+
1 row in set (0.00 sec)

mysql> |
```

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

Task – 3

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

```
| MySQL 8.0 Command Line Cli | + | v |
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT * Employee;
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 'Employee' at line 1
mysql> SELECT * FROM Employee;
+-----+-----+-----+-----+-----+
| employee_id | name | email | contact_number | salary | Role |
+-----+-----+-----+-----+-----+
| 1 | Anajli | anjali@gmail.com | 0123456789 | 60000.00 | manager |
| 2 | Ankita | ankita@gmail.com | 630156789 | 60000.00 | manager |
| 3 | Isha | isha@gmail.com | 6302456789 | 45000.00 | supervisor |
| 4 | chintu | chintu@gmail.com | 6302450122 | 30000.00 | delivery agent |
| 5 | abhishek | abhishek@gmail.com | 987450122 | 30000.00 | delivery agent |
| 6 | vickey | vickey@gmail.com | 9874500164 | 32000.00 | support staff |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT employee_id, name, COUNT(courier_id) AS TotalCouriersHandled
-> FROM Employee
-> LEFT JOIN courier ON Employee.employee_id = courier.courier_id
-> GROUP BY Employee.employee_id, Employee.name;
+-----+-----+-----+
| employee_id | name | TotalCouriersHandled |
+-----+-----+-----+
| 1 | Anajli | 1 |
| 2 | Ankita | 1 |
| 3 | Isha | 1 |
| 4 | chintu | 1 |
| 5 | abhishek | 1 |
| 6 | vickey | 1 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

15. Calculate the total revenue generated by each location

```
| MySQL 8.0 Command Line Cli | + | v |
mysql> SELECT * FROM Location;
+-----+-----+-----+
| location_id | location_name | address |
+-----+-----+-----+
| 1 | chennai | main office 123 road |
| 2 | chennai | Branch A main road |
| 3 | pune | main road 45 |
| 4 | pune | ring road 50 |
| 5 | hyderabad | ring road 12 |
| 6 | banglore | main road 82 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT Location_id, SUM(amount) AS Total_Revenue
-> FROM Payment GROUP BY Location_id;
+-----+-----+
| Location_id | Total_Revenue |
+-----+-----+
| 1 | 75.00 |
| 2 | 100.00 |
| 3 | 75.00 |
| 4 | 45.00 |
| 6 | 25.00 |
+-----+-----+
5 rows in set (0.00 sec)

mysql> |
```

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

```
MySQL 8.0 Command Line Cli x + v

mysql> SELECT * FROM payment;
+-----+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+-----+
| 1 | 1 | 2 | 50.00 | 2023-12-01 |
| 2 | 2 | 1 | 75.00 | 2023-01-01 |
| 3 | 3 | 3 | 75.00 | 2023-01-05 |
| 4 | 4 | 2 | 50.00 | 2023-01-15 |
| 5 | 5 | 6 | 25.00 | 2023-12-08 |
| 6 | 6 | 4 | 45.00 | 2023-01-15 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Courier;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT courier_id, COUNT(*) AS Total_Couriers_Delivered FROM Courier GROUP BY courier_id;
+-----+-----+
| courier_id | Total_Couriers_Delivered |
+-----+-----+
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Cli x + v

| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT courier_id, COUNT(*) AS Total_Couriers_Delivered FROM Courier GROUP BY courier_id;
+-----+-----+
| courier_id | Total_Couriers_Delivered |
+-----+-----+
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id HAVING SUM(Amount) < 70;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
| 4 | 45.00 |
| 6 | 25.00 |
+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id ;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
| 1 | 75.00 |
| 2 | 100.00 |
| 3 | 75.00 |
| 4 | 45.00 |
| 6 | 25.00 |
+-----+-----+
5 rows in set (0.00 sec)

mysql> |
```

19. Calculate Total Payments per Location

```
MySQL 8.0 Command Line Cli  +  ▾
mysql> SELECT courier_id, COUNT(*) AS Total_Couriers_Delivered FROM Courier GROUP BY courier_id;
+-----+-----+
| courier_id | Total_Couriers_Delivered |
+-----+-----+
|      1 |                  1 |
|      2 |                  1 |
|      3 |                  1 |
|      4 |                  1 |
|      5 |                  1 |
|      6 |                  1 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id HAVING SUM(Amount) < 70;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
|        4 |       45.00 |
|        6 |       25.00 |
+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id ;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
|        1 |       75.00 |
|        2 |      100.00 |
|        3 |       75.00 |
|        4 |       45.00 |
|        6 |       25.00 |
+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT c.* FROM Courier c JOIN Payment p ON c.courier_id
    -> JOIN Location l ON p.location_id = l.location_id
    -> WHERE p.Amount > 1000 AND l.location_id = 4;
Empty set (0.00 sec)

mysql>
```

