

Final Project Proposal

Group Members: Wilson Xu (wx2105), Jacqueline Peng (jp5982), Claire Kim (sk9571)

Project Name: Student Grade Management System (SGMS)

Project Description:

We will build a command-line based system to manage student records, courses, and grades. Users (administrators) can add/remove/update student and course records, assign grades, and generate performance reports. The system will allow searching by student or course and will provide statistics (average, min, max) and performance categorization.

Architecture:

We will implement the SGMS in Java using Object-Oriented Design. The main components include:

- **Student Class:**
 - Attributes: Name, ID, Enrolled Courses
- **Course Class:**
 - Attributes: Course Name, Code, Instructor
- **GradeManager Class:**
 - Actions: Add/Update/Delete Students and Courses, Assign Grades, Generate Reports, Search by Name

Supported Actions (not limited to):

- Manage Students (Add/Update/Delete)
- Manage Courses (Add/Update/Delete)
- Assign Grades to Students for Specific Courses
- Search Students (by name) and Courses (by name)
- Generate Reports (average, min, max grades, performance categorization)

The system will use in-memory data structures for all operations. The user interacts through a simple CLI menu, selecting actions like “Manage Students” or “Search Records.”