

ASSIGNMENT 4

TASK 1: Database Creation

CREATING TABLES:

-- Create User table

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

-- Create Courier table

```
CREATE TABLE Courier (
    CourierID INT PRIMARY KEY,
    SenderName VARCHAR(255),
    SenderAddress TEXT,
    ReceiverName VARCHAR(255),
    ReceiverAddress TEXT,
    Weight DECIMAL(5, 2),
    Status VARCHAR(50),
    TrackingNumber VARCHAR(20) UNIQUE,
    DeliveryDate DATE
);
```

-- Create CourierServices table

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

-- Create Employee table

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

```

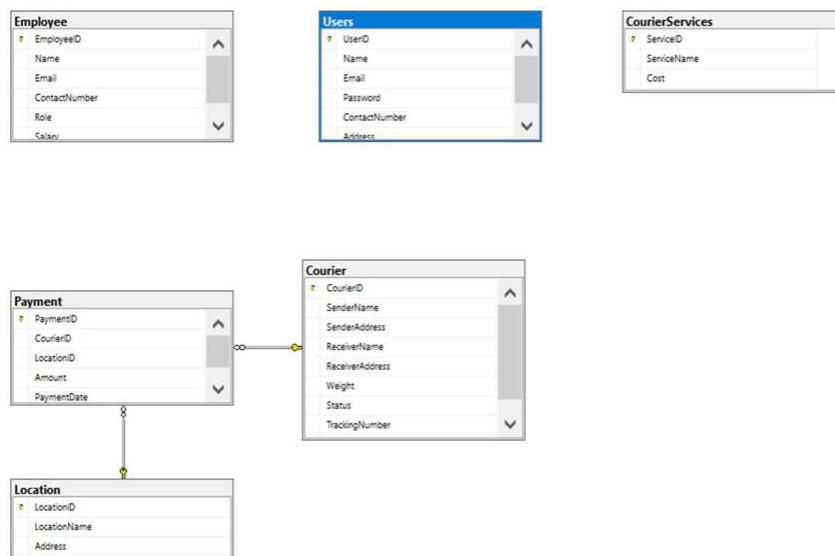
        Salary DECIMAL(10, 2)
    );

-- Create Location table
CREATE TABLE Location (
    LocationID INT PRIMARY KEY,
    LocationName
    VARCHAR(100), Address TEXT
);

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)
);

```

ENTITY REALTION DIAGRAM:



INSERTING SAMPLE RECORDS IN TO TABLES:

A. Users Table:

```

use CourierManagement

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

```

100 %

Messages

Commands completed successfully.

Completion time: 2023-12-08T18:56:00.9808851+05:30

B. Courier Table:

```
-- Create Courier table
CREATE TABLE Courier (
    CourierID INT PRIMARY KEY,
    SenderName VARCHAR(255),
    SenderAddress TEXT,
    ReceiverName VARCHAR(255),
    ReceiverAddress TEXT,
    Weight DECIMAL(5, 2),
    Status VARCHAR(50),
    TrackingNumber VARCHAR(20) UNIQUE,
    DeliveryDate DATE
);
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-12-08T18:58:28.0251916+05:30

C. CourierServices Table:

```
-- Create CourierServices table
CREATE TABLE CourierServices (
    ServiceID INT PRIMARY KEY,
    ServiceName VARCHAR(100),
    Cost DECIMAL(8, 2)
);

-- Create Employee table
CREATE TABLE Employee (
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-12-08T19:00:32.9576872+05:30

D. Employee Table:

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

-- Create Location table
CREATE TABLE Location (
```

100 %

Messages

Commands completed successfully.

Completion time: 2023-12-08T19:02:14.5042912+05:30

E. Location Table and Payment Table:

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

100 %
Messages
Commands completed successfully.
Completion time: 2023-12-08T19:03:59.8961176+05:30

TASK 2: Select, Where

1. List all customers:

```
select * from Users
```

100 %

Results Messages

	UserID	Name	Email	Password	ContactNumber	Address
1	1	Manideep	man@gmail.com	mr123	9734567890	123 hyd St
2	2	Shyam	sh@gmail.com	shy456	9876543210	456 wrngl St
3	3	Bobby	bob@gmail.com	bob789	8912223333	789 kdp Ave
4	4	Akhil	akh@gmail.com	akh456	9545556066	101 nz St
5	5	Pavan	pk@gmail.com	pk123	7278849909	202 ngkl St

2. List all orders for a specific customer:

```
select * from Courier where SenderName = 'messi'
```

100 %

Results Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL

3. List all courier:

```
select * from Courier
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
3	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
4	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

4. List all packages for a specific order:

```
SELECT * FROM Courier WHERE CourierID = 2;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL

5. List all deliveries of specific courier:

```
SELECT * FROM Courier WHERE CourierID = '3' ;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25

6. List all undelivered packages:

```
SELECT * FROM Courier WHERE Status <> 'Delivered';
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
3	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
4	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

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

```
SELECT * FROM Courier WHERE DeliveryDate = '2023-12-8';
```

100 %

Results Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
--	-----------	------------	---------------	--------------	-----------------	--------	--------	----------------	--------------

8. List all packages with a specific status:

```
SELECT * FROM Courier WHERE Status = 'Pending';
```

100 %

Results Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
2	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

9. Calculate total number of packages for each other:

```
SELECT CourierID, COUNT(*) AS TotalPackages FROM Courier GROUP BY CourierID;
```

100 %

Results Messages

	CourierID	TotalPackages
1	1	1
2	3	1
3	5	1
4	2	1
5	4	1

10. List all packages with a specific weight range:

```
SELECT * FROM Courier WHERE Weight BETWEEN '3.2' AND '7.4';
```

100 %

Results Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
2	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL

11. Retrieve employees whose names contain 'John':

```
SELECT * FROM Employee WHERE Name LIKE '%John%';
```

100 %

Results Messages

EmployeeID	Name	Email	ContactNumber	Role	Salary
------------	------	-------	---------------	------	--------

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

```
SELECT c.* FROM Courier c INNER JOIN Payment p ON c.CourierID = p.CourierID WHERE p.Amount > 50;
```

100 %

Results Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
3	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
4	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

TASK 3: Group by, Aggregate, Having, Order by, Where

13. Find total number of couriers handled by each employee.

```
SELECT EmployeeID, Name, COUNT(CourierID) AS TotalCouriersHandled  
FROM Employee  
LEFT JOIN Courier ON Employee.EmployeeID = Courier.CourierID  
GROUP BY Employee.EmployeeID, Employee.Name;
```

100 %

Results Messages

	EmployeeID	Name	TotalCouriersHandled
1	1	robert	1
2	2	Smith	1
3	3	kohli	1
4	4	sharma	1
5	5	ronaldo	1

14. Calculate total revenue generated by each location.

```
SELECT Location.LocationID, Location.LocationName, SUM(p.Amount) AS TotalRevenue
FROM Location
LEFT JOIN Payment p ON Location.LocationID = p.LocationID
GROUP BY Location.LocationID, Location.LocationName;
```

100 %

Results Messages

	LocationID	LocationName	TotalRevenue
1	1	Main Office	120.50
2	2	Branch Office 1	75.00
3	3	Warehouse	110.00
4	4	Branch Office 2	90.25
5	5	Distribution Center	80.75

15. Find total number of couriers delivered to each location.

```
SELECT L.LocationID, L.LocationName, COUNT(c.CourierID) AS TotalCouriersDelivered
FROM Location L
LEFT JOIN Payment P ON L.LocationID = P.LocationID
LEFT JOIN Courier c ON P.CourierID = c.CourierID
WHERE c.Status = 'Delivered'
GROUP BY L.LocationID, L.LocationName;
```

100 %

Results Messages

	LocationID	LocationName	TotalCouriersDelivered
1	1	Main Office	1

16. Find locations with total payments less than certain amount.

```
SELECT l.LocationID, l.LocationName, COALESCE(SUM(p.Amount), 0) AS TotalPayments
FROM Location l
LEFT JOIN Payment p ON l.LocationID = p.LocationID
GROUP BY l.LocationID, l.LocationName
HAVING COALESCE(SUM(p.Amount), 0) < 100;
```

100 %

Results Messages

	LocationID	LocationName	TotalPayments
1	2	Branch Office 1	75.00
2	4	Branch Office 2	90.25
3	5	Distribution Center	80.75

17. Calculate total payments per location.

