

ASSIGNMENT 4

COURIER MANAGEMENT SYSTEM

AKILESH K

```
mysql> create database courier_management;  
Query OK, 1 row affected (0.07 sec)
```

```
mysql> use courier_management;  
Database changed
```

```
mysql> show tables;
```

```
+-----+  
| Tables_in_courier_management |  
+-----+  
| courier                      |  
| courierservices              |  
| employee                    |  
| location                    |  
| payment                     |  
| user                        |  
+-----+  
6 rows in set (0.03 sec)
```

User		Courier		Courier Services		Employee		Location
userid	1---	courierid		serviceid	1---	EmployeeID		LocationID
name		sendername	1---	servicename		Name		LocationName
email (u)		senderaddr		cost		Email (u)		Address
password		receivername				ContactNumber		
contactnum		receiveraddr				Role		
address		weight				Salary		
		status						
		trackingnum						
		deliverydate						

Payment
PaymentID
courierID
locationId
amount
Paymentdate

```
mysql> INSERT INTO user (userid, name, email, password, contactnumber, address)
-> VALUES
-> (1, 'John Doe', 'john.doe@example.com', 'password123', '1234567890', '123 Main St'),
-> (2, 'Jane Smith', 'jane.smith@example.com', 'pass456', '9876543210', '456 Oak St'),
-> (3, 'Alice Johnson', 'alice.j@example.com', 'secret789', '5556667777', '789 Maple Ave'),
-> (4, 'Bob Williams', 'bob.w@example.com', 'qwerty123', '3332221111', '567 Pine St'),
-> (5, 'Eva Davis', 'eva.d@example.com', 'abcd5678', '1110009999', '890 Cedar Rd');
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO courier (courierid, sendername, senderaddress, receivername, receiveraddress, weight, status, trackingnumber, deliverydate)
-> VALUES
-> (101, 'John Sender', '123 Main St, CityA', 'Alice Receiver', '456 Oak St, CityA', 2.3, 'Shipped', 'TNX123', '2023-03-01'),
-> (102, 'Bob Sender', '789 Elm St, CityB', 'Eva Receiver', '987 Pine St, CityB', 3.5, 'In Transit', 'TNX456', '2023-03-03'),
-> (103, 'Charlie Sender', '321 Maple St, CityC', 'Grace Receiver', '654 Cedar St, CityC', 1.8, 'Delivered', 'TNX789', '2023-03-05'),
-> (104, 'David Sender', '567 Birch St, CityD', 'Helen Receiver', '876 Spruce St, CityD', 4.2, 'Shipped', 'TNX987', '2023-03-07'),
-> (105, 'Emma Sender', '987 Willow St, CityE', 'Ivan Receiver', '234 Oak St, CityE', 2.7, 'Delivered', 'TNX654', '2023-03-09');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO courierservices (serviceid, servicename, cost)
-> VALUES
-> (1001, 'Standard Shipping', 10.99),
-> (1002, 'Express Shipping', 19.99),
-> (1003, 'Overnight Shipping', 29.99),
-> (1004, 'International Shipping', 39.99),
-> (1005, 'Same-day Delivery', 49.99);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO employee (EmployeeID, Name, Email, ContactNumber, Role, Salary)
-> VALUES
-> (10001, 'Michael Johnson', 'michael.j@example.com', '1234567890', 'Manager', 75000.00),
-> (10002, 'Amanda Brown', 'amanda.b@example.com', '9876543210', 'Clerk', 45000.00),
-> (10003, 'Christopher White', 'chris.w@example.com', '5556667777', 'Supervisor', 60000.00),
-> (10004, 'Emily Davis', 'emily.d@example.com', '3332221111', 'Analyst', 80000.00),
-> (10005, 'Daniel Smith', 'daniel.s@example.com', '1110009999', 'Developer', 70000.00);
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO location (LocationID, LocationName, Address)
-> VALUES
-> (100001, 'Main Office', '321 Maple St, CityX'),
-> (100002, 'Warehouse Alpha', '987 Willow St, CityY'),
-> (100003, 'Retail Store Beta', '567 Birch St, CityZ'),
-> (100004, 'Logistics Hub Gamma', '876 Spruce St, CityW'),
-> (100005, 'Service Center Delta', '234 Oak St, CityV');
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO payment (PaymentID, courierID, locationId, amount, Paymentdate)
-> VALUES
-> (135, 101, 100001, 25.50, '2023-04-01'),
-> (253, 102, 100002, 30.75, '2023-04-02'),
-> (386, 103, 100003, 18.90, '2023-04-03'),
-> (435, 104, 100004, 42.25, '2023-04-04'),
-> (566, 105, 100005, 35.60, '2023-04-05');
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Task 2

1)