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

```
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
+-----+
6 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id HAVING SUM(Amount) < 70;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
| 4 | 45.00 |
| 6 | 25.00 |
+-----+
2 rows in set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_payment FROM Payment GROUP BY location_id ;
+-----+-----+
| location_id | Total_payment |
+-----+-----+
| 1 | 75.00 |
| 2 | 100.00 |
| 3 | 75.00 |
| 4 | 45.00 |
| 6 | 25.00 |
+-----+
5 rows in set (0.00 sec)

mysql> SELECT c.* FROM Courier c JOIN Payment p ON c.courier_id
   -> JOIN Location l ON p.location_id = l.location_id
   -> WHERE p.Amount > 1000 AND l.location_id = 4;
Empty set (0.00 sec)

mysql> SELECT location_id, SUM(Amount) AS Total_Amount_Received FROM Payment WHERE Payment_date < '2023-12-01'
   -> GROUP BY location_id HAVING SUM(Amount) > 5000;
Empty set (0.00 sec)

mysql> |
```

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

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

```
MySQL 8.0 Command Line Cli  X  +  v

mysql> SELECT p.payment_id, p.courier_id,p.amount, p.payment_date,l.location_name,l.address FROM Payment p
    -> JOIN Location l ON p.Location_id = l.Location_id;
+-----+-----+-----+-----+-----+-----+
| payment_id | courier_id | amount | payment_date | location_name | address |
+-----+-----+-----+-----+-----+-----+
|       1 |         1 |  50.00 | 2023-12-01 | chennai      | Branch A main road |
|       2 |         2 |  75.00 | 2023-01-01 | chennai      | main office 123 road |
|       3 |         3 |  75.00 | 2023-01-05 | pune         | main road 45        |
|       4 |         4 |  50.00 | 2023-01-15 | chennai      | Branch A main road |
|       5 |         5 |  25.00 | 2023-12-08 | banglore     | main road 82        |
|       6 |         6 |  45.00 | 2023-01-15 | pune         | ring road 50        |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

Task-4:

23. Retrieve Payments with Courier Information

24. Retrieve Payments with Location Information

```
MySQL 8.0 Command Line Cli  ×  +  ▾

mysql> SELECT p.Payment_id, p.Amount,p.Payment_date, c.courier_id,c.sender_name,
-> c.sender_address,c.receiver_name, c.receiver_address FROM Payment p JOIN
-> Corier c ON p.Courier_id = c.courier_id;
ERROR 1146 (42S02): Table 'couriermanagemnetsystem.corier' doesn't exist
mysql> SELECT p.Payment_id, p.Amount,p.Payment_date, c.courier_id,c.sender_name,
-> c.sender_address,c.receiver_name, c.receiver_address FROM Payment p JOIN
-> Courier c ON p.Courier_id = c.courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | courier_id | sender_name | sender_address | receiver_name | receiver_address |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 1 | raja | chennai | jack | pune |
| 2 | 75.00 | 2023-01-01 | 2 | raju | chennai | jehta | hyderabad |
| 3 | 75.00 | 2023-01-05 | 3 | kavitha | pune | raja | chennai |
| 4 | 50.00 | 2023-01-15 | 4 | gunjan | chennai | nisha | hyderabad |
| 5 | 25.00 | 2023-12-08 | 5 | inthu | banglore | jehta | hyderabad |
| 6 | 45.00 | 2023-01-15 | 6 | inthu | banglore | raja | chennai |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