```
SELECT Location.LocationID, Location.LocationName, COALESCE(SUM(Payment.Amount), 0) AS TotalPayments
FROM Location
LEFT JOIN Payment ON Location.LocationID = Payment.LocationID
GROUP BY Location.LocationID, Location.LocationName;
```

	LocationID	LocationName	TotalPayments
1	1	Main Office	120.50
2	2	Branch Office 1	75.00
3	3	Warehouse	110.00
4	4	Branch Office 2	90.25
5	5	Distribution Center	80.75

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

```
SELECT c.*
FROM Courier c
JOIN Payment p ON c.CourierID = p.CourierID
JOIN Location l ON p.LocationID = l.LocationID
WHERE p.Amount > 1000
AND l.LocationID = 4; -- Replace 'Specific_Location' with the desired location ID
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
-----------	------------	---------------	--------------	-----------------	--------	--------	----------------	--------------

19. Retrieve courier who have received payments totaling more than 1000\$ after a certain date.

```
SELECT c.* FROM Courier c
JOIN Payment p ON c.CourierID = p.CourierID
WHERE p.Amount > 1000 AND p.PaymentDate > '2000-1-10';
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
-----------	------------	---------------	--------------	-----------------	--------	--------	----------------	--------------

20. Retrieve locations where the total amount received is more than 5000\$ before a certain date.

```

SELECT l.LocationID, l.LocationName
FROM Location l
JOIN Payment p ON l.LocationID = p.LocationID
WHERE p.PaymentDate < '2023-6-6' -- Replace 'YYYY-MM-DD' with the specific date
GROUP BY l.LocationID, l.LocationName
HAVING SUM(p.Amount) > 5000;

```

100 %

Results Messages

LocationID	LocationName
------------	--------------

TASK 4: Inner join, Full outer join, Cross join, Left outer join, Right outer join

21. Retrieve Payments with Courier Information.

```

SELECT * FROM Payment
INNER JOIN Courier ON Payment.CourierID = Courier.CourierID;

```

100 %

Results Messages

	PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	1	2	75.00	2023-12-05	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	2	3	1	120.50	2023-12-08	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
3	3	2	4	90.25	2023-11-28	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
4	4	4	3	110.00	2023-12-01	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	5	5	5	80.75	2023-12-03	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

22. Retrieve payments with location information

```

SELECT *
FROM Payment p
INNER JOIN Location l ON p.LocationID = l.LocationID;

```

100 %

Results Messages

	PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationID	LocationName	Address
1	1	1	2	75.00	2023-12-05	2	Branch Office 1	456 Elm St, CityB, CountryB
2	2	3	1	120.50	2023-12-08	1	Main Office	123 Main St, CityA, CountryA
3	3	2	4	90.25	2023-11-28	4	Branch Office 2	101 Pine St, CityD, CountryD
4	4	4	3	110.00	2023-12-01	3	Warehouse	789 Oak Ave, CityC, CountryC
5	5	5	5	80.75	2023-12-03	5	Distribution Center	202 Cedar St, CityE, CountryE

23. Retrieve payments with courier and location information.

```
SELECT * FROM Payment
INNER JOIN Location ON Payment.LocationID = Location.LocationID
INNER JOIN Courier ON Payment.CourierID = Courier.CourierID
```

	PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationID	LocationName	Address	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress
1	1	1	2	75.00	2023-12-05	2	Branch Office 1	456 Elm St, CityB, CountryB	1	nithin	nizampet 42	araju	23 state st
2	2	3	1	120.50	2023-12-08	1	Main Office	123 Main St, CityA, CountryA	3	Johnson	lingampally 2	yamin	101 Pine St
3	3	2	4	90.25	2023-11-28	4	Branch Office 2	101 Pine St, CityD, CountryD	2	akash	kukatpally 23	cubarsi	28 city st
4	4	4	3	110.00	2023-12-01	3	Warehouse	789 Oak Ave, CityC, CountryC	4	messi	bachupally 40	yamal	202 kphb St
5	5	5	5	80.75	2023-12-03	5	Distribution Center	202 Cedar St, CityE, CountryE	5	pedri	ktr street 3	lamin	123 hu

24. List all payments with courier details.

```
SELECT *
FROM Payment p
INNER JOIN Courier c ON p.CourierID = c.CourierID
```

	PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	1	2	75.00	2023-12-05	1	nithin	nizampet 42	araju	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	2	3	1	120.50	2023-12-08	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
3	3	2	4	90.25	2023-11-28	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
4	4	4	3	110.00	2023-12-01	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	5	5	5	80.75	2023-12-03	5	pedri	ktr street 3	lamin	123 hu	10.00	Pending	TRK567990	NULL

25. 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, c.SenderName
```

	CourierID	SenderName	TotalPaymentsReceived
1	1	nithin	75.00
2	2	akash	90.25
3	3	Johnson	120.50
4	4	messi	110.00
5	5	pedri	80.75

