SQL File for Student Management System

# 1. Database Creation

CREATE DATABASE IF NOT EXISTS StudentManagement;  
USE StudentManagement;

# 2. Table Creation

CREATE TABLE IF NOT EXISTS Students (  
 StudentID INT AUTO\_INCREMENT PRIMARY KEY,  
 Name VARCHAR(50),  
 Gender VARCHAR(1),  
 Age INT,  
 Grade VARCHAR(2),  
 MathScore INT,  
 ScienceScore INT,  
 EnglishScore INT  
);

# 3. Sample Data Insertion

INSERT INTO Students (Name, Gender, Age, Grade, MathScore, ScienceScore, EnglishScore) VALUES  
('Aarav', 'M', 16, 'A', 85, 78, 90),  
('Diya', 'F', 15, 'B', 75, 70, 82),  
('Rohan', 'M', 16, 'C', 60, 55, 65),  
('Sneha', 'F', 17, 'A', 92, 88, 91),  
('Karan', 'M', 15, 'B', 85, 60, 79),  
('Meera', 'F', 14, 'C', 68, 60, 72),  
('Yash', 'M', 16, 'A', 95, 90, 94),  
('Anika', 'F', 17, 'B', 78, 76, 80),  
('Rishi', 'M', 14, 'C', 58, 62, 60),  
('Isha', 'F', 15, 'A', 88, 84, 86);

# 4. Task Queries

1. Retrieve all student records

SELECT \* FROM Students;

1. Calculate average score of each subject

SELECT  
 AVG(MathScore) AS Avg\_Math,  
 AVG(ScienceScore) AS Avg\_Science,  
 AVG(EnglishScore) AS Avg\_English  
FROM Students;

1. Find the top performer based on total score

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

1. Count students in each grade

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

1. Find average score by gender

SELECT Gender,  
 AVG(MathScore) AS Avg\_Math,  
 AVG(ScienceScore) AS Avg\_Science,  
 AVG(EnglishScore) AS Avg\_English  
FROM Students  
GROUP BY Gender;

1. Students with Math score above 80

SELECT \* FROM Students WHERE MathScore > 80;

1. Update grade for a student with ID 5

UPDATE Students SET Grade = 'A' WHERE StudentID = 5;