```
mysql> SELECT * FROM user;
+-----+-----+-----+-----+-----+-----+
| userid | name       | email                | password | contactnumber | address       |
+-----+-----+-----+-----+-----+-----+
| 1      | John Doe   | john.doe@example.com | password123 | 1234567890    | 123 Main St  |
| 2      | Jane Smith | jane.smith@example.com | pass456    | 9876543210    | 456 Oak St   |
| 3      | Alice Johnson | alice.j@example.com | secret789  | 5556667777    | 789 Maple Ave |
| 4      | Bob Williams | bob.w@example.com | qwerty123  | 3332221111    | 567 Pine St  |
| 5      | Eva Davis  | eva.d@example.com | abcd5678   | 1110009999    | 890 Cedar Rd |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

2)

```
mysql> SELECT payment.PaymentID, courier.trackingnumber, courier.deliverydate, payment.amount FROM payment JOIN
IN courier ON payment.courierID = courier.courierID JOIN user ON courier.sendername = user.name WHERE user.us
erid = '1';
Empty set (0.00 sec)

mysql>
```

3)

```
mysql> SELECT * FROM courier;
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
101	John Sender	123 Main St, CityA	Alice Receiver	456 Oak St, CityA	2.30	Shipped	TNX123	2023-03-01
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
103	Charlie Sender	321 Maple St, CityC	Grace Receiver	654 Cedar St, CityC	1.80	Delivered	TNX789	2023-03-05
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07
105	Emma Sender	987 Willow St, CityE	Ivan Receiver	234 Oak St, CityE	2.70	Delivered	TNX654	2023-03-09

```
5 rows in set (0.01 sec)

mysql>
```

4)

```
mysql> SELECT courier.* FROM courier JOIN payment ON courier.courierID = payment.courierID WHERE payment.PaymentID = 135;
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
101	John Sender	123 Main St, CityA	Alice Receiver	456 Oak St, CityA	2.30	Shipped	TNX123	2023-03-01

```
1 row in set (0.00 sec)

mysql>
```

5)

```
mysql> SELECT * FROM courier WHERE courierID = 103;
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
103	Charlie Sender	321 Maple St, CityC	Grace Receiver	654 Cedar St, CityC	1.80	Delivered	TNX789	2023-03-05

```
1 row in set (0.00 sec)

mysql>
```

6)

```
mysql> SELECT * FROM courier WHERE status <> 'Delivered';
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
101	John Sender	123 Main St, CityA	Alice Receiver	456 Oak St, CityA	2.30	Shipped	TNX123	2023-03-01
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07

```
3 rows in set (0.00 sec)

mysql>
```

7)

```
mysql> SELECT * FROM courier WHERE deliverydate = CURDATE();
Empty set (0.01 sec)

mysql>
```

8)

```
mysql> SELECT * FROM courier WHERE status = 'In Transit';
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03

```
1 row in set (0.00 sec)

mysql>
```

9)

```
mysql> SELECT courierID, COUNT(*) AS TotalPackages FROM courier GROUP BY courierID;
```

courierID	TotalPackages
101	1
102	1
103	1
104	1
105	1

```
5 rows in set (0.01 sec)
```

10)

```
mysql> SELECT courier.courierID, AVG(DATEDIFF(courier.deliverydate, payment.Paymentdate)) AS AverageDeliveryTime FROM courier JOIN payment ON courier.courierID = payment.courierID GROUP BY courier.courierID;
```

courierID	AverageDeliveryTime
101	-31.0000
102	-30.0000
103	-29.0000
104	-28.0000
105	-27.0000

```
5 rows in set (0.01 sec)

mysql>
```

11)

```
mysql> SELECT * FROM courier WHERE weight BETWEEN 3 AND 5;
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07

```
2 rows in set (0.00 sec)

mysql>
```

12)

```
mysql> SELECT * FROM employee WHERE Name LIKE '%John%';
```

EmployeeID	Name	Email	ContactNumber	Role	Salary
10001	Michael Johnson	michael.j@example.com	1234567890	Manager	75000.00

```
1 row in set (0.01 sec)

mysql>
```

