CREATE database chain\_managment\_system;

use chain\_managment\_system;

CREATE TABLE Clients (

client\_id INT PRIMARY KEY,

name VARCHAR(100),

address TEXT

);

CREATE TABLE Carriers (

carrier\_id INT PRIMARY KEY,

name VARCHAR(100),

type ENUM('Air', 'Land', 'Sea'),

contact\_info TEXT

);

CREATE TABLE Warehouses (

warehouse\_id INT PRIMARY KEY,

location VARCHAR(255),

capacity INT

);

CREATE TABLE Employees (

employee\_id INT PRIMARY KEY,

name VARCHAR(100),

role ENUM('Warehouse Staff', 'Carrier Crew'),

warehouse\_id INT,

carrier\_id INT,

CONSTRAINT chk\_one\_assignment CHECK (

(warehouse\_id IS NOT NULL AND carrier\_id IS NULL)

OR (warehouse\_id IS NULL AND carrier\_id IS NOT NULL)

),

FOREIGN KEY (warehouse\_id) REFERENCES Warehouses(warehouse\_id),

FOREIGN KEY (carrier\_id) REFERENCES Carriers(carrier\_id)

);

CREATE TABLE Shipments (

shipment\_id INT PRIMARY KEY,

origin VARCHAR(255),

destination VARCHAR(255),

weight DECIMAL(10,2),

content\_description TEXT,

shipment\_date DATE

);

CREATE TABLE ShipmentClients (

shipment\_id INT,

client\_id INT,

role ENUM('Sender', 'Receiver'),

PRIMARY KEY (shipment\_id, client\_id, role),

FOREIGN KEY (shipment\_id) REFERENCES Shipments(shipment\_id),

FOREIGN KEY (client\_id) REFERENCES Clients(client\_id)

);

CREATE TABLE ShipmentRoutes (

route\_id INT PRIMARY KEY AUTO\_INCREMENT,

shipment\_id INT,

carrier\_id INT,

start\_location VARCHAR(255),

end\_location VARCHAR(255),

leg\_order INT,

FOREIGN KEY (shipment\_id) REFERENCES Shipments(shipment\_id),

FOREIGN KEY (carrier\_id) REFERENCES Carriers(carrier\_id)

);

CREATE TABLE ShipmentWarehouses (

shipment\_id INT,

warehouse\_id INT,

storage\_date DATE,

PRIMARY KEY (shipment\_id, warehouse\_id, storage\_date),

FOREIGN KEY (shipment\_id) REFERENCES Shipments(shipment\_id),

FOREIGN KEY (warehouse\_id) REFERENCES Warehouses(warehouse\_id)

);

-- Clients

INSERT INTO Clients VALUES

(1, 'Globex Corporation', 'New York, USA'),

(2, 'Initech Ltd.', 'London, UK');

-- Carriers

INSERT INTO Carriers VALUES

(1, 'SkyFreight Express', 'Air', 'skyfreight@carrier.com'),

(2, 'TransLand Logistics', 'Land', 'contact@transland.com');

-- Warehouses

INSERT INTO Warehouses VALUES

(1, 'Delhi, India', 1000),

(2, 'Dubai, UAE', 1500);

-- Employees

INSERT INTO Employees VALUES

(101, 'Amit Sharma', 'Warehouse Staff', 1, NULL),

(102, 'Sarah Green', 'Carrier Crew', NULL, 1);

-- Shipments

INSERT INTO Shipments VALUES

(5001, 'Chennai, India', 'Berlin, Germany', 120.50, 'Electronics and gadgets', '2025-06-10'),

(5002, 'Seattle, USA', 'Tokyo, Japan', 300.00, 'Pharmaceuticals', '2025-06-12');

-- ShipmentClients (Sender/Receiver)

INSERT INTO ShipmentClients VALUES

(5001, 1, 'Sender'),

(5001, 2, 'Receiver'),

(5002, 2, 'Sender'),

(5002, 1, 'Receiver');

-- ShipmentRoutes

INSERT INTO ShipmentRoutes (shipment\_id, carrier\_id, start\_location, end\_location, leg\_order) VALUES

(5001, 2, 'Chennai, India', 'Delhi, India', 1),

(5001, 1, 'Delhi, India', 'Berlin, Germany', 2),

(5002, 1, 'Seattle, USA', 'Tokyo, Japan', 1);

-- ShipmentWarehouses

INSERT INTO ShipmentWarehouses VALUES

(5001, 1, '2025-06-10'),

(5001, 2, '2025-06-11');

