Task1 Database Design
Design a SQL schema for a Courier Management System with tables for Customers, Couriers, Orders,
and Parcels. Define the relationships between these tables using appropriate foreign keys.

Requirements:
• Define the Database Schema • Create SQL tables for entities such as User, Courier, Employee, Location,Payment
• Define relationships between these tables (one-to-many, many-to-many, etc.).
• Populate Sample Data • Insert sample data into the tables to simulate real-world scenarios.

User Table:

User
(UserID INT PRIMARY KEY,
Name VARCHAR(255),
Email VARCHAR(255) UNIQUE,
Password VARCHAR(255),
ContactNumber VARCHAR(20),
Address TEXT
);

Courier
(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);

CourierServices
(ServiceID INT PRIMARY KEY,
ServiceName VARCHAR(100),
Cost DECIMAL(8, 2));

Employee Table:
(EmployeeID INT PRIMARY KEY,
Name VARCHAR(255),
Email VARCHAR(255) UNIQUE,
ContactNumber VARCHAR(20),
Role VARCHAR(50),
Salary DECIMAL(10, 2));

Location Table:
(LocationID INT PRIMARY KEY,
LocationName VARCHAR(100),
Address TEXT);

Payment Table:
(PaymentID INT PRIMARY KEY,
CourierID INT,
LocationId INT,
Amount DECIMAL(10, 2),
PaymentDate DATE,
FOREIGN KEY (CourierID) REFERENCES Couriers(CourierID),
FOREIGN KEY (LocationID) REFERENCES Location(LocationID));

```
--ASSIGNMENT

--COURIER MANAGEMENT SYSTEM

CREATE DATABASE CourierMgmt;
USE CourierMgmt;

--TASK1 Database Design

--Users Table
CREATE TABLE Users(
    UserID INT PRIMARY KEY IDENTITY(1,1),
    Name VARCHAR(255) NOT NULL,
    Email VARCHAR(255) UNIQUE NOT NULL,
    Password VARCHAR(255) NOT NULL,
    ContactNumber VARCHAR(20) NOT NULL,
    Address VARCHAR(MAX));

--Location Table

CREATE TABLE Location (
    LocationID INT PRIMARY KEY IDENTITY(1,1),
    LocationName VARCHAR(100) NOT NULL,
    Address VARCHAR(MAX) NOT NULL);

--CourierServices Table

CREATE TABLE CourierServices (
    ServiceID INT PRIMARY KEY IDENTITY(1,1),
    ServiceName VARCHAR(100) NOT NULL,
    Cost DECIMAL(8,2) NOT NULL
);
```

```sql
-- Courier Table

CREATE TABLE Courier (
    CourierID INT PRIMARY KEY IDENTITY(1,1),
    SenderName VARCHAR(255) NOT NULL,
    SenderAddress VARCHAR(MAX) NOT NULL,
    ReceiverName VARCHAR(255) NOT NULL,
    ReceiverAddress VARCHAR(MAX) NOT NULL,
    Weight DECIMAL(5,2) NOT NULL,
    Status VARCHAR(50) DEFAULT 'Pending',
    TrackingNumber VARCHAR(20) UNIQUE NOT NULL,
    SentDate DATE NOT NULL,
    DeliveryDate DATE,
    AssignedEmployeeID INT,
    DeliveryLocationID INT,
    ServiceID INT,  -- Added ServiceID as FK
    FOREIGN KEY (DeliveryLocationID) REFERENCES
Location(LocationID),
    FOREIGN KEY (ServiceID) REFERENCES CourierServices(ServiceID)
);



--Employee Table

CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY IDENTITY(1,1),
    Name VARCHAR(255) NOT NULL,
    Email VARCHAR(255) UNIQUE NOT NULL,
    ContactNumber VARCHAR(20) NOT NULL,
    Role VARCHAR(50) NOT NULL,
    Salary DECIMAL(10,2) NOT NULL);




--Payment Table

CREATE TABLE Payment (
    PaymentID INT PRIMARY KEY IDENTITY(1,1),
    CourierID INT NOT NULL,
    LocationID INT NOT NULL,
    Amount DECIMAL(10,2) NOT NULL,
    PaymentDate DATE NOT NULL,
    FOREIGN KEY (CourierID) REFERENCES Courier(CourierID),
    FOREIGN KEY (LocationID) REFERENCES Location(LocationID));
```

```sql
-- Inserting Data into Users Table
INSERT INTO Users (Name, Email, Password, ContactNumber, Address)
VALUES
('Makesh', 'makesh@hexa.com', 'password123', '9876543210', '123
Street, Chennai'),
('Manoj', 'manoj@hexa.com', 'password1234', '9876543211', '456
Street, Chennai'),
('Priya', 'priya@hexa.com', 'securepass', '9988776655', '789
Street, Bangalore'),
('Arun', 'arun@hexa.com', 'adminpass', '8765432190', '321 Street,
Mumbai');



-- Inserting Data into Location Table
INSERT INTO Location (LocationName, Address)
VALUES
('Chennai Hub', '1st Floor, Chennai Street, Chennai'),
('Bangalore Hub', '2nd Floor, Bangalore Street, Bangalore'),
('Mumbai Hub', '3rd Floor, Mumbai Street, Mumbai'),
('Delhi Hub', '4th Floor, Delhi Street, Delhi');







-- Inserting Data into CourierServices Table
INSERT INTO CourierServices (ServiceName, Cost)
VALUES
('Standard Delivery', 100.00),
('Express Delivery', 250.00),
('Same-Day Delivery', 500.00),
('Overnight Delivery', 750.00);



-- Inserting Data into Courier Table
INSERT INTO Courier (SenderName, SenderAddress, ReceiverName,
ReceiverAddress, Weight, Status, TrackingNumber, SentDate,
DeliveryDate, AssignedEmployeeID, DeliveryLocationID, ServiceID)
VALUES
('Makesh', '123 Street, Chennai', 'Manoj', '456 Street, Chennai',
2.50, 'In Transit', 'TRK123456', '2025-03-10', '2025-03-21', 1, 1,
1),
('Priya', '789 Street, Bangalore', 'Arun', '321 Street, Mumbai',
5.00, 'Delivered', 'TRK789123', '2025-03-05', '2025-03-18', 2, 3,
2),
('Arun', '321 Street, Mumbai', 'Priya', '789 Street, Bangalore',
3.25, 'Pending', 'TRK321789', '2025-03-15', NULL, 3, 3,3);
```

```sql
-- Inserting Data into Employee Table
INSERT INTO Employee (Name, Email, ContactNumber, Role, Salary)
VALUES
('Michael', 'michael@courier.com', '9988776655', 'Delivery
Executive', 30000.00),
('Sarah', 'sarah@courier.com', '9988776644', 'Manager', 50000.00),
('John Abraham','john@courier.com','987654345','Assistant
Manager',35000.00),
('Rahul', 'rahul@courier.com', '9876541234', 'Delivery Executive',
32000.00),
('Anjali', 'anjali@courier.com', '9765432189', 'Customer Support',
28000.00);



-- Inserting Data into Payment Table
INSERT INTO Payment (CourierID, LocationID, Amount, PaymentDate)
VALUES
(1, 1, 100.00, '2025-03-15'),
(2, 2, 250.00, '2025-03-18'),
(3, 3, 500.00, '2025-03-19');
```