Courier Management System

Task 4

Retrieve Payments with Courier Information

select p.PaymentID, p.CourierID, p.Amount, p.PaymentDate,c.SenderName, c.ReceiverName from Payment p

join Courier c on p.CourierID = c.CourierID;

⊞ F	esults		Messages				
	Payme	ntID	CourierID	Amount	PaymentDate	SenderName	ReceiverName
1	1		1	250.50	2025-02-10	virat	arun
2	2		2	180.75	2025-03-15	dhoni	geetha
3	3		3	300.25	2025-03-18	vijay	babu
4	4		4	220.40	2025-02-25	karthi	lakshmi
5	5		5	275.90	2025-04-02	surya	nandhini
6	6		6	315.60	2025-01-22	meena	venkat
7	7		7	150.30	2025-02-05	anbu	ramesh
8	8		8	195.80	2025-03-27	selvi	deepak
9	9		9	320.50	2025-02-14	dinesh	arun
10	10		10	210.25	2025-03-12	vetri	kavitha
11	11		11	275.75	2025-03-25	prakash	nandhini
12	12		12	295.60	2025-03-25	revathi	arun
13	13		13	185.90	2025-03-24	virat	dinesh
14	14		14	260.40	2025-03-25	selvi	babu
15	15		1	255.30	2025-02-11	virat	arun
10	16		2	105 70	2025 02 16	dhoni	acotha

Retrieve Payments with Location Information

select p.PaymentID, p.CourierID, p.LocationId, p.Amount, p.PaymentDate,

1.LocationName, 1.Address

from Payment p

join Location l on p.LocationId = l.LocationID;

⊞F	Results 🗐 N	Messages					
	PaymentID	CourierID	LocationId	Amount	PaymentDate	LocationName	Address
1	1	1	1	250.50	2025-02-10	madurai hub	7 lion street, mad
2	2	2	2	180.75	2025-03-15	trichy branch	17 king street, tric
3	3	3	3	300.25	2025-03-18	chennai main center	21 mg road, chen
4	4	4	4	220.40	2025-02-25	coimbatore warehouse	5 anna nagar, coi
5	5	5	5	275.90	2025-04-02	salem dispatch unit	10 park avenue, s
6	6	6	6	315.60	2025-01-22	vellore sorting center	2 vikasa road, vell
7	7	7	7	150.30	2025-02-05	cuddalore distribution	4 mainroad, cudd
8	8	8	8	195.80	2025-03-27	erode parcel station	76 kamarajar roa
9	9	9	9	320.50	2025-02-14	thanjavur logistics	12 rajaji street, tha
10	10	10	10	210.25	2025-03-12	kanchipuram transit	19 temple road, k
11	11	11	11	275.75	2025-03-25	madurai parcel station	9 nehru nagar, m
12	12	12	12	295.60	2025-03-25	trichy express center	30 anna salai, tric
13	13	13	13	185.90	2025-03-24	salem fast dispatch	11 anna nagar, ei
14	14	14	14	260.40	2025-03-25	thanajvur express depot	23 rajaji street, tha
15	15	1	15	255.30	2025-02-11	madurai quick logistics	55 market street,

Retrieve Payments with Courier and Location Information

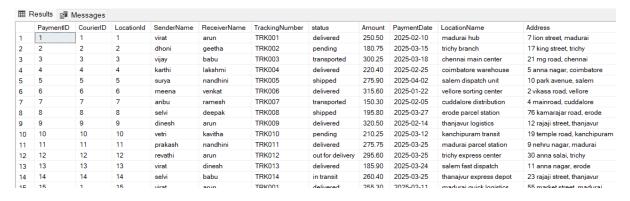
select p.PaymentID, p.CourierID, p.LocationId,c.SenderName, c.ReceiverName, c.TrackingNumber, c.status,

p.Amount, p.PaymentDate,l.LocationName, l.Address

from Payment p

join Courier c on p.CourierID = c.CourierID

join Location I on p.LocationId = 1.LocationID;



