SQL ASSIGNMENT

COURIER MANAGEMENT SYSTEM

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Task1: Database Design Design a SQL schema for a Courier Management System with tables for Customers, Couriers, Orders, and Parcels. Define the relationships between these tables using appropriate foreign keys.

```sql
use master

use dbCourierManagement;

drop table tblPayment;

drop table tblCourier;

drop table tblUser;

drop table tblCourierServices;

drop table tblEmployee;

drop table tblLocation;

create table tblUser(
UserID int primary key,
UserName varchar(255),
UserEmail varchar(255) unique,
UserPassword varchar (255),
UserContact varchar(20),
UserAddress text
);

create table tblCourierServices(
ServiceID int primary key,
ServiceName varchar(100),
ServiceCost decimal(8,2)
);

create table tblEmployee(
EmployeeID int primary key,
EmployeeName varchar(255),
EmployeeEmail varchar(255) unique,
EmployeeContact varchar(20),
EmployeeRole varchar(50),
EmployeeSalary decimal(10,2)
);

create table tblLocation(
LocationId int primary key,
```

```sql
LocationName varchar(100),
LocationAddress text
);

create table tblCourier(
CourierID int primary key,
SenderName varchar(25),
SenderAddress text,
ReceiverName varchar(25),
ReceiverAddress text,
CourierWeight decimal(5,2),
CourierStatus varchar(50),
TrackingNumber varchar(20),
DeliveryDate date,
UserID INT,
EmployeeID INT,
ServiceID INT,
LocationID INT,
constraint fk_courier_user foreign key (UserID) references tblUser(UserID),
constraint fk_courier_employee foreign key (EmployeeID) references
tblEmployee(EmployeeID),
constraint fk_courier_CourierService foreign key (ServiceID) references
tblCourierServices(ServiceID),
constraint fk_courier_location foreign key (LocationID) references
tblLocation(LocationID)
);


create table tblPayment(
PaymentID int primary key,
CourierID int,
locationID int,
EmployeeID int,
Amount decimal(10,2),
PaymentDate date,
constraint fk_payment_courier foreign key (CourierID) references
tblCourier(CourierID),
constraint fk_payment_location foreign key (LocationID) references
tblLocation(LocationID),
constraint fk_payment_employee foreign key (EmployeeID) references
tblEmployee(EmployeeID)
);




INSERT INTO tblUser VALUES
(1, 'Arun Kumar', 'arun.kumar@example.com', 'pass123', '9876543210', 'Chennai, Tamil
Nadu'),
(2, 'Priya Sharma', 'priya.sharma@example.com', 'secure456', '9898989898',
'Coimbatore, Tamil Nadu'),
(3, 'Dinesh Kumar', 'dinesh.k@example.com', 'password789', '9876512345', 'Madurai,
Tamil Nadu'),
(4, 'Sowmya R', 'sowmya.r@example.com', 'pass999', '9867543210', 'Trichy, Tamil
Nadu'),
(5, 'Vignesh B', 'vignesh.b@example.com', 'secure555', '9944556677', 'Salem, Tamil
Nadu'),
(6, 'Vikash', 'vikash2003@example.com','ToughPass35','9546595473','Madurai, Tamil
Nadu'),
(7, 'Prashanth','Prashanth03@example.com','PrashPass35','9876595472', 'Trichy, Tamil
Nadu'),
(8, 'Priya', 'Priya43@example.com','Priya678','9876595473','Salem, Tamil Nadu'),
(9, 'kaviya', 'kavi03@example.com','kaviya321','9812345473','Coimbatore, Tamil Nadu');
```
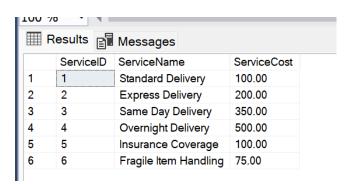
```sql
select * from tblUser;
```

	UserID	UserName	UserEmail	UserPassword	UserContact	UserAddress
1	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu
2	2	Priya Shar...	priya.sharma@example.c...	secure456	9898989898	Coimbatore, Tamil ...
3	3	Dinesh Ku...	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu
4	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu
5	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu
6	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu
7	7	Prashanth	Prashanth03@example.c...	PrashPass35	9876595472	Trichy, Tamil Nadu
8	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu
9	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil ...

```sql
INSERT INTO tblCourierServices VALUES
(1, 'Standard Delivery', 100.00),
(2, 'Express Delivery', 200.00),
(3, 'Same Day Delivery', 350.00),
(4, 'Overnight Delivery', 500.00),
(5, 'Insurance Coverage', 100.00),
(6, 'Fragile Item Handling', 75.00);


select * from tblCourierServices;
```

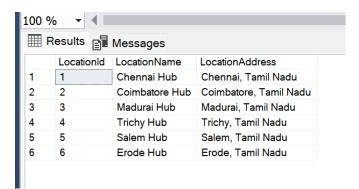|	ServiceID	ServiceName	ServiceCost
1	1	Standard Delivery	100.00
2	2	Express Delivery	200.00
3	3	Same Day Delivery	350.00
4	4	Overnight Delivery	500.00
5	5	Insurance Coverage	100.00
6	6	Fragile Item Handling	75.00

```sql
INSERT INTO tblEmployee VALUES
(1, 'Vikram R', 'vikram.r@example.com', '9876541230', 'Delivery Agent', 25000.00),
(2, 'Meena L', 'meena.l@example.com', '9845123456', 'Manager', 50000.00),
(3, 'Karthik S', 'karthik.s@example.com', '9785612345', 'Delivery Agent', 27000.00),
(4, 'Lavanya M', 'lavanya.m@example.com', '9823456789', 'Supervisor', 60000.00),
(5, 'Senthil K', 'senthil.k@example.com', '9798765432', 'Delivery Agent', 26000.00),
(6, 'John', 'JohnCena@example.com', '9798765431', 'Supervisor', 55000.00),
(7, 'Johnson', 'Johnson@example.com', '9798765430', 'Manager', 52000.00)


select * from tblEmployee
```