25. Retrieve Payments with Courier and Location Information

```
MySQL 8.0 Command Line Cli  ×  +  ▾

mysql> SELECT p.Payment_id, p.Amount,p.Payment_date, c.courier_id,c.sender_name,
-> c.sender_address,c.receiver_name, c.receiver_address FROM Payment p JOIN
-> Corier c ON p.Courier_id = c.courier_id;
ERROR 1146 (42S02): Table 'couriermanagemnetsystem.corier' doesn't exist
mysql> SELECT p.Payment_id, p.Amount,p.Payment_date, c.courier_id,c.sender_name,
-> c.sender_address,c.receiver_name, c.receiver_address FROM Payment p JOIN
-> Courier c ON p.Courier_id = c.courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | courier_id | sender_name | sender_address | receiver_name | receiver_address |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 1 | raja | chennai | jack | pune |
| 2 | 75.00 | 2023-01-01 | 2 | raju | chennai | jehta | hyderabad |
| 3 | 75.00 | 2023-01-05 | 3 | kavitha | pune | raja | chennai |
| 4 | 50.00 | 2023-01-15 | 4 | gunjan | chennai | nisha | hyderabad |
| 5 | 25.00 | 2023-12-08 | 5 | inthu | banglore | jehta | hyderabad |
| 6 | 45.00 | 2023-01-15 | 6 | inthu | banglore | raja | chennai |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT p.Courier_id, c.Sender_name, SUM(p.Amount) As Total_Payments_Received FROM Payment p
-> JOIN Courier c ON p.courier_id = c.courier_id GROUP BY p.Courier_id, c.Sender_name;
+-----+-----+-----+
| Courier_id | Sender_name | Total_Payments_Received |
+-----+-----+-----+
| 1 | raja | 50.00 |
| 2 | raju | 75.00 |
| 3 | kavitha | 75.00 |
| 4 | gunjan | 50.00 |
| 5 | inthu | 25.00 |
| 6 | inthu | 45.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

26. List all payments with courier details

```
MySQL 8.0 Command Line Cli  X  +  v

+-----+-----+-----+-----+-----+
| 6 rows in set (0.00 sec)

mysql> SELECT p.Courier_id, c.Sender_name, SUM(p.Amount) As Total_Payments_Received FROM Payment p
    -> JOIN Courier c ON p.courier_id = c.courier_id GROUP BY p.Courier_id, c.Sender_name;
+-----+-----+-----+
| Courier_id | Sender_name | Total_Payments_Received |
+-----+-----+-----+
|      1 | raja          |        50.00 |
|      2 | raju          |        75.00 |
|      3 | kavitha       |        75.00 |
|      4 | gunjan         |        50.00 |
|      5 | inthu          |        25.00 |
|      6 | inthu          |        45.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Payment;
+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+
|      1 |        1 |          2 |   50.00 | 2023-12-01 |
|      2 |        2 |          1 |   75.00 | 2023-01-01 |
|      3 |        3 |          3 |   75.00 | 2023-01-05 |
|      4 |        4 |          2 |   50.00 | 2023-01-15 |
|      5 |        5 |          6 |   25.00 | 2023-12-08 |
|      6 |        6 |          4 |   45.00 | 2023-01-15 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Payment WHERE payment_date = '2023-01-15';
+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+
|      4 |        4 |          2 |   50.00 | 2023-01-15 |
|      6 |        6 |          4 |   45.00 | 2023-01-15 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> |
```

27. Total payments received for each courier

```
MySQL 8.0 Command Line Cli  X  +  v

mysql> SELECT c.courier_id, c.Sender_name,SUM(p.Amount) AS
    -> Total_payments_received FROM Courier c JOIN Payment p ON c.courier_id = P.courier_id
    -> GROUP BY c.courier_id, c.Sender_name;
+-----+-----+-----+
| courier_id | Sender_name | Total_payments_received |
+-----+-----+-----+
|      1 | raja          |        50.00 |
|      2 | raju          |        75.00 |
|      3 | kavitha       |        75.00 |
|      4 | gunjan         |        50.00 |
|      5 | inthu          |        25.00 |
|      6 | inthu          |        45.00 |
+-----+-----+-----+
6 rows in set (0.03 sec)

mysql>
```

28. List payments made on a specific date

```
MySQL 8.0 Command Line Cli + ^

mysql> SELECT c.courier_id, c.Sender_name, SUM(p.Amount) AS
    -> Total_payments_received FROM Courier c JOIN Payment p ON c.courier_id = P.courier_id
    -> GROUP BY c.courier_id, c.Sender_name;
+-----+-----+-----+
| courier_id | Sender_name | Total_payments_received |
+-----+-----+-----+
|      1 | raja        |          50.00 |
|      2 | raju        |          75.00 |
|      3 | kavitha     |          75.00 |
|      4 | gunjan      |          50.00 |
|      5 | inthu       |          25.00 |
|      6 | inthu       |          45.00 |
+-----+-----+-----+
6 rows in set (0.03 sec)

mysql> SELECT * FROM Payment WHERE Payment_date = '2023-01-01';
+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+
|          2 |          2 |           1 |  75.00 | 2023-01-01  |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> |
```

29. Get Courier Information for Each Payment

30. Get Payment Details with Location.

