

COURIER MANAGEMENT SYSTEM SQL SCHEMA DOCUMENTATION

OVERVIEW

The Courier Management System database serves as a robust platform for managing various aspects of courier services, including orders, parcels, customers, employees, locations, payments, and courier services. With this system, organizations can streamline their operations, enhance customer service, and improve efficiency in courier management tasks.

This document offers a detailed insight into the SQL schema and its implementation, providing a comprehensive understanding of the database structure and functionality.

TABLES

USER

UserID: Primary key. Unique identifier for each user.

Name: Name of the user.

Email: Email address of the user.

Password: Password for user authentication.

ContactNumber: Contact number of the user.

Address: Address of the user.

COURIER

CourierID: Primary key. Unique identifier for each courier.

CustomerID: Foreign key referencing the Users table. Identifies the customer.

SenderName: Name of the sender.

SenderAddress: Address of the sender.

ReceiverName: Name of the receiver.

ReceiverAddress: Address of the receiver.

Weight: Weight of the courier.

Status: Current status of the courier.

TrackingNumber: Unique identifier for tracking the courier.

DeliveryDate: Expected delivery date.

ServiceID: Foreign key referencing the CourierServices table. Identifies the service.

EmployeeID: Foreign key referencing the Employees table. Identifies the employee handling the courier.

COURIERSERVICES

ServiceID: Primary key. Unique identifier for each courier service.

ServiceName: Name of the courier service.

Cost: Cost of the courier service.

EMPLOYEE

EmployeeID: Primary key. Unique identifier for each employee.

Name: Name of the employee.

Email: Email address of the employee.

ContactNumber: Contact number of the employee.

Role: Role of the employee.

Salary: Salary of the employee.

LOCATION

LocationID: Primary key. Unique identifier for each location.

LocationName: Name of the courier service office location.

Address: Address of the courier service office location.

PAYMENT

PaymentID: Primary key. Unique identifier for each payment.

CourierID: Foreign key referencing the Courier table. Identifies the courier.

LocationID: Foreign key referencing the Location table. Identifies the location of the payment.

Amount: Amount of the payment.

PaymentDate: Date of the payment.

RELATIONSHIPS IN THE COURIER MANAGEMENT SYSTEM DATABASE

1. USERS - COURIERS RELATIONSHIP:

Type: One-to-many relationship.

Description: Each user can have multiple couriers associated with them.

Example: A customer can place multiple courier orders.

Primary Key (PK): UserID in the Users table.

Foreign Key (FK): CustomerID in the Couriers table.

2. USERS - PAYMENTS RELATIONSHIP:

Type: One-to-many relationship.

Description: Each user can make multiple payments.

Example: A customer can make payments for multiple courier orders.

Primary Key (PK): UserID in the Users table.

Foreign Key (FK): Not applicable.

3. EMPLOYEES - COURIERS RELATIONSHIP:

Type: One-to-many relationship.

Description: Each employee can handle multiple couriers.

Example: A delivery agent can handle multiple courier orders.

Primary Key (PK): EmployeeID in the Employees table.

Foreign Key (FK): EmployeeID in the Couriers table.

4. COURIERS - COURIERSERVICES RELATIONSHIP:

Type: Many-to-one relationship.

Description: Each courier is associated with only one courier service.

Example: Each courier order is assigned a specific type of service, such as standard or express.

Primary Key (PK): ServiceID in the CourierServices table.

Foreign Key (FK): ServiceID in the Couriers table.

5. EMPLOYEES - PAYMENTS RELATIONSHIP:

Type: One-to-many relationship.

Description: Each employee can receive multiple payments.

Example: Employees can receive payments for their services, bonuses, or incentives.

Primary Key (PK): EmployeeID in the Employees table.

Foreign Key (FK): Not applicable.

6. LOCATIONS - PAYMENTS RELATIONSHIP:

Type: One-to-many relationship.

Description: Each location can have multiple payments associated with it.

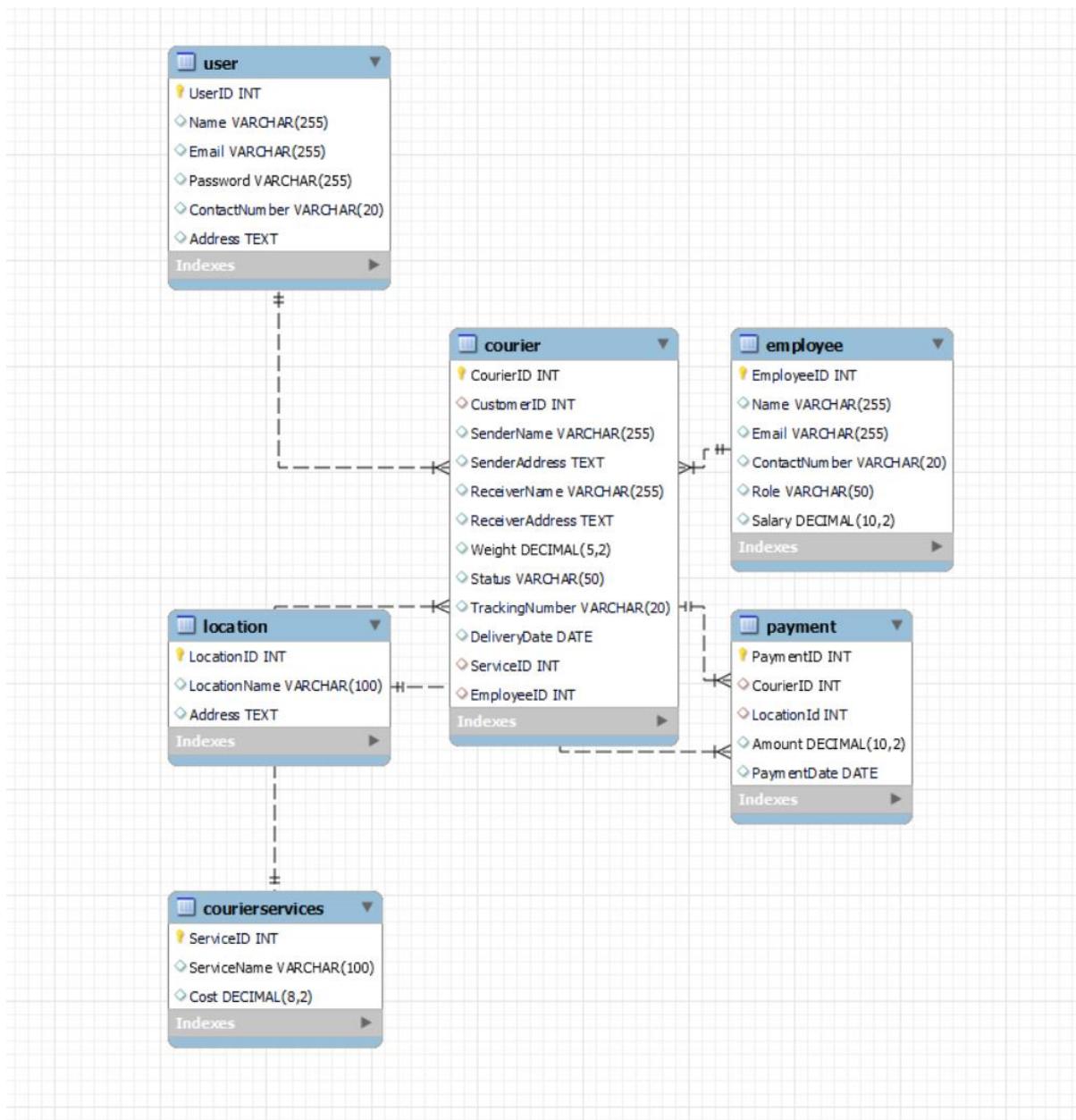
Example: Payments made for courier services at specific delivery locations.

Primary Key (PK): LocationID in the Locations table.

Foreign Key (FK): LocationID in the Payments table.

ENTITY-RELATIONSHIP (ER) MODEL DIAGRAM

The Entity-Relationship (ER) diagram presented below illustrates the structure and relationships within the Courier Management System database. By visually representing entities, their attributes, and the connections between them, this diagram offers a clear understanding of the database schema. Each entity and relationship depicted plays a crucial role in managing various aspects of courier services, including orders, parcels, customers, employees, locations, payments, and courier services. Understanding this diagram is essential for comprehending the database's functionality and for efficient management of courier operations.



DATABASE SETUP PROCESS

STEP 1 : Database Creation - Established a new database named CourierManagementSystem.

STEP 2 : Table Creation - Developed tables for Users, Couriers, CourierServices, Employees, Locations, and Payments by executing SQL scripts.

STEP 3 : Data Population - Injected data into the tables utilizing provided INSERT statements.

STEP 4 : Data Verification - Ensured data integrity and correctness by executing SELECT queries for verification purposes.