List all payments with courier details

select p.PaymentID, p.CourierID, p.Amount, p.PaymentDate,c.SenderName, c.ReceiverName, c.status

from Payment p

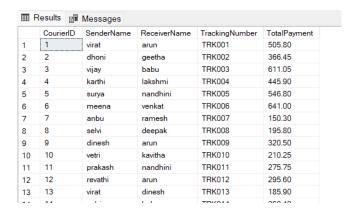
join Courier c on p.CourierID = c.CourierID;

⊞F	esults		Messages					
	Payme	entID	CourierID	Amount	PaymentDate	SenderName	ReceiverName	status
1	1		1	250.50	2025-02-10	virat	arun	delivered
2	2		2	180.75	2025-03-15	dhoni	geetha	pending
3	3		3	300.25	2025-03-18	vijay	babu	transported
4	4		4	220.40	2025-02-25	karthi	lakshmi	delivered
5	5		5	275.90	2025-04-02	surya	nandhini	shipped
6	6		6	315.60	2025-01-22	meena	venkat	delivered
7	7		7	150.30	2025-02-05	anbu	ramesh	transported
8	8		8	195.80	2025-03-27	selvi	deepak	shipped
9	9		9	320.50	2025-02-14	dinesh	arun	delivered
10	10		10	210.25	2025-03-12	vetri	kavitha	pending
11	11		11	275.75	2025-03-25	prakash	nandhini	delivered
12	12		12	295.60	2025-03-25	revathi	arun	out for delivery
13	13		13	185.90	2025-03-24	virat	dinesh	delivered
14	14		14	260.40	2025-03-25	selvi	babu	in transit
15	15		1	255.30	2025-02-11	virat	arun	delivered
16	16		2	185.70	2025-03-16	dhoni	geetha	pending

Total payments received for each courier

Select p.CourierID, c.SenderName, c.ReceiverName, c.TrackingNumber, sum(p.Amount) as TotalPayment from Payment p

join Courier c on p.CourierID = c.CourierID group by p.CourierID, c.SenderName, c.ReceiverName, c.TrackingNumber;



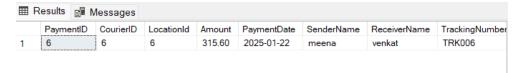
List payments made on a specific date

select p.PaymentID, p.CourierID, p.LocationId, p.Amount, p.PaymentDate,c.SenderName, c.ReceiverName, c.TrackingNumber

from Payment p

JOIN Courier c on p.CourierID = c.CourierID

where p.PaymentDate = '2025-01-22';



Get Courier Information for Each Payment

select p.PaymentID, p.CourierID, c.SenderName, c.ReceiverName, c.TrackingNumber, c.status ,c.PickupDate

from Payment p

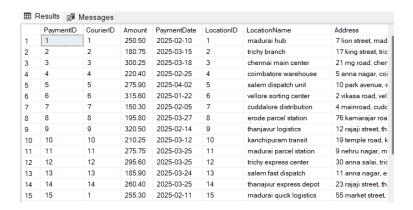
join Courier c on p.CourierID = c.CourierID



Get Payment Details with Location

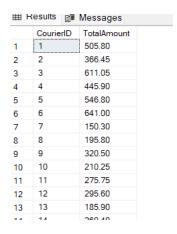
select p.PaymentID, p.CourierID, p.Amount, p.PaymentDate,

l.LocationID, l.LocationName, l.Address from Payment p join Location l on p.LocationID = l.LocationID;



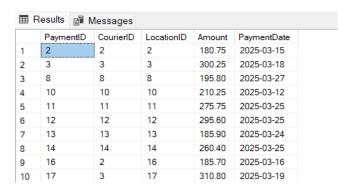
Calculating Total Payments for Each Courier

select p.CourierID, sum(p.Amount) as TotalAmount from Payment p group by p.CourierID order by CourierID;



List Payments Within a Date Range

select *from Payment where PaymentDate between'2025-03-01' AND '2025-03-30';