13)

```
mysql> SELECT courier.* FROM courier JOIN payment ON courier.courierID = payment.courierID WHERE payment.amount > 50;
Empty set (0.01 sec)

mysql>
```

Task 3

14)

15)

```
mysql> SELECT location.LocationID, location.LocationName, SUM(payment.amount) AS TotalRevenue FROM location JOIN
payment ON location.LocationID = payment.locationID GROUP BY location.LocationID, location.LocationName;
```

LocationID	LocationName	TotalRevenue
100001	Main Office	25.50
100002	Warehouse Alpha	30.75
100003	Retail Store Beta	18.90
100004	Logistics Hub Gamma	42.25
100005	Service Center Delta	35.60

```
5 rows in set (0.00 sec)
```

16)

```
mysql> SELECT location.LocationID, location.LocationName, COUNT(courier.courierID) AS TotalCouriersDelivered FROM
location LEFT JOIN payment ON location.LocationID = payment.locationID LEFT JOIN courier ON payment.courierID =
courier.courierID GROUP BY location.LocationID, location.LocationName;
```

LocationID	LocationName	TotalCouriersDelivered
100001	Main Office	1
100002	Warehouse Alpha	1
100003	Retail Store Beta	1
100004	Logistics Hub Gamma	1
100005	Service Center Delta	1

```
5 rows in set (0.01 sec)
```

17)

```
mysql> SELECT courier.courierID, courier.sendername, courier.receivername, AVG(courier.deliverydate) AS AverageDeliveryTime FROM courier WHERE courier.status = 'Delivered' GROUP BY courier.courierID ORDER BY AverageDeliveryTime DESC LIMIT 1;
```

courierID	sendername	receivername	AverageDeliveryTime
105	Emma Sender	Ivan Receiver	20230309.0000

1 row in set (0.01 sec)

18)

```
mysql> SELECT location.LocationID, location.LocationName, SUM(payment.amount) AS TotalPayments FROM location LEFT JOIN payment ON location.LocationID = payment.locationID GROUP BY location.LocationID, location.LocationName HAVING TotalPayments < 30;
```

LocationID	LocationName	TotalPayments
100001	Main Office	25.50
100003	Retail Store Beta	18.90

2 rows in set (0.00 sec)

19)

```
mysql> SELECT location.LocationID, location.LocationName, SUM(payment.amount) AS TotalPayments FROM location LEFT JOIN payment ON location.LocationID = payment.locationID GROUP BY location.LocationID, location.LocationName;
```

LocationID	LocationName	TotalPayments
100001	Main Office	25.50
100002	Warehouse Alpha	30.75
100003	Retail Store Beta	18.90
100004	Logistics Hub Gamma	42.25
100005	Service Center Delta	35.60

5 rows in set (0.00 sec)

20)

```
mysql> SELECT courier.courierID, courier.sendername, courier.receivername, SUM(payment.amount) AS TotalPayments FROM courier JOIN payment ON courier.courierID = payment.courierID -> WHERE payment.locationID = 100001 GROUP BY courier.courierID, courier.sendername, courier.receivername HAVING TotalPayments > 20;
```

courierID	sendername	receivername	TotalPayments
101	John Sender	Alice Receiver	25.50

1 row in set (0.00 sec)

mysql>

21)

```
mysql> SELECT courier.courierID, courier.sendername, courier.receivername, SUM(payment.amount) AS TotalPayments FROM courier JOIN payment ON courier.courierID = payment.courierID WHERE payment.PaymentDate > '2023-02-22' -> GROUP BY courier.courierID, courier.sendername, courier.receivername HAVING TotalPayments > 30;
```

courierID	sendername	receivername	TotalPayments
102	Bob Sender	Eva Receiver	30.75
104	David Sender	Helen Receiver	42.25
105	Emma Sender	Ivan Receiver	35.60

3 rows in set (0.00 sec)

22)

```
mysql> SELECT location.LocationID, location.LocationName, SUM(payment.amount) AS TotalAmountReceived FROM location
LEFT JOIN payment ON location.LocationID = payment.locationID WHERE payment.PaymentDate > '22-02-22' OR payment
.PaymentDate IS NULL
-> GROUP BY location.LocationID, location.LocationName HAVING TotalAmountReceived > 40;
+-----+-----+-----+
| LocationID | LocationName | TotalAmountReceived |
+-----+-----+-----+
| 100004 | Logistics Hub Gamma | 42.25 |
+-----+-----+-----+
1 row in set (0.01 sec)

mysql>
```