26. List payments made on specific date.

```
SELECT * FROM Payment
WHERE PaymentDate = '2010-10-10';
```

100 %

Results Messages

PaymentID	CourierID	LocationID	Amount	PaymentDate
-----------	-----------	------------	--------	-------------

27. Get courier information for each payment.

```
SELECT PaymentID, PaymentDate, Amount, c.*
FROM Payment p
LEFT JOIN Courier c ON p.CourierID = c.CourierID;
```

100 %

Results Messages

PaymentID	PaymentDate	Amount	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	2023-12-05	75.00	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	2023-12-08	120.50	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
3	2023-11-28	90.25	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
4	2023-12-01	110.00	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	2023-12-03	80.75	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

28. Get payment details with location.

```
SELECT p.*, l.*
FROM Payment p
LEFT JOIN Location l ON p.LocationID = l.LocationID;
```

100 %

Results Messages

PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationID	LocationName	Address
1	1	2	75.00	2023-12-05	2	Branch Office 1	456 Elm St, CityB, CountryB
2	3	1	120.50	2023-12-08	1	Main Office	123 Main St, CityA, CountryA
3	2	4	90.25	2023-11-28	4	Branch Office 2	101 Pine St, CityD, CountryD
4	4	3	110.00	2023-12-01	3	Warehouse	789 Oak Ave, CityC, CountryC
5	5	5	80.75	2023-12-03	5	Distribution Center	202 Cedar St, CityE, CountryE

29. Calculating total payment for each courier.

```
SELECT c.CourierID, c.SenderName, SUM(p.Amount) AS TotalPayments
FROM Courier c
LEFT JOIN Payment p ON c.CourierID = p.CourierID
GROUP BY c.CourierID, c.SenderName;
```

	CourierID	SenderName	TotalPayments
1	1	nithin	75.00
2	2	akash	90.25
3	3	Johnson	120.50
4	4	messi	110.00
5	5	pedri	80.75

30. List payments within a date range.

```
SELECT * FROM Payment
WHERE PaymentDate BETWEEN '2018-1-10' AND '2023-12-6';
```

	PaymentID	CourierID	LocationID	Amount	PaymentDate
1	1	1	2	75.00	2023-12-05
2	3	2	4	90.25	2023-11-28
3	4	4	3	110.00	2023-12-01
4	5	5	5	80.75	2023-12-03

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

```
SELECT u.*, cs.*
FROM Users u
CROSS JOIN CourierServices cs;
```

	UserID	Name	Email	Password	ContactNumber	Address	ServiceID	ServiceName	Cost
7	2	Shyam	sh@gmail.com	shy456	9876543210	456 wrngl St	2	Express Delivery	15.75
8	3	Bobby	bob@gmail.com	bob789	8912223333	789 kdp Ave	2	Express Delivery	15.75
9	4	Akhil	akh@gmail.com	akh456	9545556066	101 nz St	2	Express Delivery	15.75
10	5	Pavan	pk@gmail.com	pk123	7278849909	202 ngkl St	2	Express Delivery	15.75
11	1	Manideep	man@gmail.com	mr123	9734567890	123 hyd St	3	Overnight Delivery	20.00
12	2	Shyam	sh@gmail.com	shy456	9876543210	456 wrngl St	3	Overnight Delivery	20.00
13	3	Bobby	bob@gmail.com	bob789	8912223333	789 kdp Ave	3	Overnight Delivery	20.00
14	4	Akhil	akh@gmail.com	akh456	9545556066	101 nz St	3	Overnight Delivery	20.00
15	5	Pavan	pk@gmail.com	pk123	7278849909	202 ngkl St	3	Overnight Delivery	20.00
16	1	Manideep	man@gmail.com	mr123	9734567890	123 hyd St	4	International De...	25.50
17	2	Shyam	sh@gmail.com	shy456	9876543210	456 wrngl St	4	International De...	25.50
18	3	Bobby	bob@gmail.com	bob789	8912223333	789 kdp Ave	4	International De...	25.50
19	4	Akhil	akh@gmail.com	akh456	9545556066	101 nz St	4	International De...	25.50
20	5	Pavan	pk@gmail.com	pk123	7278849909	202 ngkl St	4	International De...	25.50
21	1	Manideep	man@gmail.com	mr123	9734567890	123 hyd St	5	Same-Day Deliv...	30.00
22	2	Shyam	sh@gmail.com	shy456	9876543210	456 wrngl St	5	Same-Day Deliv...	30.00
23	3	Bobby	bob@gmail.com	bob789	8912223333	789 kdp Ave	5	Same-Day Deliv...	30.00
24	4	Akhil	akh@gmail.com	akh456	9545556066	101 nz St	5	Same-Day Deliv...	30.00
25	5	Pavan	pk@gmail.com	pk123	7278849909	202 ngkl St	5	Same-Day Deliv...	30.00