DATABASE SETUP ACTIONS

Executed SQL script to create a new database named CourierManagementSystem.

```
CREATE database CourierManagementSystem;
```

Database Usage: Switched to the CourierManagementSystem database for further operations.

```
USE CourierManagementSystem;
```

User Table Creation

```
CREATE TABLE User (
    UserID INT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255) UNIQUE,
    Password VARCHAR(255),
    ContactNumber VARCHAR(20),
    Address TEXT
);
```

User Table Data Population

- INSERT INTO User VALUES
(1, 'Adel Mariam', 'adel.mariam@gmail.com', 'adelmariam123', '1234567890', '123 ABC Nagar, Chennai, Tamil Nadu, India'),
(2, 'Abel George', 'abel.george@gmail.com', 'abelgeorge123', '9876543210', '452 XYZ Street, Mumbai, Maharashtra, India'),
(3, 'Hemmasri', 'hemmasri@gmail.com', 'hemmasri123', '5551234567', '789 PQR Road, Kolkata, West Bengal, India'),
(4, 'Anindita Kannan', 'anindita.kannan@gmail.com', 'aninditakkannan123', '5559876543', '321 LMN Colony, Bangalore, Karnataka, India'),
(5, 'Srujan', 'srujan@gmail.com', 'srujan1123', '9871234567', '567 DEF Street, Hyderabad, Telangana, India'),
(6, 'Minu Fathima', 'minu.fathima@gmail.com', 'minufathima123', '1239876543', '890 GHI Nagar, Pune, Maharashtra, India'),
(7, 'Akash', 'akash@gmail.com', 'akash123', '5555555555', '234 JKL Street, Delhi, Delhi, India'),
(8, 'Ansolin George', 'ansolin.george@gmail.com', 'ansilingeorge123', '5551234567', '678 MNO Road, Chennai, Tamil Nadu, India'),
(9, 'Daisy', 'daisy@gmail.com', 'daisy123', '9875554321', '901 STU Colony, Mumbai, Maharashtra, India'),
(10, 'Tushar', 'tushar@gmail.com', 'tushar123', '5559876543', '123 UVW Street, Kolkata, West Bengal, India'),
(11, 'Antony Sujil', 'antonysujil@gmail.com', 'antony.sujil123', '5555555555', '456 XYZ Nagar, Bangalore, Karnataka, India'),
(12, 'Hiroshith', 'hiroshith@gmail.com', 'hiroshith123', '1231231234', '752 ABC Road, Hyderabad, Telangana, India'),
(13, 'Lewis', 'lewis@gmail.com', 'lewis123', '1231927234', '573 HS Road, Lucknow, Uttar Pradesh, India');

User Table Data Verification

```
SELECT * FROM User;
```

	UserID	Name	Email	Password	ContactNumber	Address
▶	1	Adel Mariam	adel.mariam@gmail.com	adelmariam123	1234567890	123 ABC Nagar, Chennai, Tamil Nadu, India
	2	Abel George	abel.george@gmail.com	abelgeorge123	9876543210	452 XYZ Street, Mumbai, Maharashtra, India
	3	Hemmasri	hemmasri@gmail.com	hemmasri123	5551234567	789 PQR Road, Kolkata, West Bengal, India
	4	Anindita Kannan	anindita.kannan@gmail.com	aninditakannan123	5559876543	321 LMN Colony, Bangalore, Karnataka, India
	5	Srujani	srujani@gmail.com	srujani123	9871234567	567 DEF Street, Hyderabad, Telangana, India
	6	Minu Fathima	minu.fathima@gmail.com	minufathima123	1239876543	890 GHI Nagar, Pune, Maharashtra, India
	7	Akash	akash@gmail.com	akash123	5555555555	234 JKL Street, Delhi, Delhi, India
	8	Ansilin George	ansilin.george@gmail.com	ansilingeorge123	5551234567	678 MNO Road, Chennai, Tamil Nadu, India
	9	Daisy	daisy@gmail.com	daisy123	9875554321	901 STU Colony, Mumbai, Maharashtra, India
	10	Tushar	tushar@gmail.com	tushar123	5559876543	123 UVW Street, Kolkata, West Bengal, India
	11	Antony Sujil	antonysujil@gmail.com	antonymsujil123	5555555555	456 XYZ Nagar, Bangalore, Karnataka, India
	12	Hiroshith	hiroshith@gmail.com	hiroshith123	1231231234	752 ABC Road, Hyderabad, Telangana, India
	13	Lewis	lewis@gmail.com	lewis123	1231927234	573 HS Road, Lucknow, Uttar Pradesh, India

CourierServices Table Creation

```
● ⓧ CREATE TABLE CourierServices (
    ServiceID INT PRIMARY KEY,
    ServiceName VARCHAR(100),
    Cost DECIMAL(8 , 2 )
);
```

CourierServices Table Data Population

```
-- Insertion of data into the CourierServices table
INSERT INTO CourierServices (ServiceID, ServiceName, Cost) VALUES
(1, 'Standard', 20.00),
(2, 'Express', 35.50),
(3, 'Same-Day', 50.75),
(4, 'Overnight', 45.25),
(5, 'International', 100.75);
```

CourierServices Table Data Verification

```
SELECT * FROM CourierServices;
```

	ServiceID	ServiceName	Cost
▶	1	Standard	20.00
	2	Express	35.50
	3	Same-Day	50.75
	4	Overnight	45.25
	5	International	100.75
*	NULL	NULL	NULL

Employee Table Creation

```
● CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY,
    Name VARCHAR(255),
    Email VARCHAR(255) UNIQUE,
    ContactNumber VARCHAR(20),
    Role VARCHAR(50),
    Salary DECIMAL(10 , 2 )
);
```

Employee Table Data Population

```
INSERT INTO Employee VALUES
(1, 'Harry Styles', 'harry@gmail.com', '123-456-7890', 'Manager', 50000.00),
(2, 'Taylor Swift', 'taylor@gmail.com', '987-654-3210', 'Sales Associate', 35000.00),
(3, 'John Legend', 'john.legend@gmail.com', '555-123-4567', 'Sales Associate', 35000.00),
(4, 'Louis Tomlinson', 'louis@gmail.com', '555-987-6543', 'Customer Service Representative', 30000.00),
(5, 'Zayn Malik', 'zayn@gmail.com', '888-555-4321', 'Customer Service Representative', 30000.00),
(6, 'Liam Payne', 'liam@gmail.com', '555-555-5555', 'Courier Agent', 32000.00),
(7, 'Niall Horan', 'niall@gmail.com', '555-123-1234', 'Courier Agent', 32000.00),
(8, 'Justin Beiber', 'justin@gmail.com', '555-303-0303', 'Courier Agent', 32000.00),
(9, 'Miley Cyrus', 'miley@gmail.com', '555-404-0404', 'Courier Agent', 32000.00),
(10, 'Ariana Grande', 'ariana@gmail.com', '555-505-0505', 'Courier Agent', 32000.00),
(11, 'John Mayer', 'mayer@gmail.com', '555-606-0606', 'Courier Agent', 32000.00),
(12, 'John Rai', 'rai@gmail.com', '555-707-0707', 'Courier Agent', 32000.00),
(13, 'Abraham John', 'abraham.john@gmail.com', '555-456-7890', 'Warehouse Associate', 28000.00),
(14, 'Mahendra Singh Dhoni', 'dhoni@gmail.com', '545-545-4444', 'Warehouse Associate', 20000.00),
(15, 'Virat Kohli', 'kohli@gmail.com', '555-666-6666', 'Warehouse Associate', 20000.00),
(16, 'Faf du Plessis', 'faf@gmail.com', '555-777-7777', 'Warehouse Associate', 20000.00);
```

Employee Table Data Verification

```
SELECT * FROM Employee;
```

	EmployeeID	Name	Email	ContactNumber	Role	Salary
▶	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00
	3	John Legend	john.legend@gmail.com	555-123-4567	Sales Associate	35000.00
	4	Louis Tomlinson	louis@gmail.com	555-987-6543	Customer Service Representative	30000.00
	5	Zayn Malik	zayn@gmail.com	888-555-4321	Customer Service Representative	30000.00
	6	Liam Payne	liam@gmail.com	555-555-5555	Courier Agent	32000.00
	7	Niall Horan	niall@gmail.com	555-123-1234	Courier Agent	32000.00
	8	Justin Beiber	justin@gmail.com	555-303-0303	Courier Agent	32000.00
	9	Miley Cyrus	miley@gmail.com	555-404-0404	Courier Agent	32000.00
	10	Ariana Grande	ariana@gmail.com	555-505-0505	Courier Agent	32000.00
	11	John Mayer	mayer@gmail.com	555-606-0606	Courier Agent	32000.00
	12	John Rai	rai@gmail.com	555-707-0707	Courier Agent	32000.00
	13	Abraham John	abraham.john@gmail.c...	555-456-7890	Warehouse Associate	28000.00
	14	Mahendra Sing...	dhoni@gmail.com	545-545-4444	Warehouse Associate	20000.00
	15	Virat Kohli	kohli@gmail.com	555-666-6666	Warehouse Associate	20000.00
	16	Faf du Plessis	faf@gmail.com	555-777-7777	Warehouse Associate	20000.00

Location Table Creation

```
• CREATE TABLE Location (
    LocationID INT PRIMARY KEY,
    LocationName VARCHAR(100),
    Address TEXT
);
```

Location Table Data Population

```
• INSERT INTO Location VALUES
    (1, 'Chennai, Tamil Nadu', '383 CTN Street, Chennai, Tamil Nadu, India'),
    (2, 'Mumbai, Maharashtra', '537 MM Road, Mumbai, Maharashtra, India'),
    (3, 'Kolkata, West Bengal', '246 KWB Avenue, Kolkata, West Bengal, India'),
    (4, 'Bangalore, Karnataka', '376 BKK Street, Bangalore, Karnataka, India'),
    (5, 'Hyderabad, Telangana', '873 HTT Lane, Hyderabad, Telangana, India'),
    (6, 'Pune, Maharashtra', '209 PMM Boulevard, Pune, Maharashtra, India'),
    (7, 'Delhi, Delhi', '2567 DDD Circle, Delhi, Delhi, India'),
    (8, 'Lucknow, Uttar Pradesh', '789 Sunrise Road, Lucknow, Uttar Pradesh, India');
```

Location Table Data Verification

	LocationID	LocationName	Address
▶	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India
	2	Mumbai, Maharashtra	537 MM Road, Mumbai, Maharashtra, India
	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India
	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India
	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India
	6	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India
	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India
	8	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India

Payment Table Creation

```
• CREATE TABLE Payment (
    PaymentID INT PRIMARY KEY,
    CourierID INT,
    LocationId INT,
    Amount DECIMAL(10 , 2 ),
    PaymentDate DATE,
    FOREIGN KEY (CourierID)
        REFERENCES Courier (CourierID),
    FOREIGN KEY (LocationID)
        REFERENCES Location (LocationID)
);
```

