question one code

-- Create Table for Properties

CREATE TABLE Properties (

    PropertyID INT PRIMARY KEY,

    Address VARCHAR(255) NOT NULL,

    City VARCHAR(100) DEFAULT 'Kampala' CHECK (City = 'Kampala'),

    Country VARCHAR(50) DEFAULT 'Uganda' CHECK (Country = 'Uganda'),

    Type VARCHAR(50) CHECK (Type IN ('Residential', 'Commercial', 'Industrial')),

    Size INT NOT NULL,

    Price DECIMAL(10,2) NOT NULL,

    Status VARCHAR(20) CHECK (Status IN ('Available', 'Sold', 'Rented'))

);

-- Create Table for Agents

CREATE TABLE Agents (

    AgentID INT PRIMARY KEY,

    Name VARCHAR(100) NOT NULL,

    ContactNumber VARCHAR(15) UNIQUE,

    CommissionRate DECIMAL(5,2) CHECK (CommissionRate > 0 AND CommissionRate <= 15)

);

-- Create Table for Clients

CREATE TABLE Clients (

    ClientID INT PRIMARY KEY,

    Name VARCHAR(100) NOT NULL,

    ContactNumber VARCHAR(15) UNIQUE,

    Email VARCHAR(100) UNIQUE,

    Preferences TEXT

);

-- Create Table for Transactions

CREATE TABLE Transactions (

    TransactionID INT PRIMARY KEY,

    PropertyID INT,

    AgentID INT,

    ClientID INT,

    TransactionType VARCHAR(10) CHECK (TransactionType IN ('Buy', 'Sell', 'Rent')),

    Date DATE NOT NULL,

    Amount DECIMAL(10,2) NOT NULL CHECK (Amount > 0),

    FOREIGN KEY (PropertyID) REFERENCES Properties(PropertyID) ON DELETE CASCADE,

    FOREIGN KEY (AgentID) REFERENCES Agents(AgentID) ON DELETE CASCADE,

    FOREIGN KEY (ClientID) REFERENCES Clients(ClientID) ON DELETE CASCADE

);

-- Insert Sample Data for Properties

INSERT INTO Properties (PropertyID, Address, Type, Size, Price, Status)

VALUES

(1, 'Plot 5, Kampala Road', 'Residential', 2000, 500000.00, 'Available'),

(2, 'Plot 12, Buziga Lane', 'Commercial', 1500, 800000.00, 'Available'),

(3, 'Plot 8, Ntinda Avenue', 'Industrial', 10000, 1500000.00, 'Rented');

-- Insert Sample Data for Agents

INSERT INTO Agents (AgentID, Name, ContactNumber, CommissionRate)

VALUES

(1, 'John Doe', '+256701234567', 10.5),

(2, 'Jane Smith', '+256772345678', 12.0);

-- Insert Sample Data for Clients

INSERT INTO Clients (ClientID, Name, ContactNumber, Email, Preferences)

VALUES

(1, 'Alice', '+256781234567', 'alice@example.com', 'Residential, Ntinda'),

(2, 'Bob', '+256791234567', 'bob@example.com', 'Commercial, Buziga');

-- Insert Sample Data for Transactions

INSERT INTO Transactions (TransactionID, PropertyID, AgentID, ClientID, TransactionType, Date, Amount)

VALUES

(1, 1, 1, 1, 'Buy', '2025-01-01', 500000.00),

(2, 3, 2, 2, 'Rent', '2025-01-02', 150000.00);

question 2 codes

-- Create Table for Location

CREATE TABLE Location (

    Location\_ID INT PRIMARY KEY,

    County VARCHAR(100) NOT NULL,

    Sub\_County VARCHAR(100),

    Parish VARCHAR(100),

    Village VARCHAR(100),

    Region VARCHAR(50),

    Population INT

);