32. List all employees and all locations, showing all possible combinations.

```
SELECT e.*, l.*
FROM Employee e
CROSS JOIN Location l;
```

	EmployeeID	Name	Email	ContactNumber	Role	Salary	LocationID	LocationName	Address
1	1	robert	ro@gmail.com	9234567890	Manager	60000.00	1	Main Office	123 Main St, CityA, CountryA
2	2	Smith	sm@gmail.com	9876543210	Delivery Staff	40000.00	1	Main Office	123 Main St, CityA, CountryA
3	3	kohli	kh@gmail.com	8712223333	Customer Service	45000.00	1	Main Office	123 Main St, CityA, CountryA
4	4	sharma	sha@gmail.com	9545556666	Dispatcher	55000.00	1	Main Office	123 Main St, CityA, CountryA
5	5	ronaldo	rona@gmail.com	6308889999	Warehouse Staff	38000.00	1	Main Office	123 Main St, CityA, CountryA
6	1	robert	ro@gmail.com	9234567890	Manager	60000.00	2	Branch Office 1	456 Elm St, CityB, CountryB
7	2	Smith	sm@gmail.com	9876543210	Delivery Staff	40000.00	2	Branch Office 1	456 Elm St, CityB, CountryB
8	3	kohli	kh@gmail.com	8712223333	Customer Service	45000.00	2	Branch Office 1	456 Elm St, CityB, CountryB
9	4	sharma	sha@gmail.com	9545556666	Dispatcher	55000.00	2	Branch Office 1	456 Elm St, CityB, CountryB
10	5	ronaldo	rona@gmail.com	6308889999	Warehouse Staff	38000.00	2	Branch Office 1	456 Elm St, CityB, CountryB
11	1	robert	ro@gmail.com	9234567890	Manager	60000.00	3	Warehouse	789 Oak Ave, CityC, CountryC
12	2	Smith	sm@gmail.com	9876543210	Delivery Staff	40000.00	3	Warehouse	789 Oak Ave, CityC, CountryC
13	3	kohli	kh@gmail.com	8712223333	Customer Service	45000.00	3	Warehouse	789 Oak Ave, CityC, CountryC
14	4	sharma	sha@gmail.com	9545556666	Dispatcher	55000.00	3	Warehouse	789 Oak Ave, CityC, CountryC
15	5	ronaldo	rona@gmail.com	6308889999	Warehouse Staff	38000.00	3	Warehouse	789 Oak Ave, CityC, CountryC
16	1	robert	ro@gmail.com	9234567890	Manager	60000.00	4	Branch Office 2	101 Pine St, CityD, CountryD
17	2	Smith	sm@gmail.com	9876543210	Delivery Staff	40000.00	4	Branch Office 2	101 Pine St, CityD, CountryD
18	3	kohli	kh@gmail.com	8712223333	Customer Service	45000.00	4	Branch Office 2	101 Pine St, CityD, CountryD
19	4	sharma	sha@gmail.com	9545556666	Dispatcher	55000.00	4	Branch Office 2	101 Pine St, CityD, CountryD
20	5	ronaldo	rona@gmail.com	6308889999	Warehouse Staff	38000.00	4	Branch Office 2	101 Pine St, CityD, CountryD
21	1	robert	ro@gmail.com	9234567890	Manager	60000.00	5	Distribution C...	202 Cedar St, CityE, Countr...
22	2	Smith	sm@gmail.com	9876543210	Delivery Staff	40000.00	5	Distribution C...	202 Cedar St, CityE, Countr...
23	3	kohli	kh@gmail.com	8712223333	Customer Service	45000.00	5	Distribution C...	202 Cedar St, CityE, Countr...