Results | Messages

	EmployeeID	EmployeeName	EmployeeEmail	EmployeeContact	EmployeeRole	EmployeeSalary
1	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00
2	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00
3	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00
4	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00
5	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00
6	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00
7	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00

```sql
INSERT INTO tblLocation VALUES
(1, 'Chennai Hub', 'Chennai, Tamil Nadu'),
(2, 'Coimbatore Hub', 'Coimbatore, Tamil Nadu'),
(3, 'Madurai Hub', 'Madurai, Tamil Nadu'),
(4, 'Trichy Hub', 'Trichy, Tamil Nadu'),
(5, 'Salem Hub', 'Salem, Tamil Nadu'),
(6, 'Erode Hub', 'Erode, Tamil Nadu');

select * from tblLocation;
```
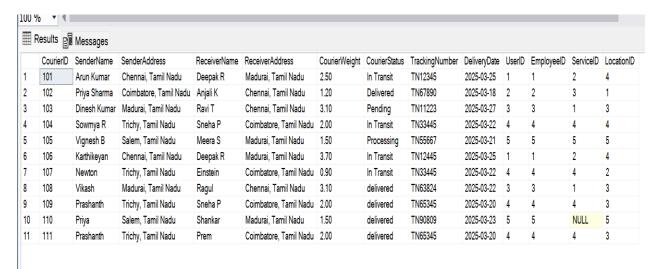
Results | Messages

	LocationId	LocationName	LocationAddress
1	1	Chennai Hub	Chennai, Tamil Nadu
2	2	Coimbatore Hub	Coimbatore, Tamil Nadu
3	3	Madurai Hub	Madurai, Tamil Nadu
4	4	Trichy Hub	Trichy, Tamil Nadu
5	5	Salem Hub	Salem, Tamil Nadu
6	6	Erode Hub	Erode, Tamil Nadu

```sql
INSERT INTO tblCourier VALUES
(101, 'Arun Kumar', 'Chennai, Tamil Nadu', 'Deepak R', 'Madurai, Tamil Nadu', 2.5, 'In
Transit', 'TN12345', '2025-03-25', 1, 1, 2, 4),
(102, 'Priya Sharma', 'Coimbatore, Tamil Nadu', 'Anjali K', 'Chennai, Tamil Nadu',
1.2, 'Delivered', 'TN67890', '2025-03-18', 2, 2, 3, 1),
(103, 'Dinesh Kumar', 'Madurai, Tamil Nadu', 'Ravi T', 'Chennai, Tamil Nadu', 3.1,
'Pending', 'TN11223', '2025-03-27', 3, 3, 1, 3),
(104, 'Sowmya R', 'Trichy, Tamil Nadu', 'Sneha P', 'Coimbatore, Tamil Nadu', 2.0, 'In
Transit', 'TN33445', '2025-03-22', 4, 4, 4, 4),
(105, 'Vignesh B', 'Salem, Tamil Nadu', 'Meera S', 'Madurai, Tamil Nadu', 1.5,
'Processing', 'TN55667', '2025-03-21', 5, 5, 5, 5),
(106, 'Karthikeyan', 'Chennai, Tamil Nadu', 'Deepak R', 'Madurai, Tamil Nadu', 3.7,
'In Transit', 'TN12445', '2025-03-25', 1, 1, 2, 4),
(107, 'Newton', 'Trichy, Tamil Nadu', 'Einstein', 'Coimbatore, Tamil Nadu', 0.9, 'In
Transit', 'TN33445', '2025-03-22', 4, 4, 4, 2),
(108, 'Vikash', 'Madurai, Tamil Nadu', 'Ragul', 'Chennai, Tamil Nadu', 3.1,
'delivered', 'TN63824', '2025-03-27', 3, 3, 1, 3),
(109, 'Prashanth', 'Trichy, Tamil Nadu', 'Sneha P', 'Coimbatore, Tamil Nadu', 2.0,
'delivered', 'TN65345', '2025-03-20', 4, 4, 4, 3),
(110, 'Priya', 'Salem, Tamil Nadu', 'Shankar', 'Madurai, Tamil Nadu',
1.5,'delivered','TN90809', '2025-03-19', 5, 5, 5, 5),
(111, 'Prashanth', 'Trichy, Tamil Nadu', 'Prem', 'Coimbatore, Tamil Nadu', 2.0,
'delivered', 'TN65345', '2025-03-20', 4, 4, 4, 3);
```
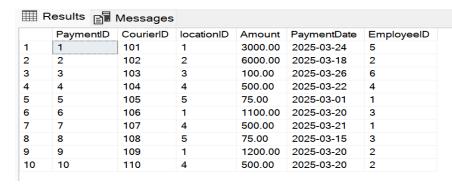
```sql
select *from tblCourier;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
5	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
6	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
7	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
8	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
9	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
10	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
11	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3

```sql
INSERT INTO tblPayment VALUES
(1, 101, 1, 200.00, '2025-03-24',5),
(2, 102, 2, 350.00, '2025-03-18',2),
(3, 103, 3, 100.00, '2025-03-26',6),
(4, 104, 4, 500.00, '2025-03-22',4),
(5, 105, 5, 75.00, '2025-03-28',1),
(6, 106, 1, 150.00, '2025-03-20',3),
(7, 107, 4, 500.00, '2025-03-21',1),
(8, 108, 5, 75.00, '2025-03-28',3),
(9, 109, 1, 150.00, '2025-03-20',2),
(10, 110, 4, 500.00, '2025-03-21',2);

select * from tblPayment;
```
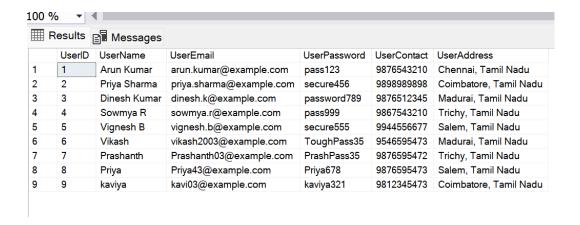
	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	1	101	1	3000.00	2025-03-24	5
2	2	102	2	6000.00	2025-03-18	2
3	3	103	3	100.00	2025-03-26	6
4	4	104	4	500.00	2025-03-22	4
5	5	105	5	75.00	2025-03-01	1
6	6	106	1	1100.00	2025-03-20	3
7	7	107	4	500.00	2025-03-21	1
8	8	108	5	75.00	2025-03-15	3
9	9	109	1	1200.00	2025-03-20	2
10	10	110	4	500.00	2025-03-20	2

Task 2: Select,Where

1. List all customers:

```sql
select * from tblUser;
```

Results 🔳 Messages

	UserID	UserName	UserEmail	UserPassword	UserContact	UserAddress
1	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu
2	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu
3	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu
4	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu
5	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu
6	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu
7	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu
8	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu
9	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu

2. List all orders for a specific customer:

```sql
select * from tblCourier
where UserID='3';
```

Results 🔳 Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
2	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3

3. List all couriers:

```sql
select * from tblCourier;
```

Results 🔳 Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
5	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
6	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
7	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
8	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
9	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
10	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
11	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3

4. List all packages for a specific order:

```sql
select * from tblCourier
where CourierID='104';
```
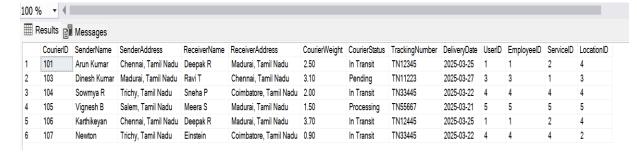
5. List all deliveries for a specific courier:

```
select * from tblCourier
where CourierID='101'
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress		CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50		In Transit	TN12345	2025-03-25	1	1	2	4

6. List all undelivered packages:

```
select * from tblCourier

where CourierStatus <> 'Delivered';
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
3	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
4	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
5	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
6	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2

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

```
select * from tblCourier

where DeliveryDate = CAST(GETDATE() AS DATE);
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5

8. List all packages with a specific status:

```
select * from tblCourier
where CourierStatus = 'in Transit';
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
4	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2

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

```
select CourierID, count(*) as 'Total Number of Packages' from tblCourier
group by CourierID;
```

	CourierID	Total Number of Packages
1	101	1
2	102	1
3	103	1
4	104	1
5	105	1
6	106	1
7	107	1
8	108	1
9	109	1
10	110	1
11	111	1

10. Find the average delivery time for each courier

```
select C.courierID,avg(DATEDIFF(DAY,P.PaymentDate,C.DeliveryDate)) as 'Average
Delivery Time' from tblCourier C
join tblPayment P on C.CourierID = P.CourierID
group by C.CourierID;
```

	courierID	Average Delivery Time
1	101	1
2	102	0
3	103	1
4	104	0
5	105	20
6	106	5
7	107	1
8	108	7
9	109	0
10	110	3

11. List all packages with a specific weight range:

```
select * from tblCourier
where CourierWeight between 2 and 3;
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
3	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
4	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3

12. Retrieve employees whose names contain 'John'

```
select * from tblEmployee
where EmployeeName like '%John%';
```

	EmployeeID	EmployeeName	EmployeeEmail	EmployeeContact	EmployeeRole	EmployeeSalary
1	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00
2	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00

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

```
select * from tblCourier C
join tblPayment P on C.CourierID = P.CourierID
where P.Amount > 50;
```

	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
3	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
4	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
5	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
6	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
7	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
8	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
9	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
10	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5

PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	101	1	3000.00	2025-03-24	5
2	102	2	6000.00	2025-03-18	2
3	103	3	100.00	2025-03-26	6
4	104	4	500.00	2025-03-22	4
5	105	5	75.00	2025-03-01	1
6	106	1	1100.00	2025-03-20	3
7	107	4	500.00	2025-03-21	1
8	108	5	75.00	2025-03-15	3
9	109	1	1200.00	2025-03-20	2
10	110	4	500.00	2025-03-20	2

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

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

```sql
select EmployeeID, count(CourierID) as 'Total number of Couriers Handled'
from tblCourier
group by EmployeeID;
```

Results | Messages

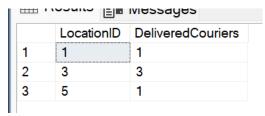|	EmployeeID	Total number of Couriers Handled
1	1	2
2	2	1
3	3	2
4	4	4
5	5	2

15. Calculate the total revenue generated by each location

```sql
select LocationID, sum(Amount) as 'Total Revenue' from tblPayment
group by LocationId;
```

	LocationID	Total Revenue
1	1	5300.00
2	2	6000.00
3	3	100.00
4	4	1500.00
5	5	150.00

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

```sql
SELECT LocationID, COUNT(CourierID) AS DeliveredCouriers FROM tblCourier
WHERE CourierStatus = 'Delivered' GROUP BY LocationID;
```

	LocationID	DeliveredCouriers
1	1	1
2	3	3
3	5	1

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

```sql
select top 1 C.CourierID, avg(DATEDIFF(day, P.PaymentDate, C.DeliveryDate)) as
'Average delivery time' from tblCourier C
join tblPayment P on C.CourierID = P.CourierID
group by C.CourierID
Order by 'Average delivery time' desc
```

	CourierID	Average delivery time
1	105	20

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

```sql
select LocationID, sum(Amount) as 'Total Payments' from tblPayment
group by LocationID
having sum(Amount)<250;
```

	LocationID	Total Payments
1	3	100.00
2	5	150.00

19. Calculate Total Payments per Location

```sql
select LocationID, sum(Amount) as 'Total Payments'
from tblPayment
group by LocationID
```

	LocationID	Total Payments
1	1	5300.00
2	2	6000.00
3	3	100.00
4	4	1500.00
5	5	150.00

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

```sql
select * from tblCourier C
join (
select CourierID,sum(Amount) as 'Total Payment' from tblPayment
where LocationID = 1
group by CourierID
having sum(Amount)>1000
) P on C.CourierID = P.CourierID;
```

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

```
select * from tblCourier
where CourierID in(
select CourierID from tblPayment
where PaymentDate > '2025-03-19'
group by CourierID
having sum(Amount)>1000
)
```


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

```
select * from tblLocation
where LocationId in(
select LocationID
from tblPayment
where PaymentDate < '2025-03-20'
group by locationID
having sum(Amount)>5000
);
```