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

select u.UserID, c.SenderName, c.CourierID, c.SenderName, c.ReceiverName, c.Status

from Users u

join Courier c on u.Name = c.SenderName

group by UserID,c.SenderName, c.CourierID, c.SenderName, c.ReceiverName, c.Status

	UserID	SenderName	CourierID	SenderName	ReceiverName	Status
1	1	virat	1	virat	arun	delivered
2	2	dhoni	2	dhoni	geetha	pending
3	3	vijay	3	vijay	babu	transported
4	4	karthi	4	karthi	lakshmi	delivered
5	5	surya	5	surya	nandhini	shipped
6	6	meena	6	meena	venkat	delivered
7	7	anbu	7	anbu	ramesh	transported
8	8	selvi	8	selvi	deepak	shipped
9	9	dinesh	9	dinesh	arun	delivered
10	10	vetri	10	vetri	kavitha	pending
11	11	prakash	11	prakash	nandhini	delivered
12	12	revathi	12	revathi	arun	out for delivery
13	1	virat	13	virat	dinesh	delivered
14	8	selvi	14	selvi	babu	in transit
15	3	vijay	15	vijay	geetha	shipped
16	6	meena	16	meena	lakshmi	delivered

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

select C.CourierID, C.SenderName, C.ReceiverName, C.Weight, C.Status,

C.TrackingNumber, C.DeliveryDate, CS.ServiceID, CS.ServiceName,

CS.Cost from Courier C

left join CourierServices CS on C.ServiceID = CS.ServiceID

union

select C.CourierID, C.SenderName, C.ReceiverName, C.Weight, C.Status, C.TrackingNumber, C.DeliveryDate, CS.ServiceID, CS.ServiceName,

CS.Cost from Courier C

right join CourierServices CS on C.ServiceID = CS.ServiceID;

⊞ F	Results 📳	Messages								
	CourierID	SenderName	ReceiverName	Weight	Status	TrackingNumber	DeliveryDate	ServiceID	ServiceName	Cost
1	NULL	NULL	NULL	NULL	NULL	NULL	NULL	2	domestic standard	250.00
2	1	virat	arun	3.20	delivered	TRK001	2025-02-10	1	local	100.00
3	2	dhoni	geetha	2.80	pending	TRK002	2025-03-15	4	same-day delivery	500.00
4	3	vijay	babu	4.10	transported	TRK003	2025-03-18	9	fragile items	800.00
5	4	karthi	lakshmi	2.30	delivered	TRK004	2025-02-25	1	local	100.00
6	5	surya	nandhini	3.60	shipped	TRK005	2025-04-02	4	same-day delivery	500.00
7	6	meena	venkat	5.20	delivered	TRK006	2025-01-22	1	local	100.00
8	7	anbu	ramesh	1.90	transported	TRK007	2025-02-05	NULL	NULL	NULL
9	8	selvi	deepak	2.70	shipped	TRK008	2025-03-27	3	domestic express	400.00
10	9	dinesh	arun	4.30	delivered	TRK009	2025-02-14	3	domestic express	400.00
11	10	vetri	kavitha	2.50	pending	TRK010	2025-03-12	10	temperature-controlled	1800.00
12	11	prakash	nandhini	3.80	delivered	TRK011	2025-03-25	1	local	100.00
13	12	revathi	arun	4.20	out for delivery	TRK012	2025-03-25	1	local	100.00
14	13	virat	dinesh	2.80	delivered	TRK013	2025-03-24	9	fragile items	800.00
10	1/	a a hii	hahu	ວ ວດ	in transit	TDV01/	שר כח שרחכ	7	international overses	SEUU UU

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

select e.EmployeeID, e.Name, p.PaymentID, p.Amount,

p.PaymentDate

from EmployeeTable e

left join Courier c on E.EmployeeID = c.EmployeeID

left join Payment p on C.CourierID = p.CourierID

union

select e.EmployeeID, e.Name, p.PaymentID, p.Amount,

p.PaymentDate

from EmployeeTable e

right join Courier c on e.EmployeeID = c.EmployeeID

right join Payment p on c.CourierID = p.CourierID;