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

```
select CourierID, SenderName, SenderAddress from Courier
```

	CourierID	SenderName	SenderAddress
1	1	nithin	nizampet 42
2	2	akash	kukatpally 23
3	3	Johnson	lingampally 2
4	4	messi	bachupally 40
5	5	pedri	ktr street 3

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

```
select CourierID, ReceiverName, ReceiverAddress from Courier
```

	CourierID	ReceiverName	ReceiverAddress
1	1	araujo	23 state st
2	2	cubarsi	28 city st
3	3	yamin	101 Pine St
4	4	yamal	202 kphb St
5	5	lamin	123 huda St

35. Retrieve a list of couriers along with the courier service details.

```
SELECT c.*, cs.*
FROM Courier c
INNER JOIN CourierServices cs ON c.CourierID = cs.ServiceID;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	ServiceName	Cost
1	1	nithin	nizampet 42	araju	23 state st	2.30	In Transit	TRK124056	2023-12-10	1	Standard Delivery	10.50
2	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL	2	Express Delivery	15.75
3	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25	3	Overnight Delivery	20.00
4	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL	4	International Delivery	25.50
5	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL	5	Same-Day Delivery	30.00

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

```
SELECT e.EmployeeID, e.Name AS EmployeeName, COUNT(c.CourierID) AS AssignedCouriers
FROM Employee e
LEFT JOIN Courier c ON e.EmployeeID = c.CourierID
GROUP BY e.EmployeeID, e.Name;
```

	EmployeeID	EmployeeName	AssignedCouriers
1	1	robert	1
2	2	Smith	1
3	3	kohli	1
4	4	sharma	1
5	5	ronaldo	1

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

```
SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPaymentAmount
FROM Location l
LEFT JOIN Payment p ON l.LocationID = p.LocationID
GROUP BY l.LocationID, l.LocationName;
```

	LocationID	LocationName	TotalPaymentAmount
1	1	Main Office	120.50
2	2	Branch Office 1	75.00
3	3	Warehouse	110.00
4	4	Branch Office 2	90.25
5	5	Distribution Center	80.75

38. Retrieve all couriers sent by the same sender.

```
SELECT c1.*
FROM Courier c1
JOIN Courier c2 ON c1.SenderName = c2.SenderName
WHERE c1.CourierID <> c2.CourierID
```

100 %

Results Messages

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
-----------	------------	---------------	--------------	-----------------	--------	--------	----------------	--------------

39. List all employees who share the same role.

```
SELECT Role, Name AS EmployeesWithSameRole
FROM Employee
GROUP BY Role, Name
HAVING COUNT(*) > 1;
```

100 %

Results Messages

Role	EmployeesWithSameRole
------	-----------------------

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

```
SELECT c1.*
FROM Courier c1
JOIN Courier c2 ON c1.SenderAddress LIKE CONCAT('%', c2.SenderAddress, '%')
WHERE c1.CourierID <> c2.CourierID;
```

100 %

Results Messages

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
-----------	------------	---------------	--------------	-----------------	--------	--------	----------------	--------------

SCOPE: Inner Queries, Non Equi Joins, Exist, Any, All

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

```
SELECT CourierID,Weight
FROM Courier
WHERE Weight > (SELECT AVG(Weight) FROM Courier);
```

100 %

Results Messages

	CourierID	Weight
1	2	8.20
2	4	6.30
3	5	10.00

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

```
SELECT Name
FROM Employee
WHERE Salary > (SELECT AVG(Salary) FROM Employee);
```

100 %

Results Messages

	Name
1	robert
2	sharma

43. 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);
```

100 %

Results Messages

	TotalCost
1	71.75

44. Find all couriers that have been paid for.

```
SELECT c.*
FROM Courier c
INNER JOIN Payment p ON c.CourierID = p.CourierID;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	1	nithin	nizampet 42	araujo	23 state st	2.30	In Transit	TRK124056	2023-12-10
2	3	Johnson	lingampally 2	yamin	101 Pine St	3.50	Delivered	TRK344678	2023-11-25
3	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
4	4	messi	bachupally 40	yamal	202 kphb St	6.30	In Transit	TRK911234	NULL
5	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL

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

```
SELECT l.*
FROM Location l
JOIN Payment p ON l.LocationID = p.LocationID
WHERE p.Amount = (SELECT MAX(Amount) FROM Payment);
```

	LocationID	LocationName	Address
1	1	Main Office	123 Main St, CityA, CountryA

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

```
SELECT * FROM Courier
WHERE Weight > (SELECT SUM(Weight) FROM Courier WHERE SenderName = 'messi');
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate
1	2	akash	kukatpally 23	cubarsi	28 city st	8.20	Pending	TRK780132	NULL
2	5	pedri	ktr street 3	lamin	123 huda St	10.00	Pending	TRK567990	NULL