Task 4

23)

```
mysql> SELECT payment.*, courier.* FROM payment JOIN courier ON payment.courierID = courier.courierID;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| PaymentID | courierID | locationID | amount | Paymentdate | courierid | sendername | senderaddress | receivername | receiveraddress | weight | status | trackingnumber | deliverydate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 135 | 101 | 100001 | 25.50 | 2023-04-01 | 101 | John Sender | 123 Main St, CityA | Alice Receiver | 456 Oak St, CityA | 2.30 | Shipped | TIX123 | 2023-03-01 |
| 253 | 102 | 100002 | 30.75 | 2023-04-02 | 102 | Bob Sender | 789 Elm St, CityB | Eva Receiver | 987 Pine St, CityB | 3.50 | In Transit | TIX456 | 2023-03-03 |
| 386 | 103 | 100003 | 18.90 | 2023-04-03 | 103 | Charlie Sender | 321 Maple St, CityC | Grace Receiver | 654 Cedar St, CityC | 1.80 | Delivered | TIX789 | 2023-03-05 |
| 435 | 104 | 100004 | 42.25 | 2023-04-04 | 104 | David Sender | 567 Birch St, CityD | Helen Receiver | 876 Spruce St, CityD | 4.20 | Shipped | TIX987 | 2023-03-07 |
| 566 | 105 | 100005 | 35.60 | 2023-04-05 | 105 | Emma Sender | 987 Willow St, CityE | Ivan Receiver | 234 Oak St, CityE | 2.70 | Delivered | TIX654 | 2023-03-09 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

24)

```
mysql> SELECT payment.PaymentID, payment.amount, payment.PaymentDate,
-> location.LocationID, location.LocationName, location.Address
-> FROM payment
-> JOIN location ON payment.locationID = location.LocationID;
+-----+-----+-----+-----+-----+-----+
| PaymentID | amount | PaymentDate | LocationID | LocationName | Address |
+-----+-----+-----+-----+-----+-----+
| 135 | 25.50 | 2023-04-01 | 100001 | Main Office | 321 Maple St, CityX |
| 253 | 30.75 | 2023-04-02 | 100002 | Warehouse Alpha | 987 Willow St, CityY |
| 386 | 18.90 | 2023-04-03 | 100003 | Retail Store Beta | 567 Birch St, CityZ |
| 435 | 42.25 | 2023-04-04 | 100004 | Logistics Hub Gamma | 876 Spruce St, CityW |
| 566 | 35.60 | 2023-04-05 | 100005 | Service Center Delta | 234 Oak St, CityV |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

25)


```
mysql> SELECT payment.PaymentID, payment.amount, payment.PaymentDate,
-> courier.courierID, courier.sendername, courier.receiveername,
-> location.LocationID, location.LocationName, location.Address
-> FROM payment
-> JOIN courier ON payment.courierID = courier.courierID
-> JOIN location ON payment.locationID = location.LocationID;
```

PaymentID	amount	PaymentDate	courierID	sendername	receiveername	LocationID	LocationName	Address
135	25.50	2023-04-01	101	John Sender	Alice Receiver	100001	Main Office	321 Maple St, CityX
253	30.75	2023-04-02	102	Bob Sender	Eva Receiver	100002	Warehouse Alpha	987 Willow St, CityY
386	18.90	2023-04-03	103	Charlie Sender	Grace Receiver	100003	Retail Store Beta	567 Birch St, CityZ
435	42.25	2023-04-04	104	David Sender	Helen Receiver	100004	Logistics Hub Gamma	876 Spruce St, CityW
566	35.60	2023-04-05	105	Emma Sender	Ivan Receiver	100005	Service Center Delta	234 Oak St, CityV

5 rows in set (0.00 sec)

26)

```
mysql> SELECT payment.PaymentID, payment.amount, payment.PaymentDate,
-> courier.courierID, courier.sendername, courier.receiveername
-> FROM payment
-> JOIN courier ON payment.courierID = courier.courierID;
```

PaymentID	amount	PaymentDate	courierID	sendername	receiveername
135	25.50	2023-04-01	101	John Sender	Alice Receiver
253	30.75	2023-04-02	102	Bob Sender	Eva Receiver
386	18.90	2023-04-03	103	Charlie Sender	Grace Receiver
435	42.25	2023-04-04	104	David Sender	Helen Receiver
566	35.60	2023-04-05	105	Emma Sender	Ivan Receiver

