Hexaware Foundation Training 2025

Sql / Java Assignments

Courier Management System

28/03/2025

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Task 4

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

23. Retrieve Payments with Courier Information

24. Retrieve Payments with Location Information

25. Retrieve Payments with Courier and Location Information

26. List all payments with courier details

27. Total payments received for each courier

28. List payments made on a specific date

29. Get Courier Information for Each Payment

30. Get Payment Details with Location

31. Calculating Total Payments for Each Courier

32. List Payments Within a Date Range

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

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

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

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

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

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

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

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

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

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

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

44. List all employees who share the same role.

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

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

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

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

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

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

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

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

SELECT CourierID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY CourierID;

SELECT * FROM Payment WHERE PaymentDate = '2025-03-30';

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

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

SELECT CourierID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY CourierID;

SELECT * FROM Payment WHERE PaymentDate BETWEEN '2025-03-01' AND '2025-03-30';

SELECT User.*, Courier.* FROM User LEFT JOIN Courier ON User.UserID = Courier.SenderName
UNION
SELECT User.*, Courier.* FROM User RIGHT JOIN Courier ON User.UserID = Courier.SenderName;

SELECT Courier.*, CourierServices.* FROM Courier LEFT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID
UNION
SELECT Courier.*, CourierServices.* FROM Courier RIGHT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID;

SELECT Employee.*, Payment.* FROM Employee LEFT JOIN Payment ON Employee.EmployeeID = Payment.CourierID
UNION
SELECT Employee.*, Payment.* FROM Employee RIGHT JOIN Payment ON Employee.EmployeeID = Payment.CourierID;

SELECT * FROM User CROSS JOIN CourierServices;

SELECT * FROM Employee CROSS JOIN Location;

SELECT Courier.*, SenderName FROM Courier;

SELECT Courier.*, ReceiverName FROM Courier;

SELECT Courier.*, CourierServices.* FROM Courier LEFT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID;

SELECT EmployeeID, COUNT(CourierID) AS AssignedCouriers FROM Courier GROUP BY EmployeeID;

SELECT LocationID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY LocationID;

SELECT * FROM Courier WHERE SenderName = 'John Doe';

SELECT * FROM Employee WHERE Role IN (SELECT Role FROM Employee GROUP BY Role HAVING COUNT(*) > 1);

SELECT * FROM Payment WHERE CourierID IN (SELECT CourierID FROM Courier WHERE SenderAddress = 'Chennai');

SELECT * FROM Courier WHERE SenderAddress = 'Chennai';

SELECT EmployeeID, COUNT(CourierID) AS DeliveredCouriers FROM Courier GROUP BY EmployeeID;

SELECT Courier.CourierID, Payment.Amount, CourierServices.Cost
FROM Payment
INNER JOIN Courier ON Payment.CourierID = Courier.CourierID
INNER JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID
WHERE Payment.Amount > CourierServices.Cost;

```
100
101 •   SELECT * FROM Payment INNER JOIN Courier ON Payment.CourierID = Courier.CourierID;
102
103
104
105
106
107
108
109
110
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

	PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	Employe
▶	1	1	1	100.00	2025-03-30	1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL
	2	2	2	50.00	2025-03-28	2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL

```
102 •   SELECT * FROM Payment INNER JOIN Location ON Payment.LocationID = Location.LocationID;
103
104       |
105
106
107
108
109
110
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

	PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationID	LocationName	Address
▶	1	1	1	100.00	2025-03-30	1	New York Hub	NY Main Street
	2	2	2	50.00	2025-03-28	2	Los Angeles Hub	LA Central Street

```sql
103
104 •  SELECT * FROM Payment
105    INNER JOIN Courier ON Payment.CourierID = Courier.CourierID
106    INNER JOIN Location ON Payment.LocationID = Location.LocationID;
107
108
109
110
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔲

PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	Employe
1	1	1	100.00	2025-03-30	1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL
2	2	2	50.00	2025-03-28	2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL

```sql
108 •  SELECT Payment.*, Courier.* FROM Payment INNER JOIN Courier ON Payment.CourierID = Courier.CourierID;
109
110
111
112
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔲

PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	Emp
1	1	1	100.00	2025-03-28	1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL
2	2	2	50.00	2025-03-28	2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL

```sql
109 •  SELECT CourierID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY CourierID;
110
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 🔲

CourierID	TotalPayments
1	100.00
2	50.00

```sql
110 •  SELECT * FROM Payment WHERE PaymentDate = '2025-03-30';
111
112
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell C

PaymentID	CourierID	LocationID	Amount	PaymentDate
1	1	1	100.00	2025-03-30
NULL	NULL	NULL	NULL	NULL

4

```sql
SELECT * FROM Payment WHERE PaymentDate = '2025-03-30';
SELECT Payment.*, Courier.* FROM Payment INNER JOIN Courier ON Payment.CourierID = Courier.CourierID;
```

PaymentID	CourierID	LocationID	Amount	PaymentDate	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	Employ...
1	1	1	100.00	2025-03-30	1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL
2	2	2	50.00	2025-03-28	2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL

```sql
SELECT Payment.*, Location.* FROM Payment INNER JOIN Location ON Payment.LocationID = Location.LocationID;
```

PaymentID	CourierID	LocationID	Amount	PaymentDate	LocationID	LocationName	Address
1	1	1	100.00	2025-03-30	1	New York Hub	NY Main Street
2	2	2	50.00	2025-03-28	2	Los Angeles Hub	LA Central Street

```sql
SELECT CourierID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY CourierID;
```