```
MySQL 8.0 Command Line Cli  +  ▾

6 rows in set (0.03 sec)

mysql> SELECT * FROM Payment WHERE Payment_date = '2023-01-01';
+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+
| 2 | 2 | 1 | 75.00 | 2023-01-01 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT p.Payment_id, p.Amount, p.Payment_date, c.courier_id, c.Sender_name,
-> c.Sender_address, c.Receiver_name, c.Receiver_address FROM Payment p
-> JOIN Courier c ON p.Courier_id = c.courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | courier_id | Sender_name | Sender_address | Receiver_name | Receiver_address |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 1 | raja | chennai | jack | pune
| 2 | 75.00 | 2023-01-01 | 2 | raju | chennai | jehta | hyderabad
| 3 | 75.00 | 2023-01-05 | 3 | kavitha | pune | raja | chennai
| 4 | 50.00 | 2023-01-15 | 4 | gunjan | chennai | nisha | hyderabad
| 5 | 25.00 | 2023-12-08 | 5 | inthu | banglore | jehta | hyderabad
| 6 | 45.00 | 2023-01-15 | 6 | inthu | banglore | raja | chennai
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT p.Payment_id, p.Amount, p.Payment_date, l.Location_id, l.Location_name, l.Address FROM Payment p
-> JOIN Location l ON p.Location_id = l.Location_id;
+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | Location_id | Location_name | Address |
+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 2 | chennai | Branch A main road
| 2 | 75.00 | 2023-01-01 | 1 | chennai | main office 123 road
| 3 | 75.00 | 2023-01-05 | 3 | pune | main road 45
| 4 | 50.00 | 2023-01-15 | 2 | chennai | Branch A main road
| 5 | 25.00 | 2023-12-08 | 6 | banglore | main road 82
| 6 | 45.00 | 2023-01-15 | 4 | pune | ring road 50
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

mysql> |
```

31. Calculating Total Payments for Each Courier.

```
MySQL 8.0 Command Line Cli  +  ▾

+-----+-----+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | courier_id | Sender_name | Sender_address | Receiver_name | Receiver_address |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 1 | raja | chennai | jack | pune
| 2 | 75.00 | 2023-01-01 | 2 | raju | chennai | jehta | hyderabad
| 3 | 75.00 | 2023-01-05 | 3 | kavitha | pune | raja | chennai
| 4 | 50.00 | 2023-01-15 | 4 | gunjan | chennai | nisha | hyderabad
| 5 | 25.00 | 2023-12-08 | 5 | inthu | banglore | jehta | hyderabad
| 6 | 45.00 | 2023-01-15 | 6 | inthu | banglore | raja | chennai
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT p.Payment_id, p.Amount, p.Payment_date, l.Location_id, l.Location_name, l.Address FROM Payment p
-> JOIN Location l ON p.Location_id = l.Location_id;
+-----+-----+-----+-----+-----+-----+
| Payment_id | Amount | Payment_date | Location_id | Location_name | Address |
+-----+-----+-----+-----+-----+-----+
| 1 | 50.00 | 2023-12-01 | 2 | chennai | Branch A main road
| 2 | 75.00 | 2023-01-01 | 1 | chennai | main office 123 road
| 3 | 75.00 | 2023-01-05 | 3 | pune | main road 45
| 4 | 50.00 | 2023-01-15 | 2 | chennai | Branch A main road
| 5 | 25.00 | 2023-12-08 | 6 | banglore | main road 82
| 6 | 45.00 | 2023-01-15 | 4 | pune | ring road 50
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

mysql> SELECT Courier_id, SUM(Amount) AS Total_Payments FROM Payment GROUP BY Courier_id;
+-----+-----+
| Courier_id | Total_Payments |
+-----+-----+
| 1 | 50.00 |
| 2 | 75.00 |
| 3 | 75.00 |
| 4 | 50.00 |
| 5 | 25.00 |
| 6 | 45.00 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

