

**CHIDURA SREENIDHI**

**ASSIGNMENT NO: 4**

**Assignment-Courier Management System Instructions**

**--TASK 1 Database Design:**

--Database Schema and Sample Data

-- User Table

```
Create Table [User] (  
    UserID int Primary key,  
    Name Varchar(255),  
    Email Varchar(255) Unique,  
    Password Varchar(255),  
    ContactNumber Varchar(20),  
    Address Text  
);  
  
Insert into [User] Values (1, 'nidhi', 'nidhi@gmail.com', 'pass123', '9277896539', 'Nizamabad'),  
(2, 'Pranu', 'pranu@gmail.com', 'pass456', '9123456789', 'Anantapur');
```

-- CourierServices Table

```
Create Table CourierServices (  
    ServiceID int Primary key ,  
    ServiceName Varchar(100),  
    Cost Decimal(8, 2)  
);  
  
Insert into CourierServices Values (1, 'Standard Delivery', 50.00),  
(2, 'Express Delivery', 100.00);
```

-- Courier Table

```
CREATE TABLE Courier4 (  
    CourierID INT PRIMARY KEY,  
    SenderName VARCHAR(255),  
    SenderAddress TEXT,
```

```

ReceiverName VARCHAR(255),
ReceiverAddress TEXT,
Weight DECIMAL(5, 2),
Status VARCHAR(50),
TrackingNumber VARCHAR(20) UNIQUE,
DeliveryDate DATE,
CreatedDate DATE,
ServiceID INT,
DeliveredByEmployeeID INT,
UserID INT,
FOREIGN KEY (ServiceID) REFERENCES CourierServices(ServiceID),
FOREIGN KEY (DeliveredByEmployeeID) REFERENCES Employee1(EmployeeID),
FOREIGN KEY (UserID) REFERENCES [User](UserID)
);

Insert into Courier4 Values (101, 'nidhi', 'Nizamabad', 'prashu', 'KYL', 2.5, 'In Transit', 'T1', '2025-06-20', '2025-06-10', 1, 1, 1),
(102, 'pranu', 'Anantapur', 'Deepthi', 'KLD', 1.5, 'Delivered', 'T2', '2025-06-15', '2025-06-08', 2, 2, 2);

```

-- Employee Table

```

Create Table Employee1 (
    EmployeeID Int Primary Key,
    Name Varchar(255),
    Email Varchar(255) Unique,
    ContactNumber Varchar(20),
    Role Varchar(50),
    Salary Decimal(10, 2)
);

Insert into Employee1 Values (1, 'Krish', 'krish@gmail.com', '9988776655', 'Delivery Boy', 25000.00),
(3, 'John', 'john@gmail.com', '8765455678', 'Delivery boy', 25000.00), (2, 'Koumi', 'koumi@gmail.com', '8877665544', 'Manager', 50000.00);

```

-- Location Table

Create Table Location (

LocationID Int Primary Key,

LocationName Varchar(100),

Address Text

);

Insert Into Location Values (1, 'Main Office', 'Hitex City'),

(2, 'Branch Office', 'Whitefield');

-- Payment Table

Create Table Payment (

PaymentID Int Primary Key,

CourierID Int,

LocationID Int,

Amount Decimal(10, 2),

PaymentDate Date,

Foreign Key (CourierID) References Courier(CourierID),

Foreign Key (LocationID) References Location(LocationID)

);

Insert into Payment Values (1, 101, 1, 50.00, '2025-06-14'),

(2, 102, 2, 100.00, '2025-06-12');

**-- TASK 2 Select,Where (1 to 13)**

Select \* from [user]

Select \* from Courier4 Where UserID = 1;

select \* from courier4

Select \* from Courier4 Where CourierID = 101;

Select \* from Courier4 Where CourierID = 101;

Select \* from Courier4 Where Status != 'Delivered';

Select \* from Courier4 Where DeliveryDate = Cast(getdate() AS date);

Select \* from Courier4 Where Status = 'In Transit';

Select UserID, Count(\*) AS TotalPackages from Courier4

Group by UserID;

Select UserID, AVG(datediff(DAY, CreatedDate, DeliveryDate)) AS AvgDeliveryDays from Courier4

Group By UserID;

Select \* from Courier4 Where Weight between 1 AND 3;

Select \* from Employee1 Where Name like '%John%';

Select c.\* from Courier4 c Join Payment p ON c.CourierID = p.CourierID

Where p.Amount > 50;

**--TASK 3 GroupBy, Aggregate Functions, Having, Order By, Where (14 to 22)**

Select e.EmployeeID, e.Name, COUNT(c.CourierID) AS TotalCouriers

from Employee e

JOIN Courier4 c ON e.EmployeeID = c.DeliveredByEmployeeID

GROUP BY e.EmployeeID, e.Name;

Select DeliveredByEmployeeID, COUNT(\*) AS TotalCouriers

from Courier4

GROUP BY DeliveredByEmployeeID;

Select LocationID, SUM(Amount) AS TotalRevenue

from Payment

GROUP BY LocationID;

Select LocationID, COUNT(\*) AS TotalCouriers

from Payment

GROUP BY LocationID;

```
Select top 1 CourierID, AVG(DATEDIFF(DAY, CreatedDate, DeliveryDate)) AS AvgDeliveryDays
from Courier4
GROUP BY CourierID
ORDER BY AvgDeliveryDays DESC;
```

```
select LocationID, SUM(Amount) AS TotalAmount
from Payment
GROUP BY LocationID
HAVING SUM(Amount) < 1000;
```

```
Select LocationID, SUM(Amount) AS TotalPayments
from Payment
GROUP BY LocationID;
```

```
Select CourierID, SUM(Amount) AS Total
from Payment
Where LocationID = 1
GROUP BY CourierID
HAVING SUM(Amount) > 1000;
```

```
Select CourierID, SUM(Amount) AS Total
from Payment
Where PaymentDate > '2025-06-01'
GROUP BY CourierID
HAVING SUM(Amount) > 1000;
```

```
select LocationID, SUM(Amount) AS Total
from Payment
Where PaymentDate < '2025-06-20'
GROUP BY LocationID
HAVING SUM(Amount) > 5000;
```

