**CREATING THE DATABASE**

1. **Creating the database**

CREATE DATABASE RemoteLearningDB;

USE RemoteLearningDB;

1. **Creating the tables**

-- Create the Students table

CREATE TABLE Students (

StudentID INT PRIMARY KEY,

Name VARCHAR(100),

Age INT,

Gender VARCHAR(10),

Region VARCHAR(50),

DeviceType VARCHAR(50),

InternetAccess VARCHAR(50)

);

-- Create the Teachers table

CREATE TABLE Teachers (

TeacherID INT PRIMARY KEY,

Name VARCHAR(100),

Qualification VARCHAR(100),

Experience INT,

RemoteTeachingSkills BOOLEAN

);

-- Create the Courses table

CREATE TABLE Courses (

CourseID INT PRIMARY KEY,

CourseName VARCHAR(100),

DeliveryMethod VARCHAR(50),

TeacherID INT,

FOREIGN KEY (TeacherID) REFERENCES Teachers(TeacherID)

);

-- Create the Assessments table

CREATE TABLE Assessments (

AssessmentID INT PRIMARY KEY,

StudentID INT,

CourseID INT,

AssessmentType VARCHAR(50),

Score INT,

Date DATE,

FOREIGN KEY (StudentID) REFERENCES Students(StudentID),

FOREIGN KEY (CourseID) REFERENCES Courses(CourseID)

);

-- Create the InternetAccess table

CREATE TABLE InternetAccess (

AccessID INT PRIMARY KEY,

StudentID INT,

TeacherID INT,

ConnectivityQuality VARCHAR(50),

DataUsage INT,

FOREIGN KEY (StudentID) REFERENCES Students(StudentID),

FOREIGN KEY (TeacherID) REFERENCES Teachers(TeacherID)

);

1. **Inserting sample data**

-- Insert sample data into the Students table

INSERT INTO Students (StudentID, Name, Age, Gender, Region, DeviceType, InternetAccess) VALUES

(1, 'John Doe', 16, 'Male', 'Urban', 'Laptop', 'Good'),

(2, 'Alice Smith', 15, 'Female', 'Rural', 'Smartphone', 'Poor'),

(3, 'Robert Brown', 17, 'Male', 'Suburban', 'Tablet', 'Moderate'),

(4, 'Emily Johnson', 16, 'Female', 'Urban', 'Laptop', 'Good'),

(5, 'Michael White', 15, 'Male', 'Rural', 'Smartphone', 'Poor'),

(6, 'Jessica Green', 17, 'Female', 'Suburban', 'Laptop', 'Moderate'),

(7, 'David Lee', 16, 'Male', 'Urban', 'Tablet', 'Good'),

(8, 'Olivia Martin', 15, 'Female', 'Rural', 'Laptop', 'Poor'),

(9, 'Daniel Harris', 17, 'Male', 'Suburban', 'Smartphone', 'Moderate'),

(10, 'Sophia Clark', 16, 'Female', 'Urban', 'Tablet', 'Good'),

(11, 'James Lewis', 15, 'Male', 'Rural', 'Laptop', 'Poor'),

(12, 'Isabella Walker', 17, 'Female', 'Suburban', 'Tablet', 'Moderate'),

(13, 'Benjamin Scott', 16, 'Male', 'Urban', 'Smartphone', 'Good'),

(14, 'Mia Young', 15, 'Female', 'Rural', 'Laptop', 'Poor'),

(15, 'William Adams', 17, 'Male', 'Suburban', 'Laptop', 'Moderate'),

(16, 'Charlotte Nelson', 16, 'Female', 'Urban', 'Smartphone', 'Good'),

(17, 'Elijah Carter', 15, 'Male', 'Rural', 'Tablet', 'Poor'),

(18, 'Amelia Roberts', 17, 'Female', 'Suburban', 'Smartphone', 'Moderate'),

(19, 'Oliver Turner', 16, 'Male', 'Urban', 'Laptop', 'Good'),

(20, 'Ava Mitchell', 15, 'Female', 'Rural', 'Smartphone', 'Poor');

-- Insert sample data into the Teachers table

INSERT INTO Teachers (TeacherID, Name, Qualification, Experience, RemoteTeachingSkills) VALUES