32. List Payments Within a Date Range.

```
MySQL 8.0 Command Line Cli  X  +  v
6 rows in set (0.01 sec)

mysql> SELECT Courier_id, SUM(Amount) AS Total_Payments FROM Payment GROUP BY Courier_id;
+-----+-----+
| Courier_id | Total_Payments |
+-----+-----+
|      1 |      50.00 |
|      2 |      75.00 |
|      3 |      75.00 |
|      4 |      50.00 |
|      5 |      25.00 |
|      6 |      45.00 |
+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Payment;
+-----+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+-----+
|      1 |      1 |          2 |   50.00 | 2023-12-01 |
|      2 |      2 |          1 |   75.00 | 2023-01-01 |
|      3 |      3 |          3 |   75.00 | 2023-01-05 |
|      4 |      4 |          2 |   50.00 | 2023-01-15 |
|      5 |      5 |          6 |   25.00 | 2023-12-08 |
|      6 |      6 |          4 |   45.00 | 2023-01-15 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT * FROM Payment WHERE Payment_date BETWEEN '2023-01-01' AND '2023-01-15';
+-----+-----+-----+-----+-----+
| payment_id | courier_id | location_id | amount | payment_date |
+-----+-----+-----+-----+-----+
|      2 |      2 |          1 |   75.00 | 2023-01-01 |
|      3 |      3 |          3 |   75.00 | 2023-01-05 |
|      4 |      4 |          2 |   50.00 | 2023-01-15 |
|      6 |      6 |          4 |   45.00 | 2023-01-15 |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
```

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

```
MySQL 8.0 Command Line Cli  X  +  v
mysql> SELECT * FROM User CROSS JOIN Courierservices;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| userid | name | email | password | contact_number | address | service_id | service_name | cost |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      1 | Express Delivery | 20.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      1 | Express Delivery | 20.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      1 | Express Delivery | 20.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      1 | Express Delivery | 20.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      1 | Express Delivery | 20.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      1 | Express Delivery | 20.00 |
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      2 | Standard Delivery | 10.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      2 | Standard Delivery | 10.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      2 | Standard Delivery | 10.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      2 | Standard Delivery | 10.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      2 | Standard Delivery | 10.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      2 | Standard Delivery | 10.00 |
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      3 | International Delivery | 50.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      3 | International Delivery | 50.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      3 | International Delivery | 50.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      3 | International Delivery | 50.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      3 | International Delivery | 50.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      3 | International Delivery | 50.00 |
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      4 | Same day Delivery | 30.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      4 | Same day Delivery | 30.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      4 | Same day Delivery | 30.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      4 | Same day Delivery | 30.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      4 | Same day Delivery | 30.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      4 | Same day Delivery | 30.00 |
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      5 | Next day Delivery | 25.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      5 | Next day Delivery | 25.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      5 | Next day Delivery | 25.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      5 | Next day Delivery | 25.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      5 | Next day Delivery | 25.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      5 | Next day Delivery | 25.00 |
|      6 | inthu | inthu@gmail.com | space123 | 6320150231 | banglore |      6 | Economy shipping | 8.00 |
|      5 | jehta | jehta@gmail.com | pass0123 | 987450231 | hyderabad |      6 | Economy shipping | 8.00 |
|      4 | Daya | daya@gmail.com | daya0123 | 9874561230 | pune |      6 | Economy shipping | 8.00 |
|      3 | kavitha | kavitha@gmail.com | word987 | 1230654987 | pune |      6 | Economy shipping | 8.00 |
|      2 | Raju | raju@gmail.com | word123 | 0321654987 | chennai |      6 | Economy shipping | 8.00 |
|      1 | RAJA | raja@gmail.com | password123 | 0321654789 | chennai |      6 | Economy shipping | 8.00 |
```

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

mysql> SELECT * FROM Employee CROSS JOIN Location;								
employee_id	name	email	contact_number	salary	Role	location_id	location_name	address
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	1	chennai	main office 123 road
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	1	chennai	main office 123 road
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	1	chennai	main office 123 road
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	1	chennai	main office 123 road
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	1	chennai	main office 123 road
1	Anajli	anjali@gmail.com	0123456789	60000.00	manager	1	chennai	main office 123 road
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	2	chennai	Branch A main road
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	2	chennai	Branch A main road
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	2	chennai	Branch A main road
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	2	chennai	Branch A main road
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	2	chennai	Branch A main road
1	Anajli	anjali@gmail.com	0123456789	60000.00	manager	2	chennai	Branch A main road
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	3	pune	main road 45
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	3	pune	main road 45
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	3	pune	main road 45
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	3	pune	main road 45
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	3	pune	main road 45
1	Anajli	anjali@gmail.com	0123456789	60000.00	manager	3	pune	main road 45
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	4	pune	ring road 50
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	4	pune	ring road 50
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	4	pune	ring road 50
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	4	pune	ring road 50
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	4	pune	ring road 50
1	Anajli	anjali@gmail.com	0123456789	60000.00	manager	4	pune	ring road 50
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	5	hyderabad	ring road 12
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	5	hyderabad	ring road 12
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	5	hyderabad	ring road 12
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	5	hyderabad	ring road 12
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	5	hyderabad	ring road 12
1	Anajli	anjali@gmail.com	0123456789	60000.00	manager	5	hyderabad	ring road 12
6	vickey	vickey@gmail.com	9874500164	32000.00	support staff	6	banglore	main road 82
5	abhishek	abhishek@gmail.com	987450122	30000.00	delivery agent	6	banglore	main road 82
4	chintu	chintu@gmail.com	6302450122	30000.00	delivery agent	6	banglore	main road 82
3	Isha	isha@gmail.com	6302456789	45000.00	supervisor	6	banglore	main road 82
2	Ankita	ankita@gmail.com	630156789	60000.00	manager	6	banglore	main road 82

