**PRODUCT DESCRIPTION**

The student grade computation and management system is a java based program that allows users to input various academic scores for a student and calculates the student's final grade based on pre-defined weightings for different components such as homework, quizzes, exams, project and attendance. The program provides a convenient way to manage and compute final grades, making it particularly useful for educators, students, and anyone else involved in academic assessment.

KEY FEATURES: -

1. Input of academic scores: The program prompts the user to enter numerical scores for various academic components, including:

* Homework
* Quizzes
* Mid-Term Exam
* Final exam
* Final Project

1. Weighted Components: The program applies predefined weightings to each component to calculate the final grade the default weightings are:

* Homework (15%)
* Quizzes (5%)
* Mid-trem exam (25%)
* Final Exam (30%)
* Final Project (25%)

1. Final Grade Calculation: The program calculates the final grade by multiplying each component’s score by its respective weight, summing these values, and expressing the result as a percentage.
2. Formatted Output : The final grade is presented to the user as a percentage with two decimal places, making the output more user-friendly.

**PROCESS**

To use the program, follow these steps:

1.Compile the java code:

To compile the program, you need to install Java Development Kit (JDK).

* Create a new text file and name it as “GradeComputationSystem.java”.
* Copy and paste the java code you provided into this file and save it.

To compile the code, open a terminal and navigate to the directory where the “GradeComputationSystem.java” file is saved. Then compile the code with the command:

* Javac GradeComputationSystem.java

2. Run the Program:

After the code is successfully compiled, you can the program with the command:

* Java GradeComputationSystem

This will start your program, and the program starts asking you to enter the values for different components, such as homework, quizzes,Mid-term Exam and Final .Enter each grade as requested and press enter.

3.Final Grade:

After entering all the grades, the program will calculate the final grade based on the predefined weightings and display it as a percentage with two decimal places.

A computer screen shot of a computer screen

Description automatically generated

**CHALLENGES**

**Project schedule**: We have divided the entire project into 5 parts.

Week 1: - **Project planning, Code implementation and Testing and Quality Assurance**

* Day 1: - Defining the requirements for the project.
* Day 2: - Deciding the team member’s roles and responsibilities and establishing the initial plan, including deadlines.
* Day 3: - Deciding what tools to be used and libraries.
* Day (4-6): - Writing the code for the grade computation system and implementing input validation for user’s grade.
* Day 7: - Started testing the program and identified the issues, bugs and refined the code based on testing and QA feedback.

Week 2: - **Documentation**

* Day (1-3): - Started preparing the user manual documentation for the written program.
* Day (4-6): - Started preparing project report (product description, challenges, process, and conclusion).

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**TEAM WORKS**

* We, the team members, worked together to complete the project from initial conception to the final operation.
* We together started gathering the required information for the project.
* After that we started implementing the code.
* These are the tasks we performed together.

**TASKS DIVIDING PROCESS**

As we are of two members in the team, we decided to divide the tasks equally as a part of the project.

* So, Keerthana Reddy Katta up with the documentation of user manual and process of the product how user can use the software or program.
* I Bhrath Baddi took up with the documentation of the product report, challenges, and conclusion of the project.

**CONCLUSION**

I have learnt lot of things while doing this project such as skill development. I have learned the programming skills which made me build a program which enhances programming skills particularly in Java. And learnt problem solving with this project. Also learned to communicate technical information effectively. Finally, learnt how to coordinate with team members.