-- 1. Database Setup

CREATE DATABASE StudentManagement; USE StudentManagement;

CREATE TABLE Students ( StudentID INT AUTO\_INCREMENT PRIMARY KEY, Name VARCHAR(50), Gender VARCHAR(1), Age INT, Grade VARCHAR(10), MathScore INT, ScienceScore INT, EnglishScore INT );

-- 2. Insert Sample Data

INSERT INTO Students (Name, Gender, Age, Grade, MathScore, ScienceScore, EnglishScore) VALUES ('Ravi', 'M', 16, 'A', 88, 92, 85), ('Priya', 'F', 15, 'B', 75, 80, 78), ('Amit', 'M', 17, 'C', 65, 70, 68), ('Sita', 'F', 16, 'A', 90, 95, 93), ('John', 'M', 15, 'B', 82, 85, 80), ('Meena', 'F', 17, 'C', 60, 62, 58), ('Raj', 'M', 16, 'B', 78, 76, 80), ('Anita', 'F', 15, 'A', 92, 89, 90), ('Karan', 'M', 17, 'C', 58, 60, 55), ('Geeta', 'F', 16, 'B', 84, 87, 82);

-- 3. Tasks

-- 3.1 Display all students

SELECT \* FROM Students;

-- 3.2 Calculate average scores

SELECT AVG(MathScore) AS AvgMath, AVG(ScienceScore) AS AvgScience, AVG(EnglishScore) AS AvgEnglish FROM Students;

-- 3.3 Find student(s) with highest total score

SELECT \*, (MathScore + ScienceScore + EnglishScore) AS TotalScore FROM Students ORDER BY TotalScore DESC LIMIT 1;

-- 3.4 Count students in each grade

SELECT Grade, COUNT(\*) AS NumberOfStudents FROM Students GROUP BY Grade;

-- 3.5 Average score by gender

SELECT Gender, AVG(MathScore) AS AvgMath, AVG(ScienceScore) AS AvgScience, AVG(EnglishScore) AS AvgEnglish FROM Students GROUP BY Gender;

-- 3.6 Students with Math score > 80

SELECT \* FROM Students WHERE MathScore > 80;

-- 3.7 Update grade of student with specific ID (e.g., ID = 3)

UPDATE Students SET Grade = 'B' WHERE StudentID = 3;