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

mysql> SELECT courier_id, Sender_name, Sender_address FROM Courier;		
courier_id	Sender_name	Sender_address
1	raja	chennai
2	raju	chennai
3	kavitha	pune
4	gunjan	chennai
5	inthu	banglore
6	inthu	banglore

6 rows in set (0.00 sec)

mysql> |

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

```
MySQL 8.0 Command Line Cli  X  +  ▾

mysql> SELECT courier_id,Receiver_name,Receiver_address FROM Courier;
+-----+-----+-----+
| courier_id | Receiver_name | Receiver_address |
+-----+-----+-----+
|      1 | jack          | pune           |
|      2 | jehta         | hyderabad     |
|      3 | raja          | chennai        |
|      4 | nisha         | hyderabad     |
|      5 | jehta         | hyderabad     |
|      6 | raja          | chennai        |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

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

```
courierservices at time 1
mysql> select * from courierservices;
+-----+-----+-----+
| service_id | service_name      | cost   |
+-----+-----+-----+
|      1 | Express Delivery | 20.00 |
|      2 | Standard Delivery | 10.00 |
|      3 | International Delivery | 50.00 |
|      4 | Same day Delivery | 30.00 |
|      5 | Next day Delivery | 25.00 |
|      6 | Economy shipping | 8.00  |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT l.Location_id,l.Location_name,SUM(p.Amount) AS Total_Payments_Recevied
    -> FROM Location l LEFT JOIN Payment p ON l.Location_id = p.Location_id
    -> GROUP BY l.Location_id,l.Location_name;
+-----+-----+-----+
| Location_id | Location_name | Total_Payments_Recevied |
+-----+-----+-----+
|      1 | chennai       | 75.00          |
|      2 | chennai       | 100.00         |
|      3 | pune          | 75.00          |
|      4 | pune          | 45.00          |
|      5 | hyderabad     | NULL           |
|      6 | banglore      | 25.00          |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

44. List all employees who share the same role.

```
MySQL 8.0 Command Line Cli  X  +  v

ourierservices' at line 1
mysql> select * from courierservices;
+-----+-----+-----+
| service_id | service_name | cost |
+-----+-----+-----+
| 1 | Express Delivery | 20.00 |
| 2 | Standard Delivery | 10.00 |
| 3 | International Delivery | 50.00 |
| 4 | Same day Delivery | 30.00 |
| 5 | Next day Delivery | 25.00 |
| 6 | Economy shipping | 8.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT l.Location_id,l.Location_name,SUM(p.Amount) AS Total_Payments_Recevied
    -> FROM Location l LEFT JOIN Payment p ON l.Location_id = p.Location_id
    -> GROUP BY l.Location_id,l.Location_name;
+-----+-----+-----+
| Location_id | Location_name | Total_Payments_Recevied |
+-----+-----+-----+
| 1 | chennai | 75.00 |
| 2 | chennai | 100.00 |
| 3 | pune | 75.00 |
| 4 | pune | 45.00 |
| 5 | hyderabad | NULL |
| 6 | banglore | 25.00 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT role, COUNT(*) AS Employee_Count FROM Employee GROUP BY role
    -> HAVING COUNT(*) > 1;
+-----+-----+
| role | Employee_Count |
+-----+-----+
| manager | 2 |
| delivery agent | 2 |
+-----+-----+
2 rows in set (0.00 sec)

mysql> |
```

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

```
MySQL 8.0 Command Line Cli  + - +  
mysql> SELECT c1.* FROM Courier c1 JOIN Courier c2 ON c1.Sender_address LIKE CONCAT('%',c2.Sender_address,'%')  
-> WHERE c1.Courier_id <> c2.Courier_id;  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |  
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |  
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |  
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |  
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |  
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |  
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |  
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
8 rows in set (0.01 sec)  
  
mysql> |
```