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

23. Retrieve Payments with Courier Information

```
select P.*,C.* from tblCourier C
left join tblPayment P on C.CourierID=P.CourierID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	
1	1	101	1	3000.00	2025-03-24	5	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	
2	2	102	2	6000.00	2025-03-18	2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	
3	3	103	3	100.00	2025-03-26	6	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	
4	4	104	4	500.00	2025-03-22	4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	
5	5	105	5	75.00	2025-03-01	1	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	
6	6	106	1	1100.00	2025-03-20	3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	
7	7	107	4	500.00	2025-03-21	1	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	
8	8	108	5	75.00	2025-03-15	3	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	
9	9	109	1	1200.00	2025-03-20	2	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	
10	10	110	4	500.00	2025-03-20	2	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	
11	NULL	NULL	NULL	NULL	NULL	NULL	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	

CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
2.50	In Transit	TN12345	2025-03-25	1	1	2	4
1.20	Delivered	TN67890	2025-03-18	2	2	3	1
3.10	Pending	TN11223	2025-03-27	3	3	1	3
2.00	In Transit	TN33445	2025-03-22	4	4	4	4
1.50	Processing	TN55667	2025-03-21	5	5	5	5
3.70	In Transit	TN12445	2025-03-25	1	1	2	4
0.90	In Transit	TN33445	2025-03-22	4	4	4	2
3.10	delivered	TN63824	2025-03-22	3	3	1	3
2.00	delivered	TN65345	2025-03-20	4	4	4	3
1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
2.00	delivered	TN65345	2025-03-20	4	4	4	3

24. Retrieve Payments with Location Information

```
select P.*,L.* from tblLocation L
left join tblPayment P on L.LocationID=P.locationID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	LocationId	LocationName	LocationAddress
1	1	101	1	3000.00	2025-03-24	5	1	Chennai Hub	Chennai, Tamil Nadu
2	6	106	1	1100.00	2025-03-20	3	1	Chennai Hub	Chennai, Tamil Nadu
3	9	109	1	1200.00	2025-03-20	2	1	Chennai Hub	Chennai, Tamil Nadu
4	2	102	2	6000.00	2025-03-18	2	2	Coimbatore Hub	Coimbatore, Tamil Nadu
5	3	103	3	100.00	2025-03-26	6	3	Madurai Hub	Madurai, Tamil Nadu
6	4	104	4	500.00	2025-03-22	4	4	Trichy Hub	Trichy, Tamil Nadu
7	7	107	4	500.00	2025-03-21	1	4	Trichy Hub	Trichy, Tamil Nadu
8	10	110	4	500.00	2025-03-20	2	4	Trichy Hub	Trichy, Tamil Nadu
9	5	105	5	75.00	2025-03-01	1	5	Salem Hub	Salem, Tamil Nadu
10	8	108	5	75.00	2025-03-15	3	5	Salem Hub	Salem, Tamil Nadu
11	NULL	NULL	NULL	NULL	NULL	NULL	6	Erode Hub	Erode, Tamil Nadu

25. Retrieve Payments with Courier and Location Information

```
select P.*,C.*,L.* from tblPayment P
inner join tblCourier C on P.CourierID = C.CourierID
inner join tblLocation L on C.locationID = L.LocationID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	F
1	1	101	1	3000.00	2025-03-24	5	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	
2	2	102	2	6000.00	2025-03-18	2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	(
3	3	103	3	100.00	2025-03-26	6	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	(
4	4	104	4	500.00	2025-03-22	4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	(
5	5	105	5	75.00	2025-03-01	1	105	Vignesh B	Salem, Tamil Nadu	Meera S	
6	6	106	1	1100.00	2025-03-20	3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	
7	7	107	4	500.00	2025-03-21	1	107	Newton	Trichy, Tamil Nadu	Einstein	(
8	8	108	5	75.00	2025-03-15	3	108	Vikash	Madurai, Tamil Nadu	Ragul	(
9	9	109	1	1200.00	2025-03-20	2	109	Prashanth	Trichy, Tamil Nadu	Sneha P	(
10	10	110	4	500.00	2025-03-20	2	110	Priya	Salem, Tamil Nadu	Shankar	

ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID	LocationId	LocationName	LocationAddress
Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4	4	Trichy Hub	Trichy, Tamil Nadu
Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1	1	Chennai Hub	Chennai, Tamil Nadu
Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3	3	Madurai Hub	Madurai, Tamil Nadu
Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4	4	Trichy Hub	Trichy, Tamil Nadu
Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5	5	Salem Hub	Salem, Tamil Nadu
Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4	4	Trichy Hub	Trichy, Tamil Nadu
Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2	2	Coimbatore Hub	Coimbatore, Tamil Na
Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3	3	Madurai Hub	Madurai, Tamil Nadu
Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3	3	Madurai Hub	Madurai, Tamil Nadu
Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5	5	Salem Hub	Salem, Tamil Nadu

26. List all payments with courier details

```sql
select P.*,C.* from tblPayment P
right join tblCourier C on P.CourierID = C.CourierID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight
1	1	101	1	3000.00	2025-03-24	5	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50
2	2	102	2	6000.00	2025-03-18	2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20
3	3	103	3	100.00	2025-03-26	6	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10
4	4	104	4	500.00	2025-03-22	4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00
5	5	105	5	75.00	2025-03-01	1	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50
6	6	106	1	1100.00	2025-03-20	3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70
7	7	107	4	500.00	2025-03-21	1	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90
8	8	108	5	75.00	2025-03-15	3	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10
9	9	109	1	1200.00	2025-03-20	2	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00
10	10	110	4	500.00	2025-03-20	2	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50
11	NULL	NULL	NULL	NULL	NULL	NULL	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00

CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
In Transit	TN12345	2025-03-25	1	1	2	4
Delivered	TN67890	2025-03-18	2	2	3	1
Pending	TN11223	2025-03-27	3	3	1	3
In Transit	TN33445	2025-03-22	4	4	4	4
Processing	TN55667	2025-03-21	5	5	5	5
In Transit	TN12445	2025-03-25	1	1	2	4
In Transit	TN33445	2025-03-22	4	4	4	2
delivered	TN63824	2025-03-22	3	3	1	3
delivered	TN65345	2025-03-20	4	4	4	3
delivered	TN90809	2025-03-23	5	5	NULL	5
delivered	TN65345	2025-03-20	4	4	4	3