**-- TASK 4: Inner Join, Full Outer Join, Cross Join, Left Outer Join, Right Outer Join (23 to 48)**

Select P.\*, C.\*

from Payment P

INNER JOIN Courier4 C ON P.CourierID = C.CourierID;

select P.\*, L.\*

from Payment P

INNER JOIN Location L ON P.LocationID = L.LocationID;

Select P.\*, C.TrackingNumber, L.LocationName

from Payment P

INNER JOIN Courier4 C ON P.CourierID = C.CourierID

INNER JOIN Location L ON P.LocationID = L.LocationID;

Select P.\*, C.\*

from Payment P

INNER JOIN Courier4 C ON P.CourierID = C.CourierID;

select CourierID, SUM(Amount) AS TotalPayments

from Payment

GROUP BY CourierID;

Select \* FROM Payment

Where PaymentDate = '2025-06-12';

Select P.\*, C.\*

from Payment P

INNER JOIN Courier4 C ON P.CourierID = C.CourierID;

Select P.\*, L.\*

From Payment P

INNER JOIN Location L ON P.LocationID = L.LocationID;

Select CourierID, SUM(Amount) AS TotalPayments

from Payment

GROUP BY CourierID;

Select \* FROM Payment

Where PaymentDate BETWEEN '2025-06-01' AND '2025-06-21';

Select U.\*, C.\*

from [User] U

FULL OUTER JOIN Courier C ON U.UserID = C.UserID;

Select C.\*, CS.\*

from Courier4 C

FULL OUTER JOIN CourierServices CS ON C.ServiceID = CS.ServiceID;

select E.\*, P.\*

from Employee1 E

FULL OUTER JOIN Courier4 C ON E.EmployeeID = C.DeliveredByEmployeeID

FULL OUTER JOIN Payment P ON C.CourierID = P.CourierID;

Select \* from [User]

CROSS JOIN CourierServices;

Select \* from Employee1

CROSS JOIN Location;

```
Select CourierID, SenderName, SenderAddress  
from Courier4;
```

```
Select CourierID, ReceiverName, ReceiverAddress  
from Courier4;
```

```
Select C.*, CS.ServiceName, CS.Cost  
from Courier4 C  
LEFT JOIN CourierServices CS ON C.ServiceID = CS.ServiceID;
```

```
Select E.EmployeeID, E.Name, COUNT(C.CourierID) AS TotalCouriers  
from Employee1 E  
LEFT JOIN Courier4 C ON E.EmployeeID = C.DeliveredByEmployeeID  
GROUP BY E.EmployeeID, E.Name;
```

```
Select L.LocationID, L.LocationName, SUM(P.Amount) AS TotalPayments  
from Location L  
LEFT JOIN Payment P ON L.LocationID = P.LocationID  
GROUP BY L.LocationID, L.LocationName;
```

```
Select * FROM Courier  
Where SenderName = 'nidhi';
```

```
Select Role, COUNT(*) AS TotalEmployees  
from Employee1  
GROUP BY Role  
HAVING COUNT(*) > 1;
```

```
Select P.*  
from Payment P  
JOIN Courier4 C ON P.CourierID = C.CourierID
```



Where CAST(C.SenderAddress AS VARCHAR(MAX)) Like 'Nizamabad'

Select \* FROM Courier4

Where CAST(SenderAddress AS VARCHAR(MAX)) = 'Nizamabad'

Select E.EmployeeID, E.Name, count(C.CourierID) AS TotalCouriers

from Employee1 E

LEFT JOIN Courier4 C ON E.EmployeeID = C.DeliveredByEmployeeID

GROUP BY E.EmployeeID, E.Name;

select C.CourierID, SUM(P.Amount) AS Paid, CS.Cost

from Courier4 C

JOIN CourierServices CS ON C.ServiceID = CS.ServiceID

JOIN Payment P ON C.CourierID = P.CourierID

Group by C.CourierID, CS.Cost

HAVING SUM(P.Amount) > CS.Cost;

**--Scope: Inner Queries, Non Equi Joins, Equi joins,Exist,Any,All (49 to 54)**

Select \* from Courier4

where Weight > (SELECT AVG(Weight) from Courier4);

Select \* from Employee1

Where Salary > (SELECT AVG(Salary) from Employee1);

Select SUM(Cost) AS TotalCost

from CourierServices

Where Cost < (SELECT MAX(Cost) from CourierServices);

```
Select DISTINCT C.CourierID,C.SenderName,CAST(C.SenderAddress AS VARCHAR(MAX)) AS  
SenderAddress,C.ReceiverName,  
  
CAST (C.ReceiverAddress AS VARCHAR(MAX)) AS  
ReceiverAddress,C.Weight,C.Status,C.TrackingNumber,C.DeliveryDate,C.CreatedDate,C.ServiceID,C.De  
liveredByEmployeeID,C.UserID  
  
from Courier4 C JOIN Payment P ON C.CourierID = P.CourierID;
```

```
Select LocationID, Amount  
  
from Payment  
  
Where Amount = (SELECT MAX(Amount) FROM Payment);
```

```
Select * from Courier4  
  
where Weight > ALL (  
  
Select Weight from Courier where SenderName = 'nidhi')
```