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

```
MySQL 8.0 Command Line Cli  +  ▾
mysql> SELECT c1.* FROM Courier c1 JOIN Courier c2 ON c1.Sender_address LIKE CONCAT('%',c2.Sender_address,'%')
-> WHERE c1.Courier_id <> c2.Courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|        4 | gunjan     | chennai      | nisha       | hyderabad      | 4.20  | Delivered | TRACK004   | 2023-01-03
|        2 | raju       | chennai      | jehta       | hyderabad      | 3.20  | Delivered | TRACK002   | 2023-01-03
|        4 | gunjan     | chennai      | nisha       | hyderabad      | 4.20  | Delivered | TRACK004   | 2023-01-03
|        1 | raja       | chennai      | jack        | pune          | 5.20  | In-transit | TRACK001   | 2023-01-20
|        2 | raju       | chennai      | jehta       | hyderabad      | 3.20  | Delivered | TRACK002   | 2023-01-03
|        1 | raja       | chennai      | jack        | pune          | 5.20  | In-transit | TRACK001   | 2023-01-20
|        6 | inthu      | banglore     | raja        | chennai       | 3.20  | Delivered | TRACK006   | 2023-01-03
|        5 | inthu      | banglore     | jehta       | hyderabad      | 5.00  | Pending    | TRACK005   | 2023-01-12
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.01 sec)

mysql> SELECT Courier_id ,weight FROM Courier WHERE weight > (SELECT AVG(weight) FROM Courier);
+-----+-----+
| Courier_id | weight |
+-----+-----+
|        1 | 5.20  |
|        3 | 5.00  |
|        5 | 5.00  |
+-----+-----+
3 rows in set (0.00 sec)

mysql> |
```

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

```
MySQL 8.0 Command Line Cli  +  ▾
mysql> SELECT c1.* FROM Courier c1 JOIN Courier c2 ON c1.Sender_address LIKE CONCAT('%',c2.Sender_address,'%')
-> WHERE c1.Courier_id <> c2.Courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|        4 | gunjan     | chennai      | nisha       | hyderabad      | 4.20  | Delivered | TRACK004   | 2023-01-03
|        2 | raju       | chennai      | jehta       | hyderabad      | 3.20  | Delivered | TRACK002   | 2023-01-03
|        4 | gunjan     | chennai      | nisha       | hyderabad      | 4.20  | Delivered | TRACK004   | 2023-01-03
|        1 | raja       | chennai      | jack        | pune          | 5.20  | In-transit | TRACK001   | 2023-01-20
|        2 | raju       | chennai      | jehta       | hyderabad      | 3.20  | Delivered | TRACK002   | 2023-01-03
|        1 | raja       | chennai      | jack        | pune          | 5.20  | In-transit | TRACK001   | 2023-01-20
|        6 | inthu      | banglore     | raja        | chennai       | 3.20  | Delivered | TRACK006   | 2023-01-03
|        5 | inthu      | banglore     | jehta       | hyderabad      | 5.00  | Pending    | TRACK005   | 2023-01-12
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.01 sec)

mysql> SELECT Courier_id ,weight FROM Courier WHERE weight > (SELECT AVG(weight) FROM Courier);
+-----+-----+
| Courier_id | weight |
+-----+-----+
|        1 | 5.20  |
|        3 | 5.00  |
|        5 | 5.00  |
+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT Name FROM Employee WHERE Salary > (SELECT AVG(Salary) FROM Employee);
+-----+
| Name  |
+-----+
| Anajli |
| Ankita |
| Isha   |
+-----+
3 rows in set (0.01 sec)

mysql> |
```

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

```
MySQL 8.0 Command Line Cli + ▾
+-----+
| gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| raju   | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| raja   | chennai | jack  | pune      | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| raju   | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| raja   | chennai | jack  | pune      | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| inthu  | banglore | raja  | chennai   | 3.20 | Delivered | TRACK006 | 2023-01-03 |
| inthu  | banglore | jehta | hyderabad | 5.00 | Pending    | TRACK005 | 2023-01-12 |
+-----+
8 rows in set (0.01 sec)

mysql> SELECT Courier_id ,weight FROM Courier WHERE weight > (SELECT AVG(weight) FROM Courier);
+-----+
| Courier_id | weight |
+-----+
| 1           | 5.20  |
| 3           | 5.00  |
| 5           | 5.00  |
+-----+
3 rows in set (0.00 sec)

mysql> SELECT Name FROM Employee WHERE Salary > (SELECT AVG(Salary) FROM Employee);
+-----+
| Name   |
+-----+
| Anajli |
| Ankita |
| Isha   |
+-----+
3 rows in set (0.01 sec)

mysql> SELECT SUM(cost) As TotalCost FROM courierservices WHERE cost < (SELECT MAX(cost) FROM courierservices);
+-----+
| TotalCost |
+-----+
| 93.00 |
+-----+
1 row in set (0.00 sec)

mysql>
```