27. Total payments received for each courier

```
select C.CourierID,sum(P.Amount) as 'Total Payments Received' from tblCourier C
left join tblPayment P on C.CourierID = P.CourierID
group by C.CourierID
```

▦ Results ▥ Messages

	CourierID	Total Payments Received
1	101	3000.00
2	102	6000.00
3	103	100.00
4	104	500.00
5	105	75.00
6	106	1100.00
7	107	500.00
8	108	75.00
9	109	1200.00
10	110	500.00
11	111	NULL

28. List payments made on a specific date

```
select * from tblPayment
where PaymentDate = '2025-03-20'
```

▦ Results ▥ Messages

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	6	106	1	1100.00	2025-03-20	3
2	9	109	1	1200.00	2025-03-20	2
3	10	110	4	500.00	2025-03-20	2

29. Get Courier Information for Each Payment

```
select P.*,C.* from tblPayment P
right join tblCourier C on P.CourierID = C.CourierID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	CourierID	SenderName	SenderAddress	ReceiverName
1	1	101	1	3000.00	2025-03-24	5	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R
2	2	102	2	6000.00	2025-03-18	2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K
3	3	103	3	100.00	2025-03-26	6	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T
4	4	104	4	500.00	2025-03-22	4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P
5	5	105	5	75.00	2025-03-01	1	105	Vignesh B	Salem, Tamil Nadu	Meera S
6	6	106	1	1100.00	2025-03-20	3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R
7	7	107	4	500.00	2025-03-21	1	107	Newton	Trichy, Tamil Nadu	Einstein
8	8	108	5	75.00	2025-03-15	3	108	Vikash	Madurai, Tamil Nadu	Ragul
9	9	109	1	1200.00	2025-03-20	2	109	Prashanth	Trichy, Tamil Nadu	Sneha P
10	10	110	4	500.00	2025-03-20	2	110	Priya	Salem, Tamil Nadu	Shankar
11	NULL	NULL	NULL	NULL	NULL	NULL	111	Prashanth	Trichy, Tamil Nadu	Prem

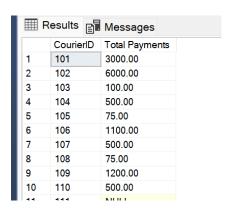| ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3

30. Get Payment Details with Location

```sql
select P.*,L.* from tblPayment P
right join tblLocation L on P.locationID = L.LocationId
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID	LocationId	LocationName	LocationAddress
1	1	101	1	3000.00	2025-03-24	5	1	Chennai Hub	Chennai, Tamil Nadu
2	6	106	1	1100.00	2025-03-20	3	1	Chennai Hub	Chennai, Tamil Nadu
3	9	109	1	1200.00	2025-03-20	2	1	Chennai Hub	Chennai, Tamil Nadu
4	2	102	2	6000.00	2025-03-18	2	2	Coimbatore Hub	Coimbatore, Tamil Nadu
5	3	103	3	100.00	2025-03-26	6	3	Madurai Hub	Madurai, Tamil Nadu
6	4	104	4	500.00	2025-03-22	4	4	Trichy Hub	Trichy, Tamil Nadu
7	7	107	4	500.00	2025-03-21	1	4	Trichy Hub	Trichy, Tamil Nadu
8	10	110	4	500.00	2025-03-20	2	4	Trichy Hub	Trichy, Tamil Nadu
9	5	105	5	75.00	2025-03-01	1	5	Salem Hub	Salem, Tamil Nadu
10	8	108	5	75.00	2025-03-15	3	5	Salem Hub	Salem, Tamil Nadu
11	NULL	NULL	NULL	NULL	NULL	NULL	6	Erode Hub	Erode, Tamil Nadu

31. Calculating Total Payments for Each Courier

```sql
select C.CourierID, sum(P.Amount) as 'Total Payments' from tblCourier C
left join tblPayment P on C.CourierID = P.CourierID
group by C.CourierID
```

	CourierID	Total Payments
1	101	3000.00
2	102	6000.00
3	103	100.00
4	104	500.00
5	105	75.00
6	106	1100.00
7	107	500.00
8	108	75.00
9	109	1200.00
10	110	500.00
11	111	NULL

32. List Payments Within a Date Range

```sql
select * from tblPayment
where PaymentDate between '2025-03-18' and '2025-03-25'
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	1	101	1	3000.00	2025-03-24	5
2	2	102	2	6000.00	2025-03-18	2
3	4	104	4	500.00	2025-03-22	4
4	6	106	1	1100.00	2025-03-20	3
5	7	107	4	500.00	2025-03-21	1
6	9	109	1	1200.00	2025-03-20	2
7	10	110	4	500.00	2025-03-20	2

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

```
select U.*,C.* from tblUser U
left join tblCourier C on U.UserID = C.UserID
```

	UserID	UserName	UserEmail	UserPassword	UserContact	UserAddress	CourierID	SenderName	SenderAddress	ReceiverName
1	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R
2	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R
3	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K
4	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T
5	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	108	Vikash	Madurai, Tamil Nadu	Ragul
6	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	104	Sowmya R	Trichy, Tamil Nadu	Sneha P
7	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	107	Newton	Trichy, Tamil Nadu	Einstein
8	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	109	Prashanth	Trichy, Tamil Nadu	Sneha P
9	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	111	Prashanth	Trichy, Tamil Nadu	Prem
10	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	105	Vignesh B	Salem, Tamil Nadu	Meera S
11	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	110	Priya	Salem, Tamil Nadu	Shankar
12	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	NULL	NULL	NULL	NULL
13	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	NULL	NULL	NULL	NULL
14	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	NULL	NULL	NULL	NULL
15	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	NULL	NULL	NULL	NULL

ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

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