5 rows in set (0.00 sec)

27)

```
mysql> SELECT courier.courierID, courier.sendername, courier.receiveername,
-> SUM(payment.amount) AS TotalPaymentsReceived
-> FROM courier
-> LEFT JOIN payment ON courier.courierID = payment.courierID
-> GROUP BY courier.courierID, courier.sendername, courier.receiveername;
```

courierID	sendername	receiveername	TotalPaymentsReceived
101	John Sender	Alice Receiver	25.50
102	Bob Sender	Eva Receiver	30.75
103	Charlie Sender	Grace Receiver	18.90
104	David Sender	Helen Receiver	42.25
105	Emma Sender	Ivan Receiver	35.60

5 rows in set (0.00 sec)

28)

```
mysql> SELECT *
-> FROM payment
-> WHERE PaymentDate = '2023-04-02';
```

PaymentID	courierID	locationId	amount	Paymentdate
253	102	100002	30.75	2023-04-02

1 row in set (0.00 sec)

29)

```
mysql> SELECT payment.PaymentID, payment.amount, payment.PaymentDate,
-> courier.courierID, courier.sendername, courier.receivername
-> FROM payment
-> JOIN courier ON payment.courierID = courier.courierID;
```

PaymentID	amount	PaymentDate	courierID	sendername	receivername
135	25.50	2023-04-01	101	John Sender	Alice Receiver
253	30.75	2023-04-02	102	Bob Sender	Eva Receiver
386	18.90	2023-04-03	103	Charlie Sender	Grace Receiver
435	42.25	2023-04-04	104	David Sender	Helen Receiver
566	35.60	2023-04-05	105	Emma Sender	Ivan Receiver

5 rows in set (0.00 sec)

30)

```
mysql> SELECT payment.PaymentID, payment.amount, payment.PaymentDate,
-> location.LocationID, location.LocationName, location.Address
-> FROM payment
-> JOIN location ON payment.locationID = location.LocationID;
```

PaymentID	amount	PaymentDate	LocationID	LocationName	Address
135	25.50	2023-04-01	100001	Main Office	321 Maple St, CityX
253	30.75	2023-04-02	100002	Warehouse Alpha	987 Willow St, CityY
386	18.90	2023-04-03	100003	Retail Store Beta	567 Birch St, CityZ
435	42.25	2023-04-04	100004	Logistics Hub Gamma	876 Spruce St, CityW
566	35.60	2023-04-05	100005	Service Center Delta	234 Oak St, CityV

5 rows in set (0.01 sec)

31)

```
mysql> SELECT courier.courierID, courier.sendername, courier.receivername,
-> SUM(payment.amount) AS TotalPayments
-> FROM courier
-> LEFT JOIN payment ON courier.courierID = payment.courierID
-> GROUP BY courier.courierID, courier.sendername, courier.receivername;
```

courierID	sendername	receivername	TotalPayments
101	John Sender	Alice Receiver	25.50
102	Bob Sender	Eva Receiver	30.75
103	Charlie Sender	Grace Receiver	18.90
104	David Sender	Helen Receiver	42.25
105	Emma Sender	Ivan Receiver	35.60

5 rows in set (0.00 sec)

32)

```
mysql> SELECT *
-> FROM payment
-> WHERE PaymentDate BETWEEN '2023-04-02' AND '2023-04-04';
```

PaymentID	courierID	locationId	amount	Paymentdate
253	102	100002	30.75	2023-04-02
386	103	100003	18.90	2023-04-03
435	104	100004	42.25	2023-04-04

3 rows in set (0.01 sec)

33)

```
mysql> SELECT
-> u.userid,
-> u.name AS UserName,
-> c.courierid,
-> c.sendername,
-> c.senderaddress,
-> c.receivername,
-> c.weight,
-> c.status,
-> c.trackingnumber,
-> c.deliverydate
-> FROM
-> user u
-> LEFT JOIN
-> courier c ON u.name = c.sendername OR u.name = c.receivername;
```

userid	UserName	courierid	sendername	senderaddress	receivername	weight	status	trackingnumber	deliverydate
1	John Doe	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
2	Jane Smith	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
3	Alice Johnson	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
4	Bob Williams	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
5	Eva Davis	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

5 rows in set (0.01 sec)