-- Create Table for Facility

CREATE TABLE Facility (

    Facility\_ID INT PRIMARY KEY,

    Facility\_Name VARCHAR(100) NOT NULL,

    Facility\_Type VARCHAR(50),

    Contact\_Details VARCHAR(100),

    Facility\_Head VARCHAR(100),

    Location\_ID INT,

    Date\_Added DATE DEFAULT CURRENT\_DATE,

    FOREIGN KEY (Location\_ID) REFERENCES Location(Location\_ID) ON DELETE CASCADE

);

-- Create Table for Patient

CREATE TABLE Patient (

    Patient\_ID INT PRIMARY KEY,

    First\_Name VARCHAR(50) NOT NULL,

    Last\_Name VARCHAR(50),

    Date\_of\_Birth DATE,

    Gender VARCHAR(10) CHECK (Gender IN ('Male', 'Female', 'Other')),

    Phone\_Number VARCHAR(15) UNIQUE,

    Next\_of\_Kin VARCHAR(100),

    Location\_ID INT,

    Date\_Added DATE DEFAULT CURRENT\_DATE,

    Update\_Date DATE,

    FOREIGN KEY (Location\_ID) REFERENCES Location(Location\_ID) ON DELETE CASCADE

);

-- Create Table for Visit

CREATE TABLE Visit (

    Visit\_ID INT PRIMARY KEY,

    Patient\_ID INT,

    Facility\_ID INT,

    Visit\_Number INT,

    Visit\_Date DATE NOT NULL,

    Date\_Added DATE DEFAULT CURRENT\_DATE,

    Update\_Date DATE,

    FOREIGN KEY (Patient\_ID) REFERENCES Patient(Patient\_ID) ON DELETE CASCADE,

    FOREIGN KEY (Facility\_ID) REFERENCES Facility(Facility\_ID) ON DELETE CASCADE

);

-- Create Table for Resource

CREATE TABLE Resource (

    Resource\_ID INT PRIMARY KEY,

    Facility\_ID INT,

    Resource\_Type VARCHAR(50) NOT NULL,

    Quantity INT CHECK (Quantity >= 0),

    Last\_Updated\_Date DATE DEFAULT CURRENT\_DATE,

    FOREIGN KEY (Facility\_ID) REFERENCES Facility(Facility\_ID) ON DELETE CASCADE

);

-- Create Table for Supply Chain

CREATE TABLE Supply\_Chain (

    Supply\_ID INT PRIMARY KEY,

    Resource\_ID INT,

    Facility\_ID INT,

    Quantity\_Shipped INT CHECK (Quantity\_Shipped >= 0),

    Expected\_Arrival\_Date DATE,

    Shipped\_By VARCHAR(100),

    FOREIGN KEY (Resource\_ID) REFERENCES Resource(Resource\_ID) ON DELETE CASCADE,

    FOREIGN KEY (Facility\_ID) REFERENCES Facility(Facility\_ID) ON DELETE CASCADE

);

-- Create Table for Treatment

CREATE TABLE Treatment (

    Treatment\_ID INT PRIMARY KEY,

    Treatment\_Name VARCHAR(100) NOT NULL,

    Treatment\_Description TEXT,

    Dosage VARCHAR(50),

    Side\_Effects TEXT,

    Date\_Added DATE DEFAULT CURRENT\_DATE,

    Update\_Date DATE

);

-- Create Table for Case

CREATE TABLE Case\_Record (

    Case\_ID INT PRIMARY KEY,

    Patient\_ID INT,

    Facility\_ID INT,

    Type\_of\_Malaria VARCHAR(50),

    Treatment\_ID INT,

    Outcome VARCHAR(50),

    Date\_of\_Diagnosis DATE NOT NULL,

    FOREIGN KEY (Patient\_ID) REFERENCES Patient(Patient\_ID) ON DELETE CASCADE,

    FOREIGN KEY (Facility\_ID) REFERENCES Facility(Facility\_ID) ON DELETE CASCADE,

    FOREIGN KEY (Treatment\_ID) REFERENCES Treatment(Treatment\_ID) ON DELETE SET NULL

);