```
select C.*,CS.* from tblCourier C
full outer join tblCourierServices CS on C.ServiceID = CS.ServiceID
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223
4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445
5	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667
6	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445
7	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445
8	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824
9	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345
10	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809
11	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345
12	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

r DeliveryDate	UserID	EmployeeID	ServiceID	LocationID	ServiceID	ServiceName	ServiceCost
2025-03-25	1	1	2	4	2	Express Delivery	200.00
2025-03-18	2	2	3	1	3	Same Day Delivery	350.00
2025-03-27	3	3	1	3	1	Standard Delivery	100.00
2025-03-22	4	4	4	4	4	Overnight Delivery	500.00
2025-03-21	5	5	5	5	5	Insurance Coverage	100.00
2025-03-25	1	1	2	4	2	Express Delivery	200.00
2025-03-22	4	4	4	2	4	Overnight Delivery	500.00
2025-03-22	3	3	1	3	1	Standard Delivery	100.00
2025-03-20	4	4	4	3	4	Overnight Delivery	500.00
2025-03-23	5	5	NULL	5	NULL	NULL	NULL
2025-03-20	4	4	4	3	4	Overnight Delivery	500.00
NULL	NULL	NULL	NULL	NULL	6	Fragile Item Handling	75.00

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

```
select E.*,P.* from tblEmployee E
full outer join tblPayment P on E.EmployeeID = P.EmployeeID
```

	EmployeeID	EmployeeName	EmployeeEmail	EmployeeContact	EmployeeRole	EmployeeSalary	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	5	105	5	75.00	2025-03-01	1
2	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	7	107	4	500.00	2025-03-21	1
3	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	2	102	2	6000.00	2025-03-18	2
4	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	9	109	1	1200.00	2025-03-20	2
5	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	10	110	4	500.00	2025-03-20	2
6	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	6	106	1	1100.00	2025-03-20	3
7	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	8	108	5	75.00	2025-03-15	3
8	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	4	104	4	500.00	2025-03-22	4
9	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	1	101	1	3000.00	2025-03-24	5
10	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	3	103	3	100.00	2025-03-26	6
11	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	NULL	NULL	NULL	NULL	NULL	NULL

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

```
select U.*,CS.* from tblUser U
cross join tblCourierServices CS
```

	UserID	UserName	UserEmail	UserPassword	UserContact	UserAddress	ServiceID	ServiceName	ServiceCost
1	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	1	Standard Delivery	100.00
2	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	1	Standard Delivery	100.00
3	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	1	Standard Delivery	100.00
4	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	1	Standard Delivery	100.00
5	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	1	Standard Delivery	100.00
6	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	1	Standard Delivery	100.00
7	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	1	Standard Delivery	100.00
8	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	1	Standard Delivery	100.00
9	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	1	Standard Delivery	100.00
10	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	2	Express Delivery	200.00
11	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	2	Express Delivery	200.00
12	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	2	Express Delivery	200.00
13	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	2	Express Delivery	200.00
14	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	2	Express Delivery	200.00
15	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	2	Express Delivery	200.00
16	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	2	Express Delivery	200.00
17	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	2	Express Delivery	200.00
18	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	2	Express Delivery	200.00
19	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	3	Same Day Delivery	350.00

20	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	3	Same Day Delivery	350.00
21	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	3	Same Day Delivery	350.00
22	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	3	Same Day Delivery	350.00
23	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	3	Same Day Delivery	350.00
24	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	3	Same Day Delivery	350.00
25	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	3	Same Day Delivery	350.00
26	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	3	Same Day Delivery	350.00
27	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	3	Same Day Delivery	350.00
28	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	4	Overnight Delivery	500.00
29	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	4	Overnight Delivery	500.00
30	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	4	Overnight Delivery	500.00
31	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	4	Overnight Delivery	500.00
32	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	4	Overnight Delivery	500.00
33	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	4	Overnight Delivery	500.00
34	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	4	Overnight Delivery	500.00
35	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	4	Overnight Delivery	500.00
36	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	4	Overnight Delivery	500.00
37	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	5	Insurance Cover...	100.00
38	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	5	Insurance Cover...	100.00
39	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	5	Insurance Cover...	100.00
40	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	5	Insurance Cover...	100.00
41	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	5	Insurance Cover...	100.00
42	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	5	Insurance Cover...	100.00
43	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	5	Insurance Cover...	100.00
44	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	5	Insurance Cover...	100.00
45	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	5	Insurance Cover...	100.00
46	1	Arun Kumar	arun.kumar@example.com	pass123	9876543210	Chennai, Tamil Nadu	6	Fragile Item Han...	75.00
47	2	Priya Sharma	priya.sharma@example.com	secure456	9898989898	Coimbatore, Tamil Nadu	6	Fragile Item Han...	75.00
48	3	Dinesh Kumar	dinesh.k@example.com	password789	9876512345	Madurai, Tamil Nadu	6	Fragile Item Han...	75.00
49	4	Sowmya R	sowmya.r@example.com	pass999	9867543210	Trichy, Tamil Nadu	6	Fragile Item Han...	75.00
50	5	Vignesh B	vignesh.b@example.com	secure555	9944556677	Salem, Tamil Nadu	6	Fragile Item Han...	75.00
51	6	Vikash	vikash2003@example.com	ToughPass35	9546595473	Madurai, Tamil Nadu	6	Fragile Item Han...	75.00
52	7	Prashanth	Prashanth03@example.com	PrashPass35	9876595472	Trichy, Tamil Nadu	6	Fragile Item Han...	75.00
53	8	Priya	Priya43@example.com	Priya678	9876595473	Salem, Tamil Nadu	6	Fragile Item Han...	75.00
54	9	kaviya	kavi03@example.com	kaviya321	9812345473	Coimbatore, Tamil Nadu	6	Fragile Item Han...	75.00

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

```sql
select * from tblEmployee cross join tblLocation
```

