Documentation is done with help of chatgpt

PROJECT1: Student Grading System

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1. Overview:

The Student Grading System is a Java console application that allows users to input details of a student, including their name, roll number, the number of subjects, total marks, and scores for each subject. The program then calculates the overall grade based on the percentage of total marks obtained by the student.

2. Functionality:

- The program begins by prompting the user to enter the name of the student, roll number, number of subjects, total marks, and scores for each subject.
- It calculates the total marks obtained by the student and the percentage achieved.
- Based on the percentage, the program assigns a grade (A, B, C, D, E, or F) to the student.
- The program then displays the academic details, including the name, roll number, subject-wise scores, and overall grade for the student.
- The user has the option to continue entering information for additional students or exit the program.

3. Program Structure:

- The program consists of three main methods:
  - `readInfo`: Handles input of student information.
  - `calculateGrade`: Calculates the grade based on total marks and scores.
  - `display`: Displays the academic details, including subject-wise scores and overall grade.
- The `main` method acts as the entry point and controls the flow of the program. It includes a loop allowing the user to input information for multiple students until choosing to exit.

4. Usage:

- Run the program and follow the prompts to input student information.
- View the displayed academic details and overall grade.
- Choose to continue entering information for additional students or exit the program.

5. Sample Output:

```
ACADEMIC DETAILS
Name of the Student: [Student Name]
Roll No: [Roll Number]
Subject 1: [Score]
Subject 2: [Score]
...
Overall Grade: [Grade]
```

6. Notes:

- The program assumes valid input from the user and does not perform extensive input validation.
- The maximum number of subjects is set to 100, but the array size can be adjusted based on actual needs.
- Additional features or improvements can be made, such as error handling and enhanced user interfaces.

```java
import java.util.Scanner;

public class Student_grading_system
{

    private static void readinfo()
    {

        Scanner sc=new Scanner(System.in);

        int stotal=0;
        int[] scores=new int[100];

        System.out.println("Enter name of student:");
        String name=sc.nextLine();

        System.out.println("Enter roll no:");
        int roll=sc.nextInt();

        System.out.println("Enter the number of subjects:");
        int no=sc.nextInt();

        System.out.println("Enter the total marks:");
        int total=sc.nextInt();

        System.out.println("Enter the scores for each subject attained by the
student:");
        for (int i=0;i<no;i++)
        {
            scores[i]=sc.nextInt();
            stotal=stotal+scores[i];
        }

        char grade=calculategrade(total,stotal);

        display(name,roll,scores,no,grade);
    }

    private static char calculategrade(int total,int stotal)
    {
        float percentage = ((float) stotal / total) * 100;

        if(percentage>90) {
            return 'A';
        }
        else if(percentage>80) {
            return 'B';
```

```
        }
         else if(percentage>70) {
            return 'C';
        }
         else if(percentage>60) {
            return 'D';
        }
         else if(percentage>50) {
            return 'E';
        }
        else {
            return 'F';
        }

    }

    private static void display(String name, int roll,int[] scores,int no,char
grade)
    {
        System.out.println("ACADEMIC DETAILS");
        System.out.println("Name of the Student:"+name);
        System.out.println("Roll No: " + roll);
        int j=1;
        for (int i=0;i<no;i++)
        {

            System.out.println("Subject "+j+":"+scores[i]);
            j++;
        }
        System.out.println("Overall Grade: " + grade);
    }

    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        int choice;
        do
        {
            readinfo();
            System.out.println("If you want to exit press 1 , if you want to
continue enter any other number!!!");
            choice=sc.nextInt();
        }while(choice!=1);

    }
}
```