Payment Table Data Population

```
INSERT INTO Payment VALUES
(1,1,1,30.00,'2024-04-10'),
(2,2,2,101.50,'2024-04-16'),
(3,3,3,126.70,'2024-04-15'),
(4,4,4,60.90,'2024-04-15'),
(5,5,5,130.00,'2024-04-17'),
(6,6,1,46.00,'2024-04-14'),
(7,7,7,70.00,'2024-04-20'),
(8,8,1,140.00,'2024-04-24'),
(9,9,2,74.55,'2024-04-22'),
(10,10,3,56.80,'2024-04-22'),
(11,11,1,44.00,'2024-04-19'),
(12,12,3,70.00,'2024-04-25'),
(13,13,4,66.00,'2024-04-10'),
(14,14,5,141.00,'2024-04-09'),
(15,15,6,131.23,'2024-04-14'),
(16,16,6,82,'2024-04-14'),
(17,17,8,82,'2024-04-13');
```

Payment Table Data Verification

	PaymentID	CourierID	LocationID	Amount	PaymentDate
▶	1	1	1	30.00	2024-04-10
	2	2	2	101.50	2024-04-16
	3	3	3	126.70	2024-04-15
	4	4	4	60.90	2024-04-15
	5	5	5	130.00	2024-04-17
	6	6	1	46.00	2024-04-14
	7	7	7	70.00	2024-04-20
	8	8	1	140.00	2024-04-24
	9	9	2	74.55	2024-04-22
	10	10	3	56.80	2024-04-22
	11	11	1	44.00	2024-04-19
	12	12	3	70.00	2024-04-25
	13	13	4	66.00	2024-04-10
	14	14	5	141.00	2024-04-09
	15	15	6	131.23	2024-04-14
	16	16	6	82.00	2024-04-14
	17	17	8	82.00	2024-04-13

Courier Table Creation

```
CREATE TABLE Courier (
    CourierID INT PRIMARY KEY,
    CustomerID INT,
    SenderName VARCHAR(255),
    SenderAddress TEXT,
    ReceiverName VARCHAR(255),
    ReceiverAddress TEXT,
    Weight DECIMAL(5 , 2 ),
    Status VARCHAR(50),
    TrackingNumber VARCHAR(20) UNIQUE,
    DeliveryDate DATE,
    ServiceID INT,
    EmployeeID INT,
    FOREIGN KEY (CustomerID)
        REFERENCES User (UserID),
    FOREIGN KEY (EmployeeID)
        REFERENCES Employee (EmployeeID),
    FOREIGN KEY (ServiceID)
        REFERENCES CourierServices (ServiceID)
);
```

Courier Table Data Population

CourierID	CustomerID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	EmployeeID
1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	1	6
2	2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	3	7
3	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	4	8
4	4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	3	9
5	5	Srujani	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	2	10
6	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	1	11
7	7	Akash	234 JK Street, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	2	1
8	8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	3	9
9	9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	2	12
10	10	Tushar	273 UWV Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	2	8
11	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	1	11
12	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	2	7
13	11	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJ8927692	2024-04-15	1	9
14	12	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	3	8
15	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	4	11
16	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	4	11
17	13	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OUD923279	2024-04-15	4	11

Courier Table Data Verification

```
SELECT * FROM Courier;
```

CourierID	CustomerID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	EmployeeID
1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	1	6
2	2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	3	7
3	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	4	8
4	4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	3	9
5	5	Srujani	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	2	10
6	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	1	11
7	7	Akash	234 JK Street, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	2	1
8	8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	3	9
9	9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	2	12
10	10	Tushar	273 UWV Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	2	8
11	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	1	11
12	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	2	7
13	11	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJ8927692	2024-04-15	1	9
14	12	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	3	8
15	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	4	11
16	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	4	11
17	12	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OUD923279	2024-04-15	4	11

INTERACTING WITH DATABASE : QUERY ILLUSTRATIONS BASED ON DATABASE SETUP

- List all customers

```
SELECT DISTINCT
    SenderName AS CUSTOMERS
FROM
    courier;
```

Output

CUSTOMERS
Adel Mariam
Abel George
Hemmasri
Anindita Kannan
Srujani
Akash
Ansilin George
Daisy
Tushar
Antony Sujil
Hiroshith
Minu Fathima
Lewis

2. List all orders for a specific customer

```
SELECT
    c.CourierID,
    c(SenderName AS Customer,
    c(SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    p.Amount AS TotalPaid
FROM
    courier c
    JOIN
        courierservices cs ON c.ServiceID = cs.ServiceID
    JOIN
        payment p ON c.CourierID = p.CourierID
WHERE
    c(SenderName = 'Adel Mariam';
```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	ServiceName	TotalPaid
1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	In Transit	ABC123456	2024-04-15	Standard	30.00
6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	Delivered	PQR123456	2024-04-20	Standard	46.00
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	In Transit	CDE901234	2024-04-24	Standard	44.00

3. List all couriers

```
SELECT
    c.CourierID,
    c(SenderName AS Customer,
    c(SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
    JOIN
        courierservices cs ON c.ServiceID = cs.ServiceID
    JOIN
        employee e ON c.EmployeeID = e.EmployeeID
    JOIN
        payment p ON c.CourierID = p.CourierID;
```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName
1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	Standard	Liam Payne
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	Same-Day	Niall Horan
3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	Oversight	Justin Bieber
4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	Same-Day	Miley Cyrus
5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	Express	Ariana Grande
6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	Standard	John Mayer
7	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	Express	Harry Styles
8	Anslin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	Same-Day	Miley Cyrus
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	John Rai
10	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	Express	Justin Bieber
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John Mayer
12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneedia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	Express	Niall Horan
13	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJB297692	2024-04-15	Standard	Miley Cyrus
14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	Same-Day	Justin Bieber
15	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	Oversight	John Mayer
16	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	Oversight	John Mayer
17	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	oud923279	2024-04-15	Oversight	John Mayer

4. List all packages for a specific order

```

SELECT
    c.CourierID,
    c.CustomerID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE

```

Output

CourierID	CustomerID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName
1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	Standard	Liam Payne
6	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	Standard	John Mayer
11	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John Mayer

5. List all deliveries for a specific courier:

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.Cost AS CostPerKg,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    cs.ServiceID = 3;

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	CostPerKg	ServiceName	EmployeeName
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	50.75	Same-Day	Niall H
4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	50.75	Same-Day	Miley C
8	Anslin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	50.75	Same-Day	Miley C
14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	50.75	Same-Day	Justin

6. List all undelivered packages

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    c.Status != 'Delivered';

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName	TotalPaid
1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	Standard	Liam Payne	30
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	Same-Day	Niall Horan	10
3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	Oversight	Justin Bieber	12
4	Anindita Karan	321 LMN Colony, Bangalore, Karnataka, India	Sharen Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	Same-Day	Miley Cyrus	60
7	Akash	234 IJK Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	Express	Harry Styles	70
8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	WVX901234	2024-04-24	Same-Day	Miley Cyrus	15
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	John Rai	7
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John Mayer	40
12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneeca Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	Express	Niall Horan	70

7. List all packages that are scheduled for delivery today

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    c.DeliveryDate = '2024-04-24';

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName	TotalPaid
8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	WVX901234	2024-04-24	Same-Day	Miley Cyrus	15
10	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	Express	Justin Bieber	50
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John Mayer	40

8. List all packages with a specific status

```
SELECT
    c.CourierID,
    c.CustomerName AS Customer,
    c.CustomerAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
    JOIN
        courierservices cs ON c.ServiceID = cs.ServiceID
    JOIN
        employee e ON c.EmployeeID = e.EmployeeID
    JOIN
        payment p ON c.CourierID = p.CourierID
WHERE
    c.Status = 'pending';
```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName	TotalPaid
4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JL901234	2024-04-15	Same-Day	Miley Cyrus	60.90
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	John Rai	74.55

9. Calculate the total number of packages for each courier

```
SELECT
    cs.ServiceName, COUNT(c.ServiceID) AS TotalPackages
FROM
    CourierServices cs
LEFT JOIN
    courier c ON c.ServiceID = cs.ServiceID
GROUP BY
    cs.ServiceID, cs.ServiceName;
```

Output

	ServiceName	TotalPackages
▶	Standard	4
	Express	5
	Same-Day	4
	Overnight	4
	International	0

10. Find the average delivery time for each courier

```
SELECT
    c.CourierID,
    ROUND(DATEDIFF(c.DeliveryDate, p.PaymentDate)) AS AvgDeliveryTime
FROM
    courier c
    JOIN
        payment p ON c.CourierID = p.CourierID;
```

Output

	CourierID	AvgDeliveryTime
▶	1	5
	2	0
	3	2
	4	0
	5	2
	6	6
	7	1
	8	0
	9	1
	10	2
	11	5
	12	1
	13	5
	14	0
	15	1
	16	1
	17	2

Average delivery time for each courier service

```
SELECT
    cs.ServiceName,
    ROUND(AVG(DATEDIFF(c.DeliveryDate, p.PaymentDate))) AS AvgDeliveryTime
FROM
    courier c
    JOIN
        courierservices cs ON cs.ServiceID = c.ServiceID
    JOIN
        payment p ON p.CourierID = c.CourierID
GROUP BY cs.ServiceID;
```

Output

ServiceName	AvgDeliveryTime
Standard	5
Same-Day	0
Overnight	2
Express	1

11. List all packages with a specific weight range

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    c.Weight BETWEEN 2 AND 3;

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName	Total
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	Same-Day	Niall Horan	101.5
3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	Overnight	Justin Bieber	126.7
6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	Standard	John Mayer	46.00
8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	Same-Day	Miley Cyrus	140.0
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	John Rai	74.55
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John Mayer	44.00
15	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	Overnight	John Mayer	131.2

Number of packages with a specific weight range

```

SELECT
    COUNT(*)
FROM
    courier
WHERE
    Weight BETWEEN 2 AND 3;

```

Output

	COUNT(*)
▶	7

12. Retrieve employees whose names contain 'John'

```
SELECT
    Name
FROM
    employee
WHERE
    Name LIKE '%john%';
```

Output

	Name
▶	John Legend
	John Mayer
	John Rai
	Abraham John

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

```
SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    Courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    Employee e ON c.CourierID = e.EmployeeID
        JOIN
    payment p ON c.courierID = p.courierID
WHERE
    p.Amount > 50;
```