34)

```
mysql> SELECT
->     c.courierid,
->     c.sendername,
->     c.receivername,
->     c.weight,
->     c.status,
->     c.trackingnumber,
->     cs.servicename,
->     cs.cost
-> FROM
->     courier c
-> LEFT JOIN
->     courierservices cs ON c.weight = cs.cost;
```

courierid	sendername	receivername	weight	status	trackingnumber	servicename	cost
101	John Sender	Alice Receiver	2.30	Shipped	TNX123	NULL	NULL
102	Bob Sender	Eva Receiver	3.50	In Transit	TNX456	NULL	NULL
103	Charlie Sender	Grace Receiver	1.80	Delivered	TNX789	NULL	NULL
104	David Sender	Helen Receiver	4.20	Shipped	TNX987	NULL	NULL
105	Emma Sender	Ivan Receiver	2.70	Delivered	TNX654	NULL	NULL

5 rows in set (0.01 sec)

35)

```
mysql> SELECT employee.*, payment.*
-> FROM employee
-> LEFT JOIN payment ON employee.employeeid = payment.courierid;
```

EmployeeID	Name	Email	ContactNumber	Role	Salary	PaymentID	courierID	locationId	amount
10001	Michael Johnson	michael.j@example.com	1234567890	Manager	75000.00	NULL	NULL	NULL	NULL
10002	Amanda Brown	amanda.b@example.com	9876543210	Clerk	45000.00	NULL	NULL	NULL	NULL
10003	Christopher White	chris.w@example.com	5556667777	Supervisor	60000.00	NULL	NULL	NULL	NULL
10004	Emily Davis	emily.d@example.com	3332221111	Analyst	80000.00	NULL	NULL	NULL	NULL
10005	Daniel Smith	daniel.s@example.com	1110009999	Developer	70000.00	NULL	NULL	NULL	NULL

5 rows in set (0.00 sec)

```
mysql>
```

36)

```
mysql> SELECT user.*, courierservices.*
-> FROM user
-> CROSS JOIN courierservices;
```

userid	name	email	password	contactnumber	address	serviceid	servicename	cost
5	Eva Davis	eva.d@example.com	abcd5678	1110009999	890 Cedar Rd	1001	Standard Shipping	10.99
4	Bob Williams	bob.w@example.com	qwerty123	3332221111	567 Pine St	1001	Standard Shipping	10.99
3	Alice Johnson	alice.j@example.com	secret789	5556667777	789 Maple Ave	1001	Standard Shipping	10.99
2	Jane Smith	jane.smith@example.com	pass456	9876543210	456 Oak St	1001	Standard Shipping	10.99
1	John Doe	john.doe@example.com	password123	1234567890	123 Main St	1001	Standard Shipping	10.99
5	Eva Davis	eva.d@example.com	abcd5678	1110009999	890 Cedar Rd	1002	Express Shipping	19.99
4	Bob Williams	bob.w@example.com	qwerty123	3332221111	567 Pine St	1002	Express Shipping	19.99
3	Alice Johnson	alice.j@example.com	secret789	5556667777	789 Maple Ave	1002	Express Shipping	19.99
2	Jane Smith	jane.smith@example.com	pass456	9876543210	456 Oak St	1002	Express Shipping	19.99

37)

```
mysql> SELECT employee.*, location.*
-> FROM employee
-> CROSS JOIN location;
```

EmployeeID	Name	Email	ContactNumber	Role	Salary	LocationID	LocationName	Address
10005	Daniel Smith	daniel.s@example.com	1110009999	Developer	70000.00	100001	Main Office	321 Maple St, CityX
10004	Emily Davis	emily.d@example.com	3332221111	Analyst	80000.00	100001	Main Office	321 Maple St, CityX
10003	Christopher White	chris.w@example.com	5556667777	Supervisor	60000.00	100001	Main Office	321 Maple St, CityX
10002	Amanda Brown	amanda.b@example.com	9876543210	Clerk	45000.00	100001	Main Office	321 Maple St, CityX
10001	Michael Johnson	michael.j@example.com	1234567890	Manager	75000.00	100001	Main Office	321 Maple St, CityX
10005	Daniel Smith	daniel.s@example.com	1110009999	Developer	70000.00	100002	Warehouse Alpha	987 Willow St, CityY
10004	Emily Davis	emily.d@example.com	3332221111	Analyst	80000.00	100002	Warehouse Alpha	987 Willow St, CityY
10003	Christopher White	chris.w@example.com	5556667777	Supervisor	60000.00	100002	Warehouse Alpha	987 Willow St, CityY