52. Find all couriers that have been paid for

```
MySQL 8.0 Command Line Cli + ▾
+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status     | tracking_number | delivery_date |
+-----+
| 1           | raja        | chennai       | jack          | pune            | 5.20  | In-transit | TRACK001      | 2023-01-20   |
| 2           | raju        | chennai       | jehta         | hyderabad      | 3.20  | Delivered  | TRACK002      | 2023-01-03   |
| 3           | kavitha     | pune          | raja          | chennai        | 5.00  | Pending    | TRACK003      | 2023-01-12   |
| 4           | gunjan      | chennai       | nisha         | hyderabad     | 4.20  | Delivered  | TRACK004      | 2023-01-03   |
| 5           | inthu       | banglore      | jehta         | hyderabad     | 5.00  | Pending    | TRACK005      | 2023-01-12   |
| 6           | inthu       | banglore      | raja          | chennai        | 3.20  | Delivered  | TRACK006      | 2023-01-03   |
+-----+
6 rows in set (0.00 sec)

mysql>
```

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

```
MySQL 8.0 Command Line Cli  X  +  ▾

mysql> SELECT c.* FROM Courier c INNER JOIN Payment p ON c.courier_id = p.courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT l.* FROM Location l JOIN Payment p ON l.location_id = p.Location_id
      -> WHERE p.Amount = (SELECT MAX(Amount) FROM Payment);
+-----+-----+-----+
| location_id | location_name | address |
+-----+-----+-----+
| 1 | chennai | main office 123 road |
| 3 | pune | main road 45 |
+-----+-----+-----+
2 rows in set (0.03 sec)

mysql> |
```

54. Find all couriers whose weight is greater than the weight of all couriers sent by a specific sender

(e.g., 'SenderName'):

```
MySQL 8.0 Command Line Cli  X  +  ▾

mysql> SELECT c.* FROM Courier c INNER JOIN Payment p ON c.courier_id = p.courier_id;
+-----+-----+-----+-----+-----+-----+-----+-----+
| courier_id | sender_name | sender_address | receiver_name | receiver_address | weight | status | tracking_number | delivery_date |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | raja | chennai | jack | pune | 5.20 | In-transit | TRACK001 | 2023-01-20 |
| 2 | raju | chennai | jehta | hyderabad | 3.20 | Delivered | TRACK002 | 2023-01-03 |
| 3 | kavitha | pune | raja | chennai | 5.00 | Pending | TRACK003 | 2023-01-12 |
| 4 | gunjan | chennai | nisha | hyderabad | 4.20 | Delivered | TRACK004 | 2023-01-03 |
| 5 | inthu | banglore | jehta | hyderabad | 5.00 | Pending | TRACK005 | 2023-01-12 |
| 6 | inthu | banglore | raja | chennai | 3.20 | Delivered | TRACK006 | 2023-01-03 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> SELECT l.* FROM Location l JOIN Payment p ON l.location_id = p.Location_id
      -> WHERE p.Amount = (SELECT MAX(Amount) FROM Payment);
+-----+-----+-----+
| location_id | location_name | address |
+-----+-----+-----+
| 1 | chennai | main office 123 road |
| 3 | pune | main road 45 |
+-----+-----+-----+
2 rows in set (0.03 sec)

mysql> SELECT * FROM Courier WHERE weight > (SELECT SUM(Weight) FROM Courier WHERE SenderName = 'inthu');
ERROR 1054 (42S22): Unknown column 'SenderName' in 'where clause'
mysql> SELECT * FROM Courier WHERE weight > (SELECT SUM(Weight) FROM Courier WHERE Sender_Name = 'inthu');
Empty set (0.00 sec)

mysql> SELECT * FROM Courier WHERE weight > (SELECT SUM(Weight) FROM Courier WHERE Sender_Name = 'raja');
Empty set (0.00 sec)

mysql>
```