Output

	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	EmployeeName	TotalPaid
▶	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	Express	Ariana Grande	56.80
	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	Same-Day	Louis Tomlinson	60.90
	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJB297692	2024-04-15	Standard	Abraham John	66.00
	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	Express	Niall Horan	70.00
	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	Express	John Rai	70.00
	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	Miley Cyrus	74.55
	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	Oversight	Faf du Plessis	82.00
	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	Same-Day	Taylor Swift	101.50
	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GH13456789	2024-04-17	Oversight	John Legend	126.70
	Srujanii	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	Express	Zayn Malik	130.00
	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	Oversight	Virat Kohli	131.23
	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	WVX901234	2024-04-24	Same-Day	Justin Beiber	140.00
	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	Same-Day	Mahendra Sing...	141.00

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

```
SELECT
    e.Name, COUNT(*) AS NumberOfCouriers
FROM
    employee e
    JOIN
    courier c ON c.EmployeeID = e.EmployeeID
GROUP BY c.EmployeeID;
```

Output

	Name	NumberOfCouriers
▶	Harry Styles	1
	Liam Payne	1
	Niall Horan	2
	Justin Beiber	3
	Miley Cyrus	3
	Ariana Grande	1
	John Mayer	5
	John Rai	1

15. Calculate the total revenue generated by each location

```
SELECT
    l.LocationName, SUM(p.Amount) AS TotalRevenue
FROM
    location l
    JOIN
    payment p
ON
    p.LocationID = l.LocationID
GROUP BY l.LocationID;
```

Output

	LocationName	TotalRevenue
▶	Chennai, Tamil Nadu	260.00
	Mumbai, Maharashtra	176.05
	Kolkata, West Bengal	253.50
	Bangalore, Karnataka	126.90
	Hyderabad, Telangana	271.00
	Pune, Maharashtra	213.23
	Delhi, Delhi	70.00
	Lucknow, Uttar Pradesh	82.00

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

```
SELECT
    1.LocationName, COUNT(*) AS NumberOfCouriers
FROM
    Courier c
    JOIN
        Location l ON c.ReceiverAddress LIKE CONCAT('%', 1.LocationName, '%')
GROUP BY 1.LocationName;
```

Output

	LocationName	NumberOfCouriers
▶	Bangalore, Karnataka	2
	Kolkata, West Bengal	2
	Mumbai, Maharashtra	3
	Hyderabad, Telangana	3
	Delhi, Delhi	1
	Chennai, Tamil Nadu	3
	Pune, Maharashtra	1

17. Find the courier with the highest average delivery time

```
SELECT
    c.CourierID,
    ROUND(DATEDIFF(c.DeliveryDate, p.PaymentDate)) AS AvgDeliveryTime
FROM
    Courier c
    JOIN
        Payment p ON c.CourierID = p.CourierID
ORDER BY AvgDeliveryTime DESC
LIMIT 1;
```

Output

	CourierID	AvgDeliveryTime
▶	6	6

Courier service with the highest average delivery time:

```
SELECT
    cs.ServiceName,
    ROUND(AVG(DATEDIFF(c.DeliveryDate, p.PaymentDate))) AS AvgDeliveryTime
FROM
    courier c
        JOIN
    courierservices cs ON cs.ServiceID = c.ServiceID
        JOIN
    payment p ON p.CourierID = c.CourierID
GROUP BY cs.ServiceID
ORDER BY AvgDeliveryTime DESC
LIMIT 1;
```

Output

	ServiceName	AvgDeliveryTime
▶	Standard	5

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

```
SELECT
    l.LocationName, SUM(p.Amount) AS sum
FROM
    location l
        JOIN
    payment p ON p.LocationID = l.LocationID
GROUP BY l.LocationID
HAVING sum < 150;
```

Output

	LocationName	sum
▶	Bangalore, Karnataka	126.90
	Delhi, Delhi	70.00
	Lucknow, Uttar Pradesh	82.00

19. Calculate Total Payments per Location

```
select l.LocationName , count(*) as TotalPayments
from location l
join payment p on p.LocationID = l.LocationID
group by l.LocationName;
```

Output

	LocationName	TotalPayments
▶	Chennai, Tamil Nadu	4
	Mumbai, Maharashtra	2
	Kolkata, West Bengal	3
	Bangalore, Karnataka	2
	Hyderabad, Telangana	2
	Pune, Maharashtra	2
	Delhi, Delhi	1
	Lucknow, Uttar Pradesh	1

20. Retrieve couriers who have received payments totaling more than \$60 in a specific location (LocationID = X):

```
SELECT
    c.CourierID,
    c(SenderName AS Customer,
    c(SenderAddress AS CustomerAddress,
    c(ReceiverName,
    c(ReceiverAddress,
    c(Status,
    c(TrackingNumber,
    c(DeliveryDate,
    cs.ServiceName,
    p.Amount AS TotalPaid

FROM
    courier c
    JOIN
        courierservices cs ON c.ServiceID = cs.ServiceID
    JOIN
        payment p ON c.CourierID = p.CourierID
    JOIN
        location l ON c(SenderAddress LIKE CONCAT('%', l.LocationName, '%')
WHERE
    p.Amount > 60
    AND l.locationName = 'hyderabad, telangana';
```

Output

	CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	ServiceName	TotalPaid
▶	5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Ela Jean	620 MSO Road, Delhi, Delhi, India	Delivered	MNO567890	2024-04-19	Express	130.00
	14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	Delivered	JAB283929	2024-04-09	Same-Day	141.00

21. Retrieve couriers who have received payments totaling more than \$60 after a certain date (PaymentDate > 'YYYY-MM-DD'):

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    p.Amount AS TotalPaid
FROM
    courier c
        JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    p.Amount > 60 AND p.PaymentDate > '2024-04-20';

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	ServiceName	TotalPaid
8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	Out for Delivery	VWX901234	2024-04-24	Same-Day	140.00
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	Pending	YZA567890	2024-04-23	Express	74.55
12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	In Transit	XYZ567890	2024-04-26	Express	70.00

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

```

SELECT
    l.LocationID,
    l.LocationName,
    SUM(p.Amount) AS TotalAmountReceived
FROM
    location l
        JOIN
    courier c ON c.ReceiverAddress LIKE CONCAT('%', l.LocationName, '%')
        JOIN
    payment p ON c.CourierID = p.CourierID
WHERE
    p.PaymentDate > '2024-04-20'
GROUP BY
    l.LocationID
HAVING
    SUM(p.Amount) > 100;

```

Output

LocationID	LocationName	TotalAmountReceived
5	Hyderabad, Telangana	140.00

23. Retrieve Payments with Courier Information

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    p.Amount AS TotalPaid,
    p.PaymentDate
FROM
    payment p
        INNER JOIN
    courier c ON p.CourierID = c.CourierID;

```

Output

CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	TotalPaid	PaymentDate
1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	In Transit	ABC123456	2024-04-15	30.00	2024-04-10
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	In Transit	DEF789012	2024-04-16	101.50	2024-04-16
3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	Out for Delivery	GHI345678	2024-04-17	126.70	2024-04-15
4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	Pending	JKL901234	2024-04-15	60.90	2024-04-15
5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	Delivered	MNO567890	2024-04-19	130.00	2024-04-17
6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	Delivered	PQR123456	2024-04-20	46.00	2024-04-14
7	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	In Transit	STU789012	2024-04-21	70.00	2024-04-20
8	Ansilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	Out for Delivery	VWX901234	2024-04-24	140.00	2024-04-24
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	Pending	YZA567890	2024-04-23	74.55	2024-04-22
10	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	Delivered	ZAB123456	2024-04-24	56.80	2024-04-22
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	In Transit	CDE901234	2024-04-24	44.00	2024-04-19
12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneeka Thomas	729 GT Road, Kolkata, West Bengal, India	In Transit	XYZ567890	2024-04-26	70.00	2024-04-25
13	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	Delivered	TSJB297692	2024-04-15	66.00	2024-04-10
14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	Delivered	JAB283929	2024-04-09	141.00	2024-04-09
15	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	Delivered	IAS280307	2024-04-15	131.23	2024-04-14
16	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OINW019279	2024-04-15	82.00	2024-04-14
17	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OUD923279	2024-04-15	82.00	2024-04-13

24. Retrieve Payments with Location Information

```

SELECT
    p.PaymentID,
    p.CourierID,
    l.LocationName,
    l.Address AS StateOfficeAddress,
    p.Amount,
    p.PaymentDate
FROM
    payment p
        JOIN
    location l ON p.LocationID = l.LocationID
ORDER BY PaymentDate ASC;

```

Output

PaymentID	CourierID	LocationName	StateOfficeAddress	Amount	PaymentDate
14	14	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India	141.00	2024-04-09
1	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	30.00	2024-04-10
13	13	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India	66.00	2024-04-10
17	17	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India	82.00	2024-04-13
6	6	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	46.00	2024-04-14
15	15	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India	131.23	2024-04-14
16	16	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India	82.00	2024-04-14
3	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	126.70	2024-04-15
4	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India	60.90	2024-04-15
2	2	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India	101.50	2024-04-16
5	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India	130.00	2024-04-17
11	11	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	44.00	2024-04-19
7	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India	70.00	2024-04-20
9	9	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India	74.55	2024-04-22
10	10	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	56.80	2024-04-22
8	8	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	140.00	2024-04-24
12	12	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	70.00	2024-04-25

25. Retrieve Payments with Courier and Location Information

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    p.Amount AS TotalPaid,
    p.PaymentDate,
    l.LocationName,
    l.Address AS StateOfficeAddress
FROM
    Payment p
    INNER JOIN
    Courier c ON p.CourierID = c.CourierID
    INNER JOIN
    Location l ON p.LocationID = l.LocationID;