(1, 'Jane Smith', 'M.Ed', 10, TRUE),

(2, 'Michael Johnson', 'B.Ed', 5, FALSE),

(3, 'Emily Davis', 'Ph.D.', 12, TRUE),

(4, 'John Wilson', 'M.A.', 8, TRUE),

(5, 'Linda Martinez', 'M.Sc.', 6, TRUE),

(6, 'Robert Garcia', 'M.Ed', 7, FALSE),

(7, 'Sarah Anderson', 'B.Sc.', 9, TRUE),

(8, 'David Thompson', 'M.A.', 11, FALSE),

(9, 'Elizabeth Taylor', 'Ph.D.', 14, TRUE),

(10, 'James White', 'B.Ed', 5, TRUE);

-- Insert sample data into the Courses table

INSERT INTO Courses (CourseID, CourseName, DeliveryMethod, TeacherID) VALUES

(1, 'Mathematics', 'Online', 1),

(2, 'Science', 'Blended', 2),

(3, 'History', 'Online', 3),

(4, 'Geography', 'Blended', 4),

(5, 'Physics', 'Online', 5),

(6, 'Chemistry', 'Blended', 6),

(7, 'Biology', 'Online', 7),

(8, 'English', 'Blended', 8),

(9, 'Computer Science', 'Online', 9),

(10, 'Art', 'Blended', 10);

-- Insert sample data into the Assessments table

INSERT INTO Assessments (AssessmentID, StudentID, CourseID, AssessmentType, Score, Date) VALUES

(1, 1, 1, 'Online Quiz', 85, '2024-08-15'),

(2, 2, 2, 'In-Person Exam', 78, '2024-08-14'),

(3, 3, 3, 'Online Assignment', 90, '2024-08-13'),

(4, 4, 4, 'Online Quiz', 88, '2024-08-12'),

(5, 5, 5, 'In-Person Exam', 72, '2024-08-11'),

(6, 6, 6, 'Online Assignment', 95, '2024-08-10'),

(7, 7, 7, 'Online Quiz', 80, '2024-08-09'),

(8, 8, 8, 'In-Person Exam', 65, '2024-08-08'),

(9, 9, 9, 'Online Assignment', 92, '2024-08-07'),

(10, 10, 10, 'Online Quiz', 85, '2024-08-06'),

(11, 11, 1, 'Online Assignment', 78, '2024-08-05'),

(12, 12, 2, 'In-Person Exam', 82, '2024-08-04'),

(13, 13, 3, 'Online Quiz', 90, '2024-08-03'),

(14, 14, 4, 'Online Assignment', 88, '2024-08-02'),

(15, 15, 5, 'In-Person Exam', 75, '2024-08-01'),

(16, 16, 6, 'Online Quiz', 91, '2024-07-31'),

(17, 17, 7, 'Online Assignment', 84, '2024-07-30'),

(18, 18, 8, 'In-Person Exam', 68, '2024-07-29'),

(19, 19, 9, 'Online Quiz', 87, '2024-07-28'),

(20, 20, 10, 'Online Assignment', 93, '2024-07-27');

-- Insert sample data into the InternetAccess table

INSERT INTO InternetAccess (AccessID, StudentID, TeacherID, ConnectivityQuality, DataUsage) VALUES

(1, 1, NULL, 'Good', 500),

(2, 2, NULL, 'Poor', 100),

(3, 3, NULL, 'Moderate', 300),

(4, 4, NULL, 'Good', 550),

(5, 5, NULL, 'Poor', 120),

(6, 6, NULL, 'Moderate', 320),

(7, 7, NULL, 'Good', 600),

(8, 8, NULL, 'Poor', 80),

(9, 9, NULL, 'Moderate', 350),

(10, 10, NULL, 'Good', 570),

(11, NULL, 1, 'Good', 700),

(12, NULL, 2, 'Moderate', 400),

(13, NULL, 3, 'Good', 750),

(14, NULL, 4, 'Moderate', 420),

(15, NULL, 5, 'Good', 680),

(16, NULL, 6, 'Moderate', 390),

(17, NULL, 7, 'Good', 720),

(18, NULL, 8, 'Moderate', 410),

(19, NULL, 9, 'Good', 730),

(20, NULL, 10, 'Moderate', 430);