⊞R	Results 🛅 M	essages			
	EmployeeID	Name	PaymentID	Amount	PaymentDate
1	1	arun	1	250.50	2025-02-10
2	1	arun	11	275.75	2025-03-25
3	1	arun	15	255.30	2025-02-11
4	2	balaji	2	180.75	2025-03-15
5	2	balaji	12	295.60	2025-03-25
6	2	balaji	16	185.70	2025-03-16
7	3	chitra	NULL	NULL	NULL
8	3	chitra	8	195.80	2025-03-27
9	4	dinesh	3	300.25	2025-03-18
10	4	dinesh	13	185.90	2025-03-24
11	4	dinesh	17	310.80	2025-03-19
12	5	eswar	NULL	NULL	NULL
13	5	eswar	6	315.60	2025-01-22
14	5	eswar	20	325.40	2025-01-23
15	6	fathima	NULL	NULL	NULL

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

select u.UserID, u.Name as UserName, s.ServiceID ,s.ServiceName, s.Cost from Users u

CROSS JOIN CourierServices s;

	UserID	UserName	ServiceID	ServiceName	Cost
1	1	virat	1	local	100.00
2	2	dhoni	1	local	100.00
3	3	vijay	1	local	100.00
4	4	karthi	1	local	100.00
5	5	surya	1	local	100.00
6	6	meena	1	local	100.00
7	7	anbu	1	local	100.00
8	8	selvi	1	local	100.00
9	9	dinesh	1	local	100.00
10	10	vetri	1	local	100.00
11	11	prakash	1	local	100.00
12	12	revathi	1	local	100.00
13	13	babu	1	local	100.00
14	14	geetha	1	local	100.00
15	15	lakshmi	1	local	100.00
16	16	nandhini	1	local	100.00

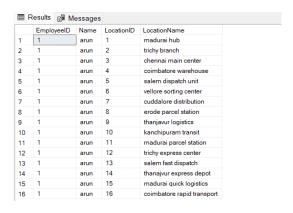
List all employees and all locations, showing all possible combinations:

select e.EmployeeID, e.Name, 1.LocationID,

1.LocationName

from EmployeeTable e

CROSS JOIN Location 1;



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

select c.CourierID, c.SenderName, c.SenderAddress from Courier c;



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

select c.CourierID, c.TrackingNumber, c.Status, c.SenderName, c.SenderAddress, case when c.SenderName is not null then 'Available'

else 'Not Available'

end as SenderInfoStatus

from Courier c



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

select c.CourierID, c.TrackingNumber, c.Status, c.SenderName, c.ReceiverName, c.Weight, cs.ServiceID, cs.ServiceName, cs.Cost

from Courier C

left join CourierServices cs on c.ServiceID = cs.ServiceID;

	CourierID	TrackingNumber	Status	SenderName	ReceiverName	Weight	ServiceID	Servicel
1	1	TRK001	delivered	virat	arun	3.20	1	local
2	2	TRK002	pending	dhoni	geetha	2.80	4	same-d
3	3	TRK003	transported	vijay	babu	4.10	9	fragile it
4	4	TRK004	delivered	karthi	lakshmi	2.30	1	local
5	5	TRK005	shipped	surya	nandhini	3.60	4	same-d
6	6	TRK006	delivered	meena	venkat	5.20	1	local
7	7	TRK007	transported	anbu	ramesh	1.90	NULL	NULL
8	8	TRK008	shipped	selvi	deepak	2.70	3	domest
9	9	TRK009	delivered	dinesh	arun	4.30	3	domest
10	10	TRK010	pending	vetri	kavitha	2.50	10	tempera
11	11	TRK011	delivered	prakash	nandhini	3.80	1	local
12	12	TRK012	out for delivery	revathi	arun	4.20	1	local

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

select e.EmployeeID, e.Name, count(c.CourierID) as TotalCourier from EmployeeTable e
join Courier c on e.EmployeeID = c.EmployeeID
group by e.EmployeeID, e.Name
order by TotalCourier desc;