```

Output

D	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	TotalPaid	PaymentDate	LocationName
Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	In Transit	ABC123456	2024-04-15	30.00	2024-04-10	Chennai, Tamil Nadu	
Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	Delivered	PQR123456	2024-04-20	46.00	2024-04-14	Chennai, Tamil Nadu	
Anilin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	Out for Delivery	VWX901234	2024-04-24	140.00	2024-04-24	Chennai, Tamil Nadu	
Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	In Transit	CDE901234	2024-04-24	44.00	2024-04-19	Chennai, Tamil Nadu	
Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Barath Waj	983 MGR Road, Kolkata, West Bengal, India	In Transit	DEF789012	2024-04-16	101.50	2024-04-16	Mumbai, Maharashtra	
Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	Pending	YZA567890	2024-04-23	74.55	2024-04-22	Mumbai, Maharashtra	
Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekhnah	352 HGS Colony, Mumbai, Maharashtra, India	Out for Delivery	GH1345678	2024-04-17	126.70	2024-04-15	Kolkata, West Bengal	
Tushar	273 UIW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	Delivered	ZAB123456	2024-04-24	56.80	2024-04-22	Kolkata, West Bengal	
Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneeka Thomas	729 GT Road, Kolkata, West Bengal, India	In Transit	XYZ567890	2024-04-26	70.00	2024-04-25	Kolkata, West Bengal	
Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandan	914 XWP Road, Hyderabad, Telangana, India	Pending	JKL901234	2024-04-15	60.90	2024-04-15	Bangalore, Karnataka	
Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lara Del Ray	715 AM Street, Hyderabad, Telangana, India	Delivered	TSJ38297692	2024-04-15	66.00	2024-04-10	Bangalore, Karnataka	
Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	Delivered	MNO567890	2024-04-19	130.00	2024-04-17	Hyderabad, Telangana	
Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	Delivered	JAB283929	2024-04-09	141.00	2024-04-09	Hyderabad, Telangana	
Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	Delivered	IAS280307	2024-04-15	131.23	2024-04-14	Pune, Maharashtra	
Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OWN19279	2024-04-15	82.00	2024-04-14	Pune, Maharashtra	
Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	In Transit	STU789012	2024-04-21	70.00	2024-04-20	Delhi, Delhi	
Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OUD923279	2024-04-15	82.00	2024-04-13	Lucknow, Uttar Pradesh	

26. List all payments with courier details

```

SELECT
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    p.PaymentID,
    p.Amount AS TotalPaid,
    p.PaymentDate
FROM
    payment p
    INNER JOIN
    courier c ON p.CourierID = c.CourierID;

```

Output

	CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	PaymentID	TotalPaid	PaymentDate
▶	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQO Street, Bangalore, Karnataka, India	In Transit	ABC123456	2024-04-15	1	30.00	2024-04-10
2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	In Transit	DEF789012	2024-04-16	2	101.50	2024-04-16	
3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	Out for Delivery	GHI345678	2024-04-17	3	126.70	2024-04-15	
4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	Pending	JKL901234	2024-04-15	4	60.90	2024-04-15	
5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	Delivered	MNO567890	2024-04-19	5	130.00	2024-04-17	
6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	Delivered	PQR123456	2024-04-20	6	46.00	2024-04-14	
7	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KGD Road, Bangalore, Karnataka, India	In Transit	STU789012	2024-04-21	7	70.00	2024-04-20	
8	Anslin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	Out for Delivery	VWX901234	2024-04-24	8	140.00	2024-04-24	
9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCD Road, Pune, Maharashtra, India	Pending	YZA567890	2024-04-23	9	74.55	2024-04-22	
10	Tushar	273 UWV Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	Delivered	ZAB123456	2024-04-24	10	56.80	2024-04-22	
11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	In Transit	CDE901234	2024-04-24	11	44.00	2024-04-19	
12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Anecia Thomas	729 GT Road, Kolkata, West Bengal, India	In Transit	XYZ567890	2024-04-26	12	70.00	2024-04-25	
13	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	Delivered	TSJ6297692	2024-04-15	13	66.00	2024-04-10	
14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	Delivered	JAB283929	2024-04-09	14	141.00	2024-04-09	
15	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	Delivered	IAS280307	2024-04-15	15	131.23	2024-04-14	
16	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OWN019279	2024-04-15	16	82.00	2024-04-14	
17	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OUD923279	2024-04-15	17	82.00	2024-04-13	

27. Total payments received for each courier

```

SELECT
    c.CourierID,
    c.SenderName,
    SUM(p.Amount) AS TotalPaymentsReceived
FROM
    courier c
    LEFT JOIN
    payment p ON c.CourierID = p.CourierID
GROUP BY c.CourierID;

```

Output

	CourierID	SenderName	TotalPaymentsReceived
▶	1	Adel Mariam	30.00
	2	Abel George	101.50
	3	Hemmasri	126.70
	4	Anindita Kannan	60.90
	5	Srujani	130.00
	6	Adel Mariam	46.00
	7	Akash	70.00
	8	Ansilin George	140.00
	9	Daisy	74.55
	10	Tushar	56.80
	11	Adel Mariam	44.00
	12	Hemmasri	70.00
	13	Antony Sujil	66.00
	14	Hiroshith	141.00
	15	Minu Fathima	131.23
	16	Minu Fathima	82.00
	17	Lewis	82.00

28. List payments made on a specific date

```
SELECT
    c.CourierID,
    c.SenderName,
    p.PaymentID,
    p.Amount,
    p.PaymentDate
FROM
    Courier c
    INNER JOIN
        payment p ON c.CourierID = p.CourierID
WHERE
    p.PaymentDate = '2024-04-15';
```

Output

	CourierID	SenderName	PaymentID	Amount	PaymentDate
▶	3	Hemmasri	3	126.70	2024-04-15
	4	Anindita Kannan	4	60.90	2024-04-15

29. Get Courier Information for Each Payment

```

SELECT
    p.PaymentID,
    c.CourierID,
    c.SenderName AS Customer,
    c.SenderAddress AS CustomerAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid,
    p.PaymentDate
FROM
    courier c
        INNER JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        INNER JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        INNER JOIN
    payment p ON c.CourierID = p.CourierID;

```

Output

	PaymentID	CourierID	Customer	CustomerAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	E
▶	1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	Standard	L
	2	2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF89012	2024-04-16	Same-Day	N
	3	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shelnah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	Overnight	Ju
	4	4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	Same-Day	Mi
	5	5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	Express	Ar
	6	6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	Standard	Jo
	7	7	Akash	234 JK Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU89012	2024-04-21	Express	Hz
	8	8	Anslin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	Same-Day	Mi
	9	9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	Jo
	10	10	Tushar	273 UWW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	Express	Ju
	11	11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	Jo
	12	12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Anecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	Express	Ni
	13	13	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJ8297692	2024-04-15	Standard	Mi
	14	14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB239929	2024-04-09	Same-Day	Ju
	15	15	Minu Fathima	890 GHT Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	Overnight	Jo
	16	16	Minu Fathima	890 GHT Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	Overnight	Jo
	17	17	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OUD923279	2024-04-15	Overnight	Jo

30. Get Payment Details with Location

```

SELECT
    p.PaymentID,
    p.CourierID,
    l.LocationName,
    l.Address AS StateOfficeAddress,
    p.Amount,
    p.PaymentDate
FROM
    payment p
        INNER JOIN
    location l ON p.LocationID = l.LocationID
ORDER BY PaymentDate ASC;

```

Output

	PaymentID	CourierID	LocationName	StateOfficeAddress	Amount	PaymentDate
▶	14	14	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India	141.00	2024-04-09
	1	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	30.00	2024-04-10
	13	13	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India	66.00	2024-04-10
	17	17	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India	82.00	2024-04-13
	6	6	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	46.00	2024-04-14
	15	15	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India	131.23	2024-04-14
	16	16	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India	82.00	2024-04-14
	3	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	126.70	2024-04-15
	4	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India	60.90	2024-04-15
	2	2	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India	101.50	2024-04-16
	5	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India	130.00	2024-04-17
	11	11	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	44.00	2024-04-19
	7	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India	70.00	2024-04-20
	9	9	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India	74.55	2024-04-22
	10	10	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	56.80	2024-04-22
	8	8	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	140.00	2024-04-24
	12	12	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	70.00	2024-04-25

31. Calculating Total Payments for Each Courier

```

SELECT
    c.CourierID, c.SenderName, SUM(p.Amount) as TotalPayments
FROM
    courier c
    LEFT JOIN
        payment p ON p.CourierID = c.CourierID
GROUP BY c.CourierID;
    
```

Output

	CourierID	SenderName	TotalPayments
▶	1	Adel Mariam	30.00
	2	Abel George	101.50
	3	Hemmasri	126.70
	4	Anindita Kannan	60.90
	5	Srujani	130.00
	6	Adel Mariam	46.00
	7	Akash	70.00
	8	Ansilin George	140.00
	9	Daisy	74.55
	10	Tushar	56.80
	11	Adel Mariam	44.00
	12	Hemmasri	70.00
	13	Antony Sujil	66.00
	14	Hiroshith	141.00
	15	Minu Fathima	131.23
	16	Minu Fathima	82.00
	17	Lewis	82.00

32. List Payments Within a Date Range

```

SELECT
    p.PaymentID,
    p.CourierID,
    c.SenderName,
    l.LocationName,
    l.Address AS StateOfficeAddress,
    p.Amount,
    p.PaymentDate
FROM
    payment p
        INNER JOIN
    location l ON p.LocationID = l.LocationID
        INNER JOIN
    courier c ON p.CourierID = c.CourierID
WHERE
    p.PaymentDate BETWEEN '2024-04-20' AND '2024-04-24'
ORDER BY p.PaymentDate ASC;

```

Output

	PaymentID	CourierID	SenderName	LocationName	StateOfficeAddress	Amount	PaymentDate
▶	7	7	Akash	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India	70.00	2024-04-20
	9	9	Daisy	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India	74.55	2024-04-22
	10	10	Tushar	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India	56.80	2024-04-22
	8	8	Ansilin George	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India	140.00	2024-04-24

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

```

SELECT
    u.UserID,
    u.Name,
    c.CourierID,
    c.SenderAddress AS UserAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    user u
        LEFT JOIN
    courier c ON u.UserID = c.CustomerID
        LEFT JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        LEFT JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        LEFT JOIN
    payment p ON c.CourierID = p.CourierID
UNION

