**Student Management System SQL CODING**

CREATE TABLE Courses (

CourseID INT PRIMARY KEY IDENTITY,

CourseName NVARCHAR(100) NOT NULL,

Credits INT NOT NULL

);

CREATE TABLE Students (

StudentID INT PRIMARY KEY IDENTITY,

FirstName NVARCHAR(50) NOT NULL,

LastName NVARCHAR(50) NOT NULL,

DateOfBirth DATE,

EnrollmentDate DATE

);

CREATE TABLE Enrollments (

EnrollmentID INT PRIMARY KEY IDENTITY,

StudentID INT FOREIGN KEY REFERENCES Students(StudentID),

CourseID INT FOREIGN KEY REFERENCES Courses(CourseID),

EnrollmentDate DATE

);

INSERT INTO Courses (CourseName, Credits)

VALUES ('Introduction to SQL', 3),

('Data Structures', 4),

('Web Development', 3);

INSERT INTO Students (FirstName, LastName, DateOfBirth, EnrollmentDate)

VALUES ('John', 'Doe', '2000-01-15', '2022-08-20'),

('Jane', 'Smith', '1999-05-22', '2022-08-20'),

('Emily', 'Jones', '2001-11-30', '2022-08-20');

INSERT INTO Enrollments (StudentID, CourseID, EnrollmentDate)

VALUES (1, 1, '2022-08-20'),

(1, 2, '2022-08-20'),

(2, 2, '2022-08-20'),

(2, 3, '2022-08-20'),

(3, 1, '2022-08-20');

**1.How can you list all the students in the system?**

SELECT \* FROM Students;

**2.How can you find all students enrolled in a particular course, such as "Introduction to SQL"?**

SELECT s.FirstName, s.LastName FROM Students s JOIN Enrollments e ON s.StudentID = e.StudentID JOIN Courses c ON e.CourseID = c.CourseID WHERE c.CourseName = 'Introduction to SQL';

**3.How can you list each course and the number of students enrolled in it?**

SELECT c.CourseName, COUNT(e.StudentID) AS NumberOfStudents FROM Courses c LEFT JOIN Enrollments e ON c.CourseID = e.CourseID GROUP BY c.CourseName;

**4.How can you find students who are enrolled in more than one course?**

SELECT s.FirstName, s.LastName FROM Students s JOIN Enrollments e ON s.StudentID = e.StudentID

GROUP BY s.FirstName, s.LastName HAVING COUNT(e.CourseID) > 1;

**5.How can you retrieve the enrolment details, including the names of students, for a specific course?**

SELECT s.FirstName, s.LastName FROM Students s JOIN Enrollments e ON s.StudentID = e.StudentID

JOIN Courses c ON e.CourseID = c.CourseID WHERE c.CourseName = 'Introduction to SQL';

**6. How can you find students enrolled in both "Introduction to SQL" and "Web Development"?**

SELECT s.FirstName, s.LastName FROM Students s JOIN Enrollments e1 ON s.StudentID = e1.StudentID JOIN Enrollments e2 ON s.StudentID = e2.StudentID JOIN Courses c1 ON e1.CourseID = c1.CourseID

JOIN Courses c2 ON e2.CourseID = c2.CourseID WHERE c1.CourseName = 'Introduction to SQL'

AND c2.CourseName = 'Web Development';

**7.How can you find the total number of enrollments in the system?**

SELECT COUNT(\*) AS TotalEnrollments FROM Enrollments;