Project Report: Student Record Management System

# 1. Team Members & Guide

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# 2. Problem Statement

To develop a C program that manages student records with CRUD operations, sorting, grading, and file persistence using a menu-driven approach.

# 3. Objectives

• Store student details (name, roll, marks, grade)  
• Modify or delete entries  
• Sort and display records  
• Save/load to/from file

# 4. Methodology

• Struct-based design using `Student` struct  
• Menu-driven program using loops and switch cases  
• Grade logic via conditions  
• File I/O using `fopen`, `fprintf`, and `fscanf`

# 5. Code Explanation

Functions like `addStudent()`, `modifyStudent()`, `deleteStudent()` implement core features. `calculateGrade()` assigns grades based on marks. Sorting uses bubble sort on roll/marks.

# 6. Conclusion

The system meets all basic student record operations with file persistence. It is modular and can be extended for dynamic memory or GUI interface in future.