```

```

SELECT
    u.UserID,
    u.Name,
    c.CourierID,
    c.SenderAddress AS UserAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceName,
    e.Name AS EmployeeName,
    p.Amount AS TotalPaid
FROM
    courier c
        RIGHT JOIN
    user u ON u.UserID = c.CustomerID
        RIGHT JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
        RIGHT JOIN
    employee e ON c.EmployeeID = e.EmployeeID
        RIGHT JOIN
    payment p ON c.CourierID = p.CourierID;

```

Output

	UserID	Name	CourierID	UserAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceName	Employee
▶	1	Adel Mariam	1	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	Standard	Liam Payr
	1	Adel Mariam	6	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	Standard	John May
	1	Adel Mariam	11	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	Standard	John May
	2	Abel George	2	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	Same-Day	Niall Hora
	3	Hemmasri	3	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GH13456789	2024-04-17	Overnight	Justin Bel
	3	Hemmasri	12	789 PQR Road, Kolkata, West Bengal, India	Anneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	Express	Niall Hora
	4	Anindita Kannan	4	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	Same-Day	Miley Cyr
	5	Srujan	5	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	Express	Ariana Gr
	6	Minu Fathima	15	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	Overnight	John May
	6	Minu Fathima	16	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	Overnight	John May
	7	Akash	7	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	Express	Harry Sty
	8	Ansilin George	8	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	Same-Day	Miley Cyr
	9	Daisy	9	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	Express	John Rai
	10	Tushar	10	273 UWV Street, Kolkata, West Bengal, India	Lloyd George X...	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	Express	Justin Bel
	11	Antony Sujil	13	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJB297692	2024-04-15	Standard	Miley Cyr
	12	Hiroshith	14	752 ABC Road, Hyderabad, Telangana, India	Sharul Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	Same-Day	Justin Bel
	12	Hiroshith	17	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OUD923279	2024-04-15	Overnight	John May
	13	Lewis	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

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

```

SELECT
    c.CourierID,
    c.SenderName AS CustomerName,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceID,
    cs.ServiceName
FROM
    courier c
        LEFT JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID
UNION SELECT
    c.CourierID,
    c.SenderName AS CustomerName,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceID,
    cs.ServiceName
FROM
    courier c
        RIGHT JOIN
    courierservices cs ON c.ServiceID = cs.ServiceID;

```

Output

	CourierID	CustomerName	ReceiverName	ReceiverAddress	Status	TrackingNumber	DeliveryDate	ServiceID	ServiceName
▶	1	Adel Mariam	Praveen	777 WQD Street, Bangalore, Karnataka, India	In Transit	ABC123456	2024-04-15	1	Standard
	2	Abel George	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	In Transit	DEF789012	2024-04-16	3	Same-Day
	3	Hemmasri	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	Out for Delivery	GHI345678	2024-04-17	4	Oversight
	4	Anindita Kannan	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	Pending	JKL901234	2024-04-15	3	Same-Day
	5	Srujani	Elsa Jean	620 MSO Road, Delhi, Delhi, India	Delivered	MNO567890	2024-04-19	2	Express
	6	Adel Mariam	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	Delivered	PQR123456	2024-04-20	1	Standard
	7	Akash	Prakash	134 KKR Road, Bangalore, Karnataka, India	In Transit	STU789012	2024-04-21	2	Express
	8	Ansilin George	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	Out for Delivery	VWX901234	2024-04-24	3	Same-Day
	9	Daisy	Srinivasan	819 RCB Road, Pune, Maharashtra, India	Pending	YZA567890	2024-04-23	2	Express
	10	Tushar	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	Delivered	ZAB123456	2024-04-24	2	Express
	11	Adel Mariam	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	In Transit	CDE901234	2024-04-24	1	Standard
	12	Hemmasri	Anecia Thomas	729 GT Road, Kolkata, West Bengal, India	In Transit	XYZ567890	2024-04-26	2	Express
	13	Antony Sujil	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	Delivered	TSJB297692	2024-04-15	1	Standard
	14	Hiroshith	Sharulik Khan	917 HAG Colony, Mumbai, Maharashtra, India	Delivered	JAB283929	2024-04-09	3	Same-Day
	15	Minu Fathima	David John	928 LAS Road, Chennai, Tamil Nadu, India	Delivered	IAS280307	2024-04-15	4	Oversight
	16	Minu Fathima	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OWN019279	2024-04-15	4	Oversight
	17	Lewis	Anna	234 Mountain View Lane, Uttar Pradesh, India	Delivered	OUD923279	2024-04-15	4	Oversight
	NULL	NULL	NULL	NULL	NULL	NULL	NULL	5	International

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

```

SELECT
    e.EmployeeID,
    e.Name AS EmployeeName,
    p.PaymentID,
    p.Amount AS PaymentAmount
FROM
    Employee e
        LEFT JOIN
    Courier c ON e.EmployeeID = c.EmployeeID
        LEFT JOIN
    Payment p ON c.CourierID = p.CourierID
UNION SELECT
    e.EmployeeID,
    e.Name AS EmployeeName,
    p.PaymentID,
    p.Amount AS PaymentAmount
FROM
    Payment p
        RIGHT JOIN
    Courier c ON p.CourierID = c.CourierID
        RIGHT JOIN
    Employee e ON e.EmployeeID = c.EmployeeID;

```

Output

	EmployeeID	EmployeeName	PaymentID	PaymentAmount
▶	1	Harry Styles	7	70.00
	2	Taylor Swift	NULL	NULL
	3	John Legend	NULL	NULL
	4	Louis Tomlinson	NULL	NULL
	5	Zayn Malik	NULL	NULL
	6	Liam Payne	1	30.00
	7	Niall Horan	2	101.50
	7	Niall Horan	12	70.00
	8	Justin Bieber	3	126.70
	8	Justin Bieber	10	56.80
	8	Justin Bieber	14	141.00
	9	Miley Cyrus	4	60.90
	9	Miley Cyrus	8	140.00
	9	Miley Cyrus	13	66.00
	10	Ariana Grande	5	130.00
	11	John Mayer	6	46.00
	11	John Mayer	11	44.00
	11	John Mayer	15	131.23
	11	John Mayer	16	82.00
	11	John Mayer	17	82.00
	12	John Rai	9	74.55
	13	Abraham John	NULL	NULL
	14	Mahendra Sing...	NULL	NULL
	15	Virat Kohli	NULL	NULL
	16	Faf du Plessis	NULL	NULL

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

```

SELECT
    u.UserID,
    u.Name AS UserName,
    u.Email AS UserEmail,
    cs.ServiceID,
    cs.ServiceName,
    cs.Cost
FROM
    user u
CROSS JOIN
    CourierServices cs;
  
```

Output

	UserID	UserName	UserEmail	ServiceID	ServiceName	Cost
▶	1	Adel Mariam	adel.mariam@gmail.com	5	International	100.75
	1	Adel Mariam	adel.mariam@gmail.com	4	Oversight	45.25
	1	Adel Mariam	adel.mariam@gmail.com	3	Same-Day	50.75
	1	Adel Mariam	adel.mariam@gmail.com	2	Express	35.50
	1	Adel Mariam	adel.mariam@gmail.com	1	Standard	20.00
	2	Abel George	abel.george@gmail.com	5	International	100.75
	2	Abel George	abel.george@gmail.com	4	Oversight	45.25
	2	Abel George	abel.george@gmail.com	3	Same-Day	50.75
	2	Abel George	abel.george@gmail.com	2	Express	35.50
	2	Abel George	abel.george@gmail.com	1	Standard	20.00
	3	Hemmasri	hemmasri@gmail.com	5	International	100.75
	3	Hemmasri	hemmasri@gmail.com	4	Oversight	45.25
	3	Hemmasri	hemmasri@gmail.com	3	Same-Day	50.75
	3	Hemmasri	hemmasri@gmail.com	2	Express	35.50
	3	Hemmasri	hemmasri@gmail.com	1	Standard	20.00
	4	Anindita Ka...	anindita.kannan@gmail...	5	International	100.75
	4	Anindita Ka...	anindita.kannan@gmail...	4	Oversight	45.25
	4	Anindita Ka...	anindita.kannan@gmail...	3	Same-Day	50.75
	4	Anindita Ka...	anindita.kannan@gmail...	2	Express	35.50
	4	Anindita Ka...	anindita.kannan@gmail...	1	Standard	20.00
	5	Srujani	srujani@gmail.com	5	International	100.75
	5	Srujani	srujani@gmail.com	4	Oversight	45.25
	5	Srujani	srujani@gmail.com	3	Same-Day	50.75
	5	Srujani	srujani@gmail.com	2	Express	35.50
	5	Srujani	srujani@gmail.com	1	Standard	20.00

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

```
SELECT
*
FROM
employee e
CROSS JOIN
location l;
```

Output

	EmployeeID	Name	Email	ContactNumber	Role	Salary	LocationID	LocationName	Address
▶	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	8	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	6	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	2	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India
	1	Harry Styles	harry@gmail.com	123-456-7890	Manager	50000.00	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	8	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	6	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	2	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India
	2	Taylor Swift	taylor@gmail.com	987-654-3210	Sales Associate	35000.00	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	8	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	7	Delhi, Delhi	2567 DDD Circle, Delhi, Delhi, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	6	Pune, Maharashtra	209 PMM Boulevard, Pune, Maharashtra, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	4	Bangalore, Karnataka	376 BKK Street, Bangalore, Karnataka, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	3	Kolkata, West Bengal	246 KWB Avenue, Kolkata, West Bengal, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	2	Mumbai, Maharashtra	537 MMM Road, Mumbai, Maharashtra, India
	3	John Legend	john.legend@gmail...	555-123-4567	Sales Associate	35000.00	1	Chennai, Tamil Nadu	383 CTN Street, Chennai, Tamil Nadu, India
	4	Louis Tomlin...	louis@gmail.com	555-987-6543	Customer Serv...	30000.00	8	Lucknow, Uttar Pradesh	789 Sunrise Road, Lucknow, Uttar Pradesh, India