38)

```
mysql> SELECT
-> c.courierid,
-> c.sendername,
-> u.userid AS sender_userid,
-> u.name AS sender_name
-> FROM
-> courier c
-> JOIN
-> user u ON c.sendername = u.name;
Empty set (0.01 sec)
```

39)

```
mysql> SELECT
-> c.courierid,
-> c.receivername,
-> u.userid AS receiver_userid,
-> u.name AS receiver_name
-> FROM
-> courier c
-> JOIN
-> user u ON c.receivername = u.name;
Empty set (0.01 sec)
```

40)

```
mysql> SELECT
->   c.courierid,
->   c.sendername,
->   c.receivername,
->   c.weight,
->   c.status,
->   c.trackingnumber,
->   c.deliverydate,
->   cs.servicename,
->   cs.cost
-> FROM
->   courier c
-> LEFT JOIN
->   courierservices cs ON c.weight = cs.cost;
```

courierid	sendername	receivername	weight	status	trackingnumber	deliverydate	servicename	cost
101	John Sender	Alice Receiver	2.30	Shipped	TNX123	2023-03-01	NULL	NULL
102	Bob Sender	Eva Receiver	3.50	In Transit	TNX456	2023-03-03	NULL	NULL
103	Charlie Sender	Grace Receiver	1.80	Delivered	TNX789	2023-03-05	NULL	NULL
104	David Sender	Helen Receiver	4.20	Shipped	TNX987	2023-03-07	NULL	NULL
105	Emma Sender	Ivan Receiver	2.70	Delivered	TNX654	2023-03-09	NULL	NULL

5 rows in set (0.00 sec)

41)

```
mysql> SELECT
->   e.EmployeeID,
->   e.Name AS EmployeeName,
->   e.Role AS EmployeeRole,
->   e.Salary AS EmployeeSalary,
->   COUNT(c.courierid)
-> FROM
->   employee e
-> LEFT JOIN
->   courier c ON e.Name = c.sendername
-> GROUP BY
->   e.EmployeeID, e.Name, e.Role, e.Salary;
```

EmployeeID	EmployeeName	EmployeeRole	EmployeeSalary	COUNT(c.courierid)
10001	Michael Johnson	Manager	75000.00	0
10002	Amanda Brown	Clerk	45000.00	0
10003	Christopher White	Supervisor	60000.00	0
10004	Emily Davis	Analyst	80000.00	0
10005	Daniel Smith	Developer	70000.00	0

5 rows in set (0.01 sec)

42)

```
mysql> SELECT l.*, SUM(p.amount) AS total_payment_amount
-> FROM location l
-> LEFT JOIN payment p ON l.locationid = p.locationid
-> GROUP BY l.locationid, l.locationname, l.address;
```

LocationID	LocationName	Address	total_payment_amount
100001	Main Office	321 Maple St, CityX	25.50
100002	Warehouse Alpha	987 Willow St, CityY	30.75
100003	Retail Store Beta	567 Birch St, CityZ	18.90
100004	Logistics Hub Gamma	876 Spruce St, CityW	42.25
100005	Service Center Delta	234 Oak St, CityV	35.60

5 rows in set (0.00 sec)

43)

```
mysql> SELECT
->     courierid,
->     sendername,
->     receivername,
->     weight,
->     status,
->     trackingnumber,
->     deliverydate
-> FROM
->     courier
-> WHERE
->     sendername = 'Bob Sender';
```

courierid	sendername	receivername	weight	status	trackingnumber	deliverydate
102	Bob Sender	Eva Receiver	3.50	In Transit	TNX456	2023-03-03

1 row in set (0.01 sec)

44)

```
mysql> SELECT
->     Role,
->     GROUP_CONCAT(EmployeeID) AS EmployeeIDs,
->     COUNT(*) AS EmployeeCount
-> FROM employee GROUP BY Role HAVING COUNT(*) > 1;
```

Empty set (0.00 sec)

45)

```
mysql> SELECT p.PaymentID,p.courierID,p.amount ,c1.sendername,c1.receivername,c1.weight,c1.status,c1.trackingnumber,c1.deliverydate
-> FROM payment p
-> JOIN courier c1 ON p.courierID = c1.courierid
-> JOIN courier c2 ON c1.senderaddress = c2.senderaddress
-> WHERE c2.courierid <> c1.courierid;
```