	EmployeeID	EmployeeName	EmployeeEmail	EmployeeContact	EmployeeRole	EmployeeSalary	LocationId	LocationName	LocationAddress
1	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	1	Chennai Hub	Chennai, Tamil Nadu
2	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	1	Chennai Hub	Chennai, Tamil Nadu
3	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	1	Chennai Hub	Chennai, Tamil Nadu
4	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	1	Chennai Hub	Chennai, Tamil Nadu
5	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	1	Chennai Hub	Chennai, Tamil Nadu
6	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	1	Chennai Hub	Chennai, Tamil Nadu
7	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	1	Chennai Hub	Chennai, Tamil Nadu
8	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
9	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
10	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
11	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
12	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
13	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
14	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	2	Coimbatore Hub	Coimbatore, Tamil Nadu
15	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	3	Madurai Hub	Madurai, Tamil Nadu
16	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	3	Madurai Hub	Madurai, Tamil Nadu
17	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	3	Madurai Hub	Madurai, Tamil Nadu
18	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	3	Madurai Hub	Madurai, Tamil Nadu
19	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	3	Madurai Hub	Madurai, Tamil Nadu
20	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	3	Madurai Hub	Madurai, Tamil Nadu
21	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	3	Madurai Hub	Madurai, Tamil Nadu
22	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	4	Trichy Hub	Trichy, Tamil Nadu
23	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	4	Trichy Hub	Trichy, Tamil Nadu
24	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	4	Trichy Hub	Trichy, Tamil Nadu
25	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	4	Trichy Hub	Trichy, Tamil Nadu
26	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	4	Trichy Hub	Trichy, Tamil Nadu
27	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	4	Trichy Hub	Trichy, Tamil Nadu
28	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	4	Trichy Hub	Trichy, Tamil Nadu
29	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	5	Salem Hub	Salem, Tamil Nadu
30	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	5	Salem Hub	Salem, Tamil Nadu
31	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	5	Salem Hub	Salem, Tamil Nadu
32	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	5	Salem Hub	Salem, Tamil Nadu
33	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	5	Salem Hub	Salem, Tamil Nadu
34	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	5	Salem Hub	Salem, Tamil Nadu
35	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	5	Salem Hub	Salem, Tamil Nadu
36	1	Vikram R	vikram.r@example.com	9876541230	Delivery Agent	25000.00	6	Erode Hub	Erode, Tamil Nadu
37	2	Meena L	meena.l@example.com	9845123456	Manager	50000.00	6	Erode Hub	Erode, Tamil Nadu
38	3	Karthik S	karthik.s@example.com	9785612345	Delivery Agent	27000.00	6	Erode Hub	Erode, Tamil Nadu
39	4	Lavanya M	lavanya.m@example.com	9823456789	Supervisor	60000.00	6	Erode Hub	Erode, Tamil Nadu
40	5	Senthil K	senthil.k@example.com	9798765432	Delivery Agent	26000.00	6	Erode Hub	Erode, Tamil Nadu
41	6	John	JohnCena@example.com	9798765431	Supervisor	55000.00	6	Erode Hub	Erode, Tamil Nadu
42	7	Johnson	Johnson@example.com	9798765430	Manager	52000.00	6	Erode Hub	Erode, Tamil Nadu

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

```sql
select CourierID,SenderName,SenderAddress from tblCourier
```

Results | Messages

	CourierID	SenderName	SenderAddress
1	101	Arun Kumar	Chennai, Tamil Nadu
2	102	Priya Sharma	Coimbatore, Tamil Nadu
3	103	Dinesh Kumar	Madurai, Tamil Nadu
4	104	Sowmya R	Trichy, Tamil Nadu
5	105	Vignesh B	Salem, Tamil Nadu
6	106	Karthikeyan	Chennai, Tamil Nadu
7	107	Newton	Trichy, Tamil Nadu
8	108	Vikash	Madurai, Tamil Nadu
9	109	Prashanth	Trichy, Tamil Nadu
10	110	Priya	Salem, Tamil Nadu
11	111	Prashanth	Trichy, Tamil Nadu

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

```sql
select CourierID,ReceiverName,ReceiverAddress from tblCourier
```

	CourierID	ReceiverName	ReceiverAddress
1	101	Deepak R	Madurai, Tamil Nadu
2	102	Anjali K	Chennai, Tamil Nadu
3	103	Ravi T	Chennai, Tamil Nadu
4	104	Sneha P	Coimbatore, Tamil Nadu
5	105	Meera S	Madurai, Tamil Nadu
6	106	Deepak R	Madurai, Tamil Nadu
7	107	Einstein	Coimbatore, Tamil Nadu
8	108	Ragul	Chennai, Tamil Nadu
9	109	Sneha P	Coimbatore, Tamil Nadu
10	110	Shankar	Madurai, Tamil Nadu
11	111	Prem	Coimbatore, Tamil Nadu

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

```sql
select C.*,CS.* from tblCourier C
left join tblCourierServices CS on C.ServiceID = CS.ServiceID
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223
4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445
5	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667
6	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445
7	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445
8	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824
9	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345
10	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809
11	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345

UserID	EmployeeID	ServiceID	LocationID	ServiceID	ServiceName	ServiceCost
1	1	2	4	2	Express Delivery	200.00
2	2	3	1	3	Same Day Delivery	350.00
3	3	1	3	1	Standard Delivery	100.00
4	4	4	4	4	Overnight Delivery	500.00
5	5	5	5	5	Insurance Coverage	100.00
1	1	2	4	2	Express Delivery	200.00
4	4	4	2	4	Overnight Delivery	500.00
3	3	1	3	1	Standard Delivery	100.00
4	4	4	3	4	Overnight Delivery	500.00
5	5	NULL	5	NULL	NULL	NULL
4	4	4	3	4	Overnight Delivery	500.00

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

```
select E.EmployeeID,E.EmployeeName,count(C.EmployeeID) as 'Number of Couriers
Assigned' from tblCourier C
right join tblEmployee E on C.EmployeeID = E.EmployeeID
group by E.EmployeeID,E.EmployeeName;
```

	EmployeeID	EmployeeName	Number of Couriers Assigned
1	1	Vikram R	2
2	2	Meena L	1
3	3	Karthik S	2
4	4	Lavanya M	4
5	5	Senthil K	2
6	6	John	0
7	7	Johnson	0

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

```
select L.LocationId,L.LocationName,sum(P.Amount) as 'Total Payment' from tblPayment P
right join tblLocation L on P.LocationId = L.locationID
group by L.LocationId,L.LocationName
```

	LocationId	LocationName	Total Payment
1	1	Chennai Hub	5300.00
2	2	Coimbatore Hub	6000.00
3	3	Madurai Hub	100.00
4	4	Trichy Hub	1500.00
5	5	Salem Hub	150.00
6	6	Erode Hub	NULL

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

```
select C1.* from tblCourier C1
inner join tblCourier C2 on C1.SenderName = C2.SenderName
where C1.CourierID <> C2.CourierID
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
2	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3

