Name: Shifa Fathima I

Assignment : Courier Management System

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

Solve the following queries in the Schema that you have created above

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

15. Calculate the total revenue generated by each location

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

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

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

19. Calculate Total Payments per Location

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

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

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

Answers:

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

```
--  Find the total number of couriers handled by each employee.

-- Since there is no direct Employee-Courier relation in your schema, this query is not possible

-- unless you have an assignment table linking employees to couriers.

-- If employees are supposed to handle couriers, you need to create that relation.

SELECT e.EmployeeID, e.Name, COUNT(ca.CourierID) AS TotalCouriersHandled

FROM Employee e

JOIN CourierAssignment ca ON e.EmployeeID = ca.EmployeeID

GROUP BY e.EmployeeID, e.Name

ORDER BY TotalCouriersHandled DESC;
```

15. Calculate the total revenue generated by each location

```
-- Calculate the total revenue generated by each location.
SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalRevenue
FROM Payment p
JOIN Location l ON p.LocationID = l.LocationID
GROUP BY l.LocationID, l.LocationName;
```

Result Grid | Filter Rows:

LocationID	LocationName	TotalRevenue
1	Downtown Hub	50.00
2	Uptown Hub	100.00
3	East End Hub	150.00
4	West End Hub	200.00
5	South Side Hub	250.00
6	North Side Hub	300.00
7	City Center Hub	350.00
8	Airport Hub	400.00
9	Harbor Hub	450.00
10	Industrial Hub	500.00

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

```
-- Find the total number of couriers delivered to each receiver address.
SELECT ReceiverAddress, COUNT(CourierID) AS TotalCouriersDelivered
FROM Courier
WHERE Status = 'Delivered'
GROUP BY ReceiverAddress
ORDER BY TotalCouriersDelivered DESC;
```

Result Grid | Filter Rows:

ReceiverAddress	TotalCouriersDelivered
101 Pine St	1
606 Aspen St	1
789 Pine St	1

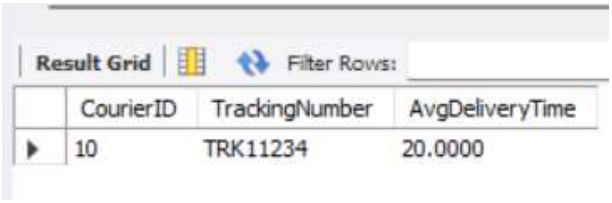
17. Find the courier with the highest average delivery time:

-- Find the courier with the highest average delivery time.

-- Since there is no dispatch date in your schema, this cannot be calculated correctly.

-- However, if we assume all deliveries started on the date of payment, we can use:

```
SELECT c.CourierID, c.TrackingNumber, AVG(DATEDIFF(c.DeliveryDate,
p.PaymentDate)) AS AvgDeliveryTime
FROM Courier c
JOIN Payment p ON c.CourierID = p.CourierID
WHERE c.DeliveryDate IS NOT NULL
GROUP BY c.CourierID, c.TrackingNumber
ORDER BY AvgDeliveryTime DESC
LIMIT 1;
```



Result Grid | Filter Rows:

CourierID	TrackingNumber	AvgDeliveryTime
10	TRK11234	20.0000

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

-- Find locations with total payments less than a certain amount (e.g., $2000).

```
SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments
FROM Payment p
JOIN Location l ON p.LocationID = l.LocationID
GROUP BY l.LocationID, l.LocationName
HAVING TotalPayments < 2000;
```

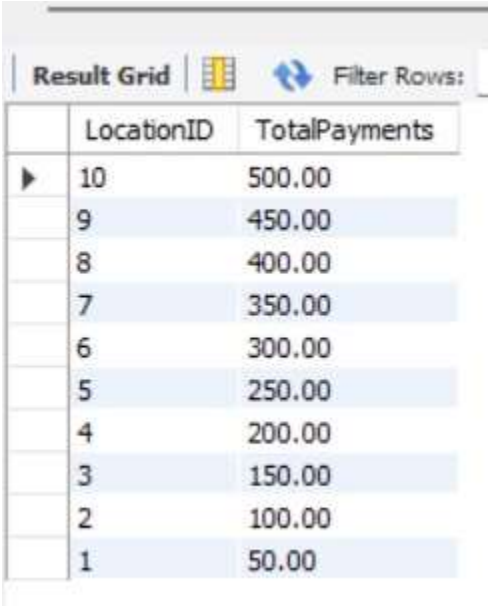
Result Grid | Filter Rows:

LocationID	LocationName	TotalPayments
1	Downtown Hub	50.00
2	Uptown Hub	100.00
3	East End Hub	150.00
4	West End Hub	200.00
5	South Side Hub	250.00
6	North Side Hub	300.00
7	City Center Hub	350.00
8	Airport Hub	400.00
9	Harbor Hub	450.00
10	Industrial Hub	500.00

19. Calculate Total Payments per Location

-- Calculate total payments per location.

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



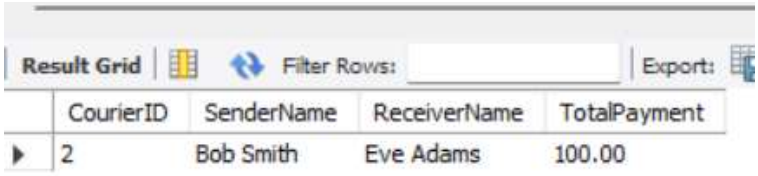
Result Grid | Filter Rows:

LocationID	TotalPayments
10	500.00
9	450.00
8	400.00
7	350.00
6	300.00
5	250.00
4	200.00
3	150.00
2	100.00
1	50.00

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

--Retrieve couriers who have received payments totaling more than $1000 in a specific location.

```
SELECT c.CourierID, c.SenderName, c.ReceiverName, SUM(p.Amount) AS TotalPayment
FROM Payment p
JOIN Courier c ON p.CourierID = c.CourierID
WHERE p.LocationID = 2  -- Replace X with the specific LocationID
GROUP BY c.CourierID, c.SenderName, c.ReceiverName
HAVING TotalPayment < 1000;
```



Result Grid | Filter Rows: | Export:

CourierID	SenderName	ReceiverName	TotalPayment
2	Bob Smith	Eve Adams	100.00

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

-- Retrieve couriers who have received payments totaling more than $1000 after a certain date.

SELECT c.CourierID, c.SenderName, c.ReceiverName, SUM(p.Amount) AS TotalPayment

FROM Payment p

JOIN Courier c ON p.CourierID = c.CourierID

WHERE p.PaymentDate > '2025-03-29' -- Replace YYYY-MM-DD with your specific date

GROUP BY c.CourierID, c.SenderName, c.ReceiverName

HAVING TotalPayment < 1000;

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

CourierID	SenderName	ReceiverName	TotalPayment

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

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

SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalPayments

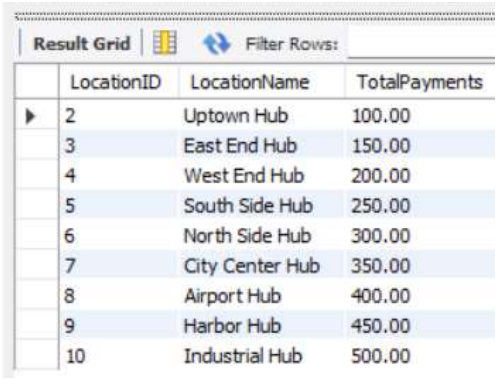
FROM Payment p

JOIN Location l ON p.LocationID = l.LocationID

WHERE p.PaymentDate < '2025-03-29' -- Change the date as needed

GROUP BY l.LocationID, l.LocationName

HAVING TotalPayments < 5000;



Result Grid | Filter Rows:

LocationID	LocationName	TotalPayments
2	Uptown Hub	100.00
3	East End Hub	150.00
4	West End Hub	200.00
5	South Side Hub	250.00
6	North Side Hub	300.00
7	City Center Hub	350.00
8	Airport Hub	400.00
9	Harbor Hub	450.00
10	Industrial Hub	500.00