CourierID	TotalPayments
1	100.00
2	50.00

```sql
SELECT * FROM Payment WHERE PaymentDate BETWEEN '2025-03-01' AND '2025-03-30';
```

PaymentID	CourierID	LocationID	Amount	PaymentDate
1	1	1	100.00	2025-03-30
2	2	2	50.00	2025-03-28
NULL	NULL	NULL	NULL	NULL

```sql
SELECT User.*, Courier.* FROM User LEFT JOIN Courier ON User.UserID = Courier.SenderName
UNION
SELECT User.*, Courier.* FROM User RIGHT JOIN Courier ON User.UserID = Courier.SenderName;
```

UserID	Name	Email	Password	ContactNumber	Address	CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumb...
1	John Doe	john@example.com	password123	9876543210	New York	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
2	Smith	alice@example.com	alicepass	8765432109	Los Angeles	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
NULL	NULL	NULL	NULL	NULL	NULL	1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123
NULL	NULL	NULL	NULL	NULL	NULL	2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456

```sql
122
123 •  SELECT Courier.*, CourierServices.* FROM Courier LEFT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID
124    UNION
125    SELECT Courier.*, CourierServices.* FROM Courier RIGHT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID;
126
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	EmployeeID	ServiceID	ServiceName	Cost
1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL	1	Express Delivery	100.00
2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL	2	Standard Delivery	50.00

```sql
126 •  SELECT Employee.*, Payment.* FROM Employee LEFT JOIN Payment ON Employee.EmployeeID = Payment.CourierID
127    UNION
128    SELECT Employee.*, Payment.* FROM Employee RIGHT JOIN Payment ON Employee.EmployeeID = Payment.CourierID;
129
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

EmployeeID	Name	Email	ContactNumber	Role	Salary	PaymentID	CourierID	LocationID	Amount	PaymentDate
1	Michael	michael@dundermifflin.com	9998887776	Manager	60000.00	1	1	1	100.00	2025-03-30
2	Jim	jim@dundermifflin.com	9998887775	Agent	30000.00	2	2	2	50.00	2025-03-28

```sql
129 •  SELECT * FROM User CROSS JOIN CourierServices;
130
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

UserID	Name	Email	Password	ContactNumber	Address	ServiceID	ServiceName	Cost
2	Smith	alice@example.com	alicepass	8765432109	Los Angeles	1	Express Delivery	100.00
1	John Doe	john@example.com	password123	9876543210	New York	1	Express Delivery	100.00
2	Smith	alice@example.com	alicepass	8765432109	Los Angeles	2	Standard Delivery	50.00
1	John Doe	john@example.com	password123	9876543210	New York	2	Standard Delivery	50.00

```sql
130 •  SELECT * FROM Employee CROSS JOIN Location;
131
132
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

EmployeeID	Name	Email	ContactNumber	Role	Salary	LocationID	LocationName	Address
2	Jim	jim@dundermifflin.com	9998887775	Agent	30000.00	1	New York Hub	NY Main Street
1	Michael	michael@dundermifflin.com	9998887776	Manager	60000.00	1	New York Hub	NY Main Street
2	Jim	jim@dundermifflin.com	9998887775	Agent	30000.00	2	Los Angeles Hub	LA Central Street
1	Michael	michael@dundermifflin.com	9998887776	Manager	60000.00	2	Los Angeles Hub	LA Central Street

```sql
131
132 •  SELECT Courier.*, SenderName FROM Courier;
133
134
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: IA

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	EmployeeID	SenderName
1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL	John Doe
2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL	Smith
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
134 •    SELECT Courier.*, ReceiverName FROM Courier;
135
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	EmployeeID	ReceiverName
1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL	Alice Smith
2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL	John Doe
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
134 •    SELECT Courier.*, ReceiverName FROM Courier;
135 •    SELECT Courier.*, CourierServices.* FROM Courier LEFT JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID;
136
```

CourierID	SenderName	SenderAddress	ReceiverName	ReceiverAddress	Weight	Status	TrackingNumber	DeliveryDate	EmployeeID	ServiceID	ServiceName	Cost
1	John Doe	New York	Alice Smith	Los Angeles	5.00	In Transit	TRACK123	2025-04-01	NULL	1	Express Delivery	100.00
2	Smith	Los Angeles	John Doe	New York	2.50	Delivered	TRACK456	2025-03-29	NULL	2	Standard Delivery	50.00

```sql
136
137 •    SELECT EmployeeID, COUNT(CourierID) AS AssignedCouriers FROM Courier GROUP BY EmployeeID;
138
```

EmployeeID	AssignedCouriers
NULL	2

```sql
138 •    SELECT LocationID, SUM(Amount) AS TotalPayments FROM Payment GROUP BY LocationID;
139
```

LocationID	TotalPayments
1	100.00
2	50.00

```sql
140 •    SELECT * FROM Employee WHERE Role IN (SELECT Role FROM Employee GROUP BY Role HAVING COUNT(*) > 1);
141
```

EmployeeID	Name	Email	ContactNumber	Role	Salary
* NULL	NULL	NULL	NULL	NULL	NULL

```sql
141 •    SELECT EmployeeID, COUNT(CourierID) AS DeliveredCouriers FROM Courier GROUP BY EmployeeID;
142
```

EmployeeID	DeliveredCouriers
NULL	2

```
142 •   SELECT Courier.CourierID, Payment.Amount, CourierServices.Cost
143     FROM Payment
144     INNER JOIN Courier ON Payment.CourierID = Courier.CourierID
145     INNER JOIN CourierServices ON Courier.CourierID = CourierServices.ServiceID
146     WHERE Payment.Amount > CourierServices.Cost;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ‡A

CourierID	Amount	Cost