Empty set (0.00 sec)

46)

```
mysql> SELECT
->     c1.courierid,c1.sendername,c1.senderaddress,c1.receivername,c1.weight,c1.status,c1.trackingnumber,c1.deliverydate
-> FROM
->     courier c1
-> JOIN
->     courier c2 ON c1.senderaddress = c2.senderaddress
-> WHERE
->     c2.courierid <> c1.courierid;
```

Empty set (0.00 sec)

47)

```
mysql> SELECT
->     e.EmployeeID,
->     e.Name AS EmployeeName,
->     e.Role AS EmployeeRole,
->     e.Salary AS EmployeeSalary,
->     COUNT(c.courierid)
-> FROM
->     employee e
-> LEFT JOIN
->     courier c ON e.Name = c.sendername
-> GROUP BY
->     e.EmployeeID;
```

EmployeeID	EmployeeName	EmployeeRole	EmployeeSalary	COUNT(c.courierid)
10001	Michael Johnson	Manager	75000.00	0
10002	Amanda Brown	Clerk	45000.00	0
10003	Christopher White	Supervisor	60000.00	0
10004	Emily Davis	Analyst	80000.00	0
10005	Daniel Smith	Developer	70000.00	0

5 rows in set (0.01 sec)

48)

```
mysql> SELECT
->     p.PaymentID,
->     p.courierID,
->     p.amount ,
->     c.sendername,
->     c.weight,
->     c.status,
->     c.trackingnumber,
->     c.deliverydate
-> FROM
->     payment p
-> JOIN
->     courier c ON p.courierID = c.courierid
-> WHERE
->     p.amount > (SELECT MAX(cost) FROM courierservices );
```

Empty set (0.00 sec)

49)

```
mysql> SELECT *
-> FROM courier
-> WHERE weight > (SELECT AVG(weight) FROM courier);
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07

2 rows in set (0.07 sec)

```
mysql>
```

50)


```
mysql> SELECT Name, Salary
-> FROM employee
-> WHERE Salary > (SELECT AVG(Salary) FROM employee);
```

Name	Salary
Michael Johnson	75000.00
Emily Davis	80000.00
Daniel Smith	70000.00

```
3 rows in set (0.01 sec)
```

51)

```
mysql> SELECT SUM(cost) AS total_cost
-> FROM courierservices
-> WHERE cost < (SELECT MAX(cost) FROM courierservices);
```

total_cost
100.96

```
1 row in set (0.00 sec)
```

52)

```
mysql> SELECT DISTINCT c.*
-> FROM courier c
-> INNER JOIN payment p ON c.courierid = p.courierID;
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
101	John Sender	123 Main St, CityA	Alice Receiver	456 Oak St, CityA	2.30	Shipped	TNX123	2023-03-01
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
103	Charlie Sender	321 Maple St, CityC	Grace Receiver	654 Cedar St, CityC	1.80	Delivered	TNX789	2023-03-05
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07
105	Emma Sender	987 Willow St, CityE	Ivan Receiver	234 Oak St, CityE	2.70	Delivered	TNX654	2023-03-09

```
5 rows in set (0.02 sec)

mysql>
```

53)

```
mysql> SELECT l.LocationID, l.LocationName, MAX(p.amount) AS max_payment_amount
-> FROM location l
-> INNER JOIN payment p ON l.LocationID = p.locationID
-> GROUP BY l.LocationID, l.LocationName;
```

LocationID	LocationName	max_payment_amount
100001	Main Office	25.50
100002	Warehouse Alpha	30.75
100003	Retail Store Beta	18.90
100004	Logistics Hub Gamma	42.25
100005	Service Center Delta	35.60

5 rows in set (0.01 sec)

54)

```
mysql> SELECT *
-> FROM courier c1
-> WHERE weight > ALL (
->   SELECT c2.weight
->   FROM courier c2
->   WHERE c2.sendername = 'Emma Sender'
-> );
```

courierid	sendername	senderaddress	receivername	receiveraddress	weight	status	trackingnumber	deliverydate
102	Bob Sender	789 Elm St, CityB	Eva Receiver	987 Pine St, CityB	3.50	In Transit	TNX456	2023-03-03
104	David Sender	567 Birch St, CityD	Helen Receiver	876 Spruce St, CityD	4.20	Shipped	TNX987	2023-03-07

2 rows in set (0.00 sec)

mysql>