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

```
SELECT
    c.CourierID,
    u.Name AS SenderName,
    u.Email AS SenderEmail,
    u.ContactNumber AS SenderContactNumber,
    u.Address AS SenderAddress
FROM
    Courier c
LEFT JOIN
    User u ON c.CustomerID = u.UserID;
```

Output

	CourierID	SenderName	SenderEmail	SenderContactNumber	SenderAddress
▶	1	Adel Mariam	adel.mariam@gmail.com	1234567890	123 ABC Nagar, Chennai, Tamil Nadu, India
	6	Adel Mariam	adel.mariam@gmail.com	1234567890	123 ABC Nagar, Chennai, Tamil Nadu, India
	11	Adel Mariam	adel.mariam@gmail.com	1234567890	123 ABC Nagar, Chennai, Tamil Nadu, India
	2	Abel George	abel.george@gmail.com	9876543210	452 XYZ Street, Mumbai, Maharashtra, India
	3	Hemmasri	hemmasri@gmail.com	5551234567	789 PQR Road, Kolkata, West Bengal, India
	12	Hemmasri	hemmasri@gmail.com	5551234567	789 PQR Road, Kolkata, West Bengal, India
	4	Anindita Kannan	anindita.kannan@gmail.com	5559876543	321 LMN Colony, Bangalore, Karnataka, India
	5	Srujani	srujani@gmail.com	9871234567	567 DEF Street, Hyderabad, Telangana, India
	15	Minu Fathima	minu.fathima@gmail.com	1239876543	890 GHI Nagar, Pune, Maharashtra, India
	16	Minu Fathima	minu.fathima@gmail.com	1239876543	890 GHI Nagar, Pune, Maharashtra, India
	7	Akash	akash@gmail.com	5555555555	234 JKL Street, Delhi, Delhi, India
	8	Ansilin George	ansilin.george@gmail.com	5551234567	678 MNO Road, Chennai, Tamil Nadu, India
	9	Daisy	daisy@gmail.com	9875554321	901 STU Colony, Mumbai, Maharashtra, India
	10	Tushar	tushar@gmail.com	5559876543	123 UVW Street, Kolkata, West Bengal, India
	13	Antony Sujil	antony.sujil@gmail.com	5555555555	456 XYZ Nagar, Bangalore, Karnataka, India
	14	Hiroshith	hiroshith@gmail.com	1231231234	752 ABC Road, Hyderabad, Telangana, India
	17	Lewis	lewis@gmail.com	1231927234	573 HS Road, Lucknow, Uttar Pradesh, India

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

```
SELECT
    c.CourierID,
    c.ReceiverName,
    c.ReceiverAddress
FROM
    courier c;
-- OR
SELECT
    c1.CourierID,
    c1.ReceiverName,
    c1.ReceiverAddress
FROM
    Courier c1
LEFT JOIN
    Courier c2 ON c1.CourierID = c2.CourierID
WHERE
    c1.ReceiverName IS NOT NULL;
```

Output

	CourierID	ReceiverName	ReceiverAddress
►	1	Praveen	777 WQD Street, Bangalore, Karnataka, India
	2	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India
	3	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India
	4	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India
	5	Elsa Jean	620 MSO Road, Delhi, Delhi, India
	6	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India
	7	Prakash	134 KKR Road, Bangalore, Karnataka, India
	8	Cynthia	708 CSK Colony, Hyderabad, Telangana, India
	9	Srinivasan	819 RCB Road, Pune, Maharashtra, India
	10	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India
	11	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India
	12	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India
	13	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India
	14	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India
	15	David John	928 LAS Road, Chennai, Tamil Nadu, India
	16	Anna	234 Mountain View Lane, Uttar Pradesh, India
	17	Anna	234 Mountain View Lane, Uttar Pradesh, India

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

```

SELECT
    c.CourierID,
    c.SenderName,
    c.SenderAddress,
    c.ReceiverName,
    c.ReceiverAddress,
    c.Weight,
    c.Status,
    c.TrackingNumber,
    c.DeliveryDate,
    cs.ServiceID,
    cs.ServiceName,
    cs.Cost,
    p.Amount AS TotalCost
FROM
    Courier c
    INNER JOIN
    CourierServices cs ON c.ServiceID = cs.ServiceID
    INNER JOIN
    payment AS p ON c.CourierID = p.PaymentID;
  
```

Output

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	ServiceName	Cost	Total
►	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	1	Standard	20.00	30.0
	6	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	1	Standard	20.00	46.0
	11	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	1	Standard	20.00	44.0
	13	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJB297692	2024-04-15	1	Standard	20.00	66.0
	5	Srujan	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	2	Express	35.50	130.0
	7	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	2	Express	35.50	70.0
	9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	2	Express	35.50	74.5
	10	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	2	Express	35.50	56.8
	12	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XY2567890	2024-04-26	2	Express	35.50	70.0
	2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	3	Same-Day	50.75	101.0
	4	Anindita Ka...	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	3	Same-Day	50.75	60.9
	8	Anslin George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for ...	VWX901234	2024-04-24	3	Same-Day	50.75	140.0
	14	Hiroshith	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	3	Same-Day	50.75	141.0
	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for ...	GH1345678	2024-04-17	4	Overnight	45.25	126.0
	15	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	4	Overnight	45.25	131.0
	16	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWV019279	2024-04-15	4	Overnight	45.25	82.0
	17	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	ODU923279	2024-04-15	4	Overnight	45.25	82.0

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

```
SELECT
    e.EmployeeID, e.Name, COUNT(*) AS NumberOfCouriers
FROM
    Courier c
    INNER JOIN
        employee e ON c.EmployeeID = e.EmployeeID
GROUP BY c.EmployeeID;
```

Output

	EmployeeID	Name	NumberOfCouriers
▶	1	Harry Styles	1
	6	Liam Payne	1
	7	Niall Horan	2
	8	Justin Bieber	3
	9	Miley Cyrus	3
	10	Ariana Grande	1
	11	John Mayer	5
	12	John Rai	1

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

```
SELECT
    l.LocationName, SUM(p.Amount) AS TotalPaymentAmount
FROM
    location l
    INNER JOIN
        payment p ON p.LocationID = l.LocationID
GROUP BY l.LocationID;
```

Output

	LocationName	TotalPaymentAmount
▶	Chennai, Tamil Nadu	260.00
	Mumbai, Maharashtra	176.05
	Kolkata, West Bengal	253.50
	Bangalore, Karnataka	126.90
	Hyderabad, Telangana	271.00
	Pune, Maharashtra	213.23
	Delhi, Delhi	70.00
	Lucknow, Uttar Pradesh	82.00

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(*) > 1)
ORDER BY CustomerID ASC;

-- OR

SELECT DISTINCT
  c1.*
FROM
  Courier c1
  JOIN
  Courier c2 ON c1.SenderName = c2.SenderName
WHERE
  c1.CourierID != c2.CourierID
ORDER BY c1.CustomerID ASC;
```

Output

	CourierID	CustomerID	SenderId	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	EmployeeID
▶	11	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	1	11	
	6	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhineesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	1	11	
	1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	1	6	
	12	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Aneecia Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	2	7	
	3	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI345678	2024-04-17	4	8	
	16	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	4	11	
	15	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	4	11	

44. List all employees who share the same role.

```
SELECT DISTINCT
  e1.Name, e1.Role
FROM
  employee e1
  JOIN
  employee e2 ON e2.Role = e1.Role
WHERE
  e1.EmployeeID != e2.EmployeeID;
```

Output

	Name	Role
▶	John Legend	Sales Associate
	Taylor Swift	Sales Associate
	Zayn Malik	Customer Service Representative
	Louis Tomlinson	Customer Service Representative
	John Rai	Courier Agent
	John Mayer	Courier Agent
	Ariana Grande	Courier Agent
	Miley Cyrus	Courier Agent
	Justin Bieber	Courier Agent
	Niall Horan	Courier Agent
	Liam Payne	Courier Agent
	Faf du Plessis	Warehouse Associate
	Virat Kohli	Warehouse Associate
	Mahendra Sing...	Warehouse Associate
	Abraham John	Warehouse Associate

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

```

SELECT
    p.CourierID, p.Amount, p.PaymentDate, l.LocationName
FROM
    payment p
        INNER JOIN
    location l ON p.LocationID = l.LocationID
WHERE
    p.LocationID IN (SELECT
        p.LocationID
    FROM
        payment p
    GROUP BY p.LocationID
    HAVING COUNT(*) > 1);

```

Output

	CourierID	Amount	PaymentDate	LocationName
▶	1	30.00	2024-04-10	Chennai, Tamil Nadu
	6	46.00	2024-04-14	Chennai, Tamil Nadu
	8	140.00	2024-04-24	Chennai, Tamil Nadu
	11	44.00	2024-04-19	Chennai, Tamil Nadu
	2	101.50	2024-04-16	Mumbai, Maharashtra
	9	74.55	2024-04-22	Mumbai, Maharashtra
	3	126.70	2024-04-15	Kolkata, West Bengal
	10	56.80	2024-04-22	Kolkata, West Bengal
	12	70.00	2024-04-25	Kolkata, West Bengal
	4	60.90	2024-04-15	Bangalore, Karnataka
	13	66.00	2024-04-10	Bangalore, Karnataka
	5	130.00	2024-04-17	Hyderabad, Telangana
	14	141.00	2024-04-09	Hyderabad, Telangana
	15	131.23	2024-04-14	Pune, Maharashtra
	16	82.00	2024-04-14	Pune, Maharashtra

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