⊞R	Results Messages					
	EmployeeID	Name	TotalCourier			
1	1	arun	2			
2	2	balaji	2			
3	3	chitra	2			
4	4	dinesh	2			
5	5	eswar	2			
6	6	fathima	2			
7	7	ganesh	2			
8	8	hema	2			
9	9	ilango	2			
10	10	:	2			

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

select L.LocationID, L.LocationName, sum(P.Amount) as TotalPayment from Location L $join\ Payment\ P\ on\ L.LocationID = P.LocationID$ group by L.LocationID, L.LocationName order by TotalPayment;

⊞R	esults 🗐 N	Messages	
	LocationID	LocationName	TotalPayment
1	7	cuddalore distribution	150.30
2	2	trichy branch	180.75
3	16	coimbatore rapid transport	185.70
4	13	salem fast dispatch	185.90
5	8	erode parcel station	195.80
6	10	kanchipuram transit	210.25
7	4	coimbatore warehouse	220.40
8	18	madurai fast shipment	225.50
9	1	madurai hub	250.50
10	15	madurai quick logistics	255.30
11	14	thanajvur express depot	260.40
12	19	dindigul regional hub	270.90
13	11	madurai parcel station	275.75
14	5	salem dispatch unit	275.90
15	12	trichy express center	295.60

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

select SenderName, CourierID, TrackingNumber, ReceiverName,

ReceiverAddress, Status, DeliveryDate

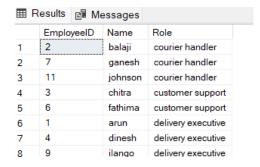
from Courier

order by SenderName, DeliveryDate;

	SenderName	CourierID	TrackingNumber	ReceiverName	ReceiverAddress	Status
1	anbu	7	TRK007	ramesh	23 rajaji street, thanjavur	transported
2	anbu	18	TRK018	prakash	10 anna nagar, coimbatore	pending
3	dhoni	2	TRK002	geetha	15 rajaji street, madurai	pending
4	dinesh	9	TRK009	arun	18 lake road, coimbatore	delivered
5	karthi	4	TRK004	lakshmi	5 temple street, thanjavur	delivered
6	karthi	17	TRK017	ramesh	45 gandhi street, dindigul	transported
7	meena	6	TRK006	venkat	11 anna nagar, erode	delivered
8	meena	16	TRK016	lakshmi	5 kamarajar street, thanjavur	delivered
9	prakash	11	TRK011	nandhini	22 lake view street,chennai	delivered
10	revathi	12	TRK012	arun	30 anna salai,trichy	out for delivery
11	revathi	20	TRK020	vetri	5 gandhi nagar, trichy	delivered
12	selvi	14	TRK014	babu	21 gandhi nagar, chennai	in transit
13	selvi	8	TRK008	deepak	55 market street, madurai	shipped

List all employees who share the same role.

select EmployeeID, Name, Role from EmployeeTable
where Role IN (select Role from EmployeeTable group by Role having count(*) > 1)
order by Role, Name;



List employees and the number of couriers they have delivered:

select EmployeeID, count(*) as NumberOfCouriersDelivered
from Courier where Status = 'Delivered'
group by EmployeeID;

	<u> </u>	9
	EmployeeID	NumberOfCouriersDelivered
1	1	2
2	4	1
3	5	2
4	6	1
5	7	1
6	8	1

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

select c.CourierID, c.TrackingNumber, p.Amount, cs.Cost as ServiceCost from Payment p $join\ Courier\ c\ on\ p.CourierID = c.CourierID$ $join\ CourierServices\ cs\ on\ c.ServiceID = cs.ServiceID$ where p.Amount > cs.Cost

	CourierID	TrackingNumber	Amount	ServiceCost
1	1	TRK001	250.50	100.00
2	4	TRK004	220.40	100.00
3	6	TRK006	315.60	100.00
4	11	TRK011	275.75	100.00
5	12	TRK012	295.60	100.00
6	1	TRK001	255.30	100.00
7	4	TRK004	225.50	100.00
8	6	TRK006	325.40	100.00