44. List all employees who share the same role.

```
select EmployeeID, EmployeeName, EmployeeRole
from tblEmployee e1
where EXISTS (
    select 'a' from tblEmployee e2
    where e1.EmployeeRole = e2.EmployeeRole
    and e1.EmployeeID <> e2.EmployeeID
)
order by EmployeeRole asc;
```

	EmployeeID	EmployeeName	EmployeeRole
1	1	Vikram R	Delivery Agent
2	3	Karthik S	Delivery Agent
3	5	Senthil K	Delivery Agent
4	7	Johnson	Manager
5	2	Meena L	Manager
6	4	Lavanya M	Supervisor
7	6	John	Supervisor

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

```sql
select * from tblPayment P1
where exists(
        select 1 from tblPayment P2
        where P1.locationID=P2.locationID
        and P1.CourierID <> P2.CourierID
        )
order by P1.locationID
```

	PaymentID	CourierID	locationID	Amount	PaymentDate	EmployeeID
1	1	101	1	3000.00	2025-03-24	5
2	6	106	1	1100.00	2025-03-20	3
3	9	109	1	1200.00	2025-03-20	2
4	10	110	4	500.00	2025-03-20	2
5	7	107	4	500.00	2025-03-21	1
6	4	104	4	500.00	2025-03-22	4
7	5	105	5	75.00	2025-03-01	1
8	8	108	5	75.00	2025-03-15	3

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

```sql
select * from tblCourier C1
where exists(
        select 1 from tblCourier C2
        where cast(C1.SenderAddress as varchar(max))=cast((C2.SenderAddress) as
varchar(max))
        and C1.CourierID <> C2.CourierID
        )
order by cast(C1.SenderAddress as varchar(max))
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
4	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
5	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5
6	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
7	111	Prashanth	Trichy, Tamil Nadu	Prem	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
8	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
9	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
10	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2

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

```
select E.EmployeeID,E.EmployeeName,Count(C.EmployeeID) as 'No of Couriers Delivered'
from tblCourier C
right join tblEmployee E on C.EmployeeID = E.EmployeeID
group by E.EmployeeID,E.EmployeeName
```

	EmployeeID	EmployeeName	No of Couriers Delivered
1	1	Vikram R	2
2	2	Meena L	1
3	3	Karthik S	2
4	4	Lavanya M	4
5	5	Senthil K	2
6	6	John	0
7	7	Johnson	0

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

```
select
        C.CourierID,
        C.SenderName,
        C.SenderAddress,
        C.ReceiverName,
        C.ReceiverAddress,
        C.CourierWeight,
        C.CourierStatus,
        C.TrackingNumber,
        C.DeliveryDate,
        P.Amount,
        CS.ServiceCost
from tblCourier C
join tblPayment P on C.CourierID = P.CourierID
join tblCourierServices CS on C.ServiceID= CS.ServiceID
where P.Amount>CS.ServiceCost
```

Results | Messages

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	Amount	ServiceCost
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	3000.00	200.00
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	6000.00	350.00
3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1100.00	200.00
4	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	1200.00	500.00

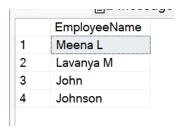## Scope: Inner Queries, Non Equi Joins, Equi joins,Exist,Any,All

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

```sql
select * from tblCourier
where CourierWeight > ( select avg(CourierWeight) as 'Average Weight' from
tblCourier);
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
4	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3

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

```sql
select EmployeeName
from tblEmployee
where EmployeeSalary > ( select avg(EmployeeSalary) as 'Average Salary' from
tblEmployee )
```

	EmployeeName
1	Meena L
2	Lavanya M
3	John
4	Johnson

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

```sql
select sum(ServiceCost) as 'Total Cost'
from tblCourierServices
where ServiceCost < (select max(ServiceCost) from tblCourierServices)
```

	Total Cost
1	825.00

52. Find all couriers that have been paid for

```sql
select * from tblCourier
where CourierID in (select CourierID from tblPayment)
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	102	Priya Sharma	Coimbatore, Tamil Nadu	Anjali K	Chennai, Tamil Nadu	1.20	Delivered	TN67890	2025-03-18	2	2	3	1
3	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
4	104	Sowmya R	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	In Transit	TN33445	2025-03-22	4	4	4	4
5	105	Vignesh B	Salem, Tamil Nadu	Meera S	Madurai, Tamil Nadu	1.50	Processing	TN55667	2025-03-21	5	5	5	5
6	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
7	107	Newton	Trichy, Tamil Nadu	Einstein	Coimbatore, Tamil Nadu	0.90	In Transit	TN33445	2025-03-22	4	4	4	2
8	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3
9	109	Prashanth	Trichy, Tamil Nadu	Sneha P	Coimbatore, Tamil Nadu	2.00	delivered	TN65345	2025-03-20	4	4	4	3
10	110	Priya	Salem, Tamil Nadu	Shankar	Madurai, Tamil Nadu	1.50	delivered	TN90809	2025-03-23	5	5	NULL	5

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

```sql
select top 1* from tblLocation L
join(
select LocationID,sum(Amount) as 'Total Payment' from tblPayment
group by LocationID
) P
on L.LocationId=P.locationID
order by 'Total Payment' desc
```

	LocationId	LocationName	LocationAddress	LocationID	Total Payment
1	2	Coimbatore Hub	Coimbatore, Tamil Nadu	2	6000.00

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

```sql
select * from tblCourier
where CourierWeight > all(
select CourierWeight from tblCourier
where SenderName = 'Prashanth'
)
```

	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	CourierWeight	CourierStatus	TrackingNumber	DeliveryDate	UserID	EmployeeID	ServiceID	LocationID
1	101	Arun Kumar	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	2.50	In Transit	TN12345	2025-03-25	1	1	2	4
2	103	Dinesh Kumar	Madurai, Tamil Nadu	Ravi T	Chennai, Tamil Nadu	3.10	Pending	TN11223	2025-03-27	3	3	1	3
3	106	Karthikeyan	Chennai, Tamil Nadu	Deepak R	Madurai, Tamil Nadu	3.70	In Transit	TN12445	2025-03-25	1	1	2	4
4	108	Vikash	Madurai, Tamil Nadu	Ragul	Chennai, Tamil Nadu	3.10	delivered	TN63824	2025-03-22	3	3	1	3