```
SELECT
    p.CourierID,
    c.SenderAddress,
    p.Amount,
    p.PaymentDate
FROM
    Payment p
JOIN
    Courier c ON p.CourierID = c.CourierID
JOIN
    Location l ON c.SenderAddress LIKE CONCAT('%', l.LocationName, '%')
WHERE
    l.LocationName IN (
        SELECT
            l.LocationName
        FROM
            Courier c
        JOIN
            Location l ON c.SenderAddress LIKE CONCAT('%', l.LocationName, '%')
        GROUP BY
            l.LocationName
        HAVING
            COUNT(*) > 1
    ) ORDER BY l.LocationName ASC;
```

Output

	CourierID	SenderAddress	Amount	PaymentDate
▶	4	321 LMN Colony, Bangalore, Karnataka, India	60.90	2024-04-15
	13	456 XYZ Nagar, Bangalore, Karnataka, India	66.00	2024-04-10
	1	123 ABC Nagar, Chennai, Tamil Nadu, India	30.00	2024-04-10
	6	123 ABC Nagar, Chennai, Tamil Nadu, India	46.00	2024-04-14
	8	678 MNO Road, Chennai, Tamil Nadu, India	140.00	2024-04-24
	11	123 ABC Nagar, Chennai, Tamil Nadu, India	44.00	2024-04-19
	5	567 DEF Street, Hyderabad, Telangana, India	130.00	2024-04-17
	14	752 ABC Road, Hyderabad, Telangana, India	141.00	2024-04-09
	3	789 PQR Road, Kolkata, West Bengal, India	126.70	2024-04-15
	10	273 UVW Street, Kolkata, West Bengal, India	56.80	2024-04-22
	12	789 PQR Road, Kolkata, West Bengal, India	70.00	2024-04-25
	2	452 XYZ Street, Mumbai, Maharashtra, India	101.50	2024-04-16
	9	901 STU Colony, Mumbai, Maharashtra, India	74.55	2024-04-22
	15	890 GHI Nagar, Pune, Maharashtra, India	131.23	2024-04-14
	16	890 GHI Nagar, Pune, Maharashtra, India	82.00	2024-04-14

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

```
SELECT
    E.EmployeeID, e.Name, COUNT(*) AS NumberOfCouriers
FROM
    employee e
    JOIN
        courier c ON c.EmployeeID = e.EmployeeID
GROUP BY c.EmployeeID;
```

Output

	EmployeeID	Name	NumberOfCouriers
▶	1	Harry Styles	1
	6	Liam Payne	1
	7	Niall Horan	2
	8	Justin Bieber	3
	9	Miley Cyrus	3
	10	Ariana Grande	1
	11	John Mayer	5
	12	John Rai	1

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

```

SELECT
    c.CourierID,
    c.ServiceID,
    cs.Cost AS ServiceCostPerKg,
    cs.Cost * c.Weight AS ActualAmount,
    p.Amount AS AmountPaid
FROM
    courier c
    INNER JOIN courierservices cs ON c.ServiceID = cs.ServiceID
    INNER JOIN payment p ON c.CourierID = p.CourierID
WHERE
    p.Amount > (cs.Cost * c.Weight);

```

Output

	CourierID	ServiceID	ServiceCostPerKg	ActualAmount	AmountPaid
▶	5	2	35.50	124.2500	130.00
	7	2	35.50	67.4500	70.00
	12	2	35.50	63.9000	70.00
	8	3	50.75	137.0250	140.00
	15	4	45.25	131.2250	131.23
	16	4	45.25	81.4500	82.00
	17	4	45.25	81.4500	82.00

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

```

SELECT
    CourierID,
    Weight,
    ROUND((SELECT AVG(Weight) FROM courier),2) AS AverageWeight
FROM
    courier
WHERE
    Weight > (SELECT AVG(Weight) FROM courier);

```

Output

	CourierID	Weight	AverageWeight
▶	3	2.80	2.26
	5	3.50	2.26
	6	2.30	2.26
	8	2.70	2.26
	13	3.30	2.26
	14	3.10	2.26
	15	2.90	2.26

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

```
SELECT
    Name,
    Salary,
    (SELECT ROUND(AVG(Salary)) FROM employee) AS AverageSalary
FROM
    employee
WHERE
    Salary > (SELECT AVG(Salary) FROM employee);
```

Output

	Name	Salary	AverageSalary
▶	Harry Styles	50000.00	30750
	Taylor Swift	35000.00	30750
	John Legend	35000.00	30750
	Liam Payne	32000.00	30750
	Niall Horan	32000.00	30750
	Justin Bieber	32000.00	30750
	Miley Cyrus	32000.00	30750
	Ariana Grande	32000.00	30750
	John Mayer	32000.00	30750
	John Rai	32000.00	30750

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

```
SELECT
    SUM(Cost) AS TotalCost
FROM
    CourierServices
WHERE
    Cost < (SELECT MAX(Cost) FROM CourierServices);
```

Output

	TotalCost
▶	151.50

52. Find all couriers that have been paid for

```
SELECT DISTINCT CourierID
FROM payment;

-- OR

SELECT *
FROM courier c
WHERE EXISTS (
    SELECT 1
    FROM payment p
    WHERE p.CourierID = c.CourierID
);
```

Output

	CourierID	CustomerID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	Em
▶	1	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Praveen	777 WQD Street, Bangalore, Karnataka, India	1.50	In Transit	ABC123456	2024-04-15	1	6
	2	2	Abel George	452 XYZ Street, Mumbai, Maharashtra, India	Bharath Waj	983 MGR Road, Kolkata, West Bengal, India	2.00	In Transit	DEF789012	2024-04-16	3	7
	3	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Daisy Shekinah	352 HGS Colony, Mumbai, Maharashtra, India	2.80	Out for Delivery	GHI12345678	2024-04-17	4	8
	4	4	Anindita Kannan	321 LMN Colony, Bangalore, Karnataka, India	Sharan Pandian	914 XWP Road, Hyderabad, Telangana, India	1.20	Pending	JKL901234	2024-04-15	3	9
	5	5	Srujani	567 DEF Street, Hyderabad, Telangana, India	Elsa Jean	620 MSO Road, Delhi, Delhi, India	3.50	Delivered	MNO567890	2024-04-19	2	10
	6	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Dhinesh Singh	562 VSD Road, Chennai, Tamil Nadu, India	2.30	Delivered	PQR123456	2024-04-20	1	11
	7	7	Akash	234 JKL Street, Delhi, Delhi, India	Prakash	134 KKR Road, Bangalore, Karnataka, India	1.90	In Transit	STU789012	2024-04-21	2	1
	8	8	Ansiln George	678 MNO Road, Chennai, Tamil Nadu, India	Cynthia	708 CSK Colony, Hyderabad, Telangana, India	2.70	Out for Delivery	VWX901234	2024-04-24	3	9
	9	9	Daisy	901 STU Colony, Mumbai, Maharashtra, India	Srinivasan	819 RCB Road, Pune, Maharashtra, India	2.10	Pending	YZA567890	2024-04-23	2	12
	10	10	Tushar	273 UVW Street, Kolkata, West Bengal, India	Lloyd George Xavier	382 DC Road, Mumbai, Maharashtra, India	1.60	Delivered	ZAB123456	2024-04-24	2	8
	11	1	Adel Mariam	123 ABC Nagar, Chennai, Tamil Nadu, India	Lydia Paul	510 RR Road, Chennai, Tamil Nadu, India	2.20	In Transit	CDE901234	2024-04-24	1	11
	12	3	Hemmasri	789 PQR Road, Kolkata, West Bengal, India	Anecca Thomas	729 GT Road, Kolkata, West Bengal, India	1.80	In Transit	XYZ567890	2024-04-26	2	7
	13	11	Antony Sujil	456 XYZ Nagar, Bangalore, Karnataka, India	Lana Del Ray	715 AM Street, Hyderabad, Telangana, India	3.30	Delivered	TSJ30297692	2024-04-15	1	9
	14	12	Hiroshithi	752 ABC Road, Hyderabad, Telangana, India	Sharukh Khan	917 HAG Colony, Mumbai, Maharashtra, India	3.10	Delivered	JAB283929	2024-04-09	3	8
	15	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	David John	928 LAS Road, Chennai, Tamil Nadu, India	2.90	Delivered	IAS280307	2024-04-15	4	11
	16	6	Minu Fathima	890 GHI Nagar, Pune, Maharashtra, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OWN019279	2024-04-15	4	11
	17	13	Lewis	573 HS Road, Lucknow, Uttar Pradesh, India	Anna	234 Mountain View Lane, Uttar Pradesh, India	1.80	Delivered	OID923279	2024-04-15	4	11

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

```
SELECT
    l.LocationID, l.LocationName, l.Address, p.Amount
FROM
    location l
    JOIN
        payment p ON p.LocationID = l.LocationID
WHERE
    p.Amount = (SELECT
        MAX(Amount)
    FROM
        payment);
```

Output

	LocationID	LocationName	Address	Amount
▶	5	Hyderabad, Telangana	873 HTT Lane, Hyderabad, Telangana, India	141.00

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

```
SELECT CourierID, Weight,
       (SELECT SUM(Weight)
        FROM courier
        WHERE SenderName = 'akash') AS TotalWeightBySender
    FROM courier
   WHERE Weight > (
       SELECT SUM(Weight)
        FROM courier
        WHERE SenderName = 'akash'
    );
```

Output

	CourierID	Weight	TotalWeightBySender
▶	2	2.00	1.90
	3	2.80	1.90
	5	3.50	1.90
	6	2.30	1.90
	8	2.70	1.90
	9	2.10	1.90
	11	2.20	1.90
	13	3.30	1.90
	14	3.10	1.90
	15	2.90	1.90

SUMMARY

SUMMARY OF SQL TASKS COVERED:

- Basic SELECT queries with WHERE clauses for specific data retrieval.
- Advanced SQL concepts such as grouping, aggregate functions, filtering with HAVING clauses, sorting with ORDER BY, and complex filtering conditions.
- Exploration of different join types including INNER JOIN, FULL OUTER JOIN, CROSS JOIN, LEFT OUTER JOIN, and RIGHT OUTER JOIN.
- Utilization of inner queries, equi joins, non equi Joins and EXISTS clauses for intricate data retrieval and filtering operations.

In conclusion, this document serves as a comprehensive guide to SQL querying within our database structure. It covers a wide range of SQL tasks, starting from basic searches for specific information within the database to more advanced operations like joining tables and conducting detailed data analysis.

This document is provided with step-by-step instructions and examples to help them navigate and execute SQL queries effectively. By breaking down SQL tasks into manageable sections, individuals have been equipped with the necessary skills to work confidently with databases, regardless of their level of experience.