**Project Proposal: SIMPLE ALARM CLOCK**

**Introduction:**

We propose the development of an advanced Grade Calculator project that builds upon the fundamental concepts of C++ covered in the curriculum. This project aims to provide students with a comprehensive tool for calculating and analyzing grades, incorporating various programming constructs such as if-else statements, loops, arrays, and functions.

**Project Overview:**

The Grade Calculator will allow users to input grades for multiple subjects, calculate weighted averages, assign letter grades, and provide detailed feedback. It will include features like storing student records, generating grade histograms, analyzing class statistics, suggesting subject recommendations, and implementing user authentication.

**Key Features:**

**1. Subject-wise Grades:**

- Enable users to input grades for different subjects.

- Implement calculations for subject-wise averages.

**2. Weighted Grading System:**

- Introduce a weighted grading system for each subject.

- Calculate the overall weighted average based on subject importance.

**3. Grade Ranges and Feedback:**

- Define specific grade ranges with corresponding feedback.

- Offer detailed insights based on the achieved grade.

**4. Student Records:**

- Store and manage individual student records, including names and grades.

- Allow users to view, update, and maintain historical records.

**5. Subject Recommendations:**

- Implement a feature to suggest subjects based on the student's performance.

- Guide students toward areas that may require improvement.

**Conclusion:**

This Grade Calculator project offers an excellent opportunity for students to apply their knowledge of C++ concepts, including control structures, arrays, functions, and more. The advanced features introduced in this project will not only challenge students to extend their programming skills but also provide a practical and valuable tool for academic assessment and analysis.