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// Program to calculate SGPA of a Student
```

```
import java.util.Scanner;
```

```
class Student{
    private String usn;
    private String name;
    private int[] credits;
    private int[] marks;

    public Student(int numberOfSubjects){
        credits = new int[numberOfSubjects];
        marks = new int[numberOfSubjects];
    }

    public void acceptDetails(){
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter USN: ");
        usn = scanner.nextLine();

        System.out.print("Enter Name: ");
        name = scanner.nextLine();

        for (int i = 0; i < credits.length; i++){
            System.out.print("Enter credits for subject " + (i + 1) + ": ");
            credits[i] = scanner.nextInt();

            System.out.print("Enter marks for subject " + (i + 1) + ": ");
            marks[i] = scanner.nextInt();
        }
    }

    public void displayDetails(){
        System.out.println();
        System.out.println("Student Details:");
        System.out.println("USN: " + usn);
        System.out.println("Name: " + name);

        for(int i = 0; i < credits.length; i++){
            System.out.println("Subject " + (i + 1) + ": Credits = " + credits[i] + ", Marks = " + marks[i]);
        }
    }
}
```

```

public void displayDetails(){
    System.out.println();
    System.out.println("Student Details:");
    System.out.println("USN: " + usn);
    System.out.println("Name: " + name);

    for(int i = 0; i < credits.length; i++){
        System.out.println("Subject " + (i + 1) + ": Credits = " + credits[i] + ", Marks = " + marks[i]);
    }
}

public double calculateSGPA(){
    int totalCredits = 0;
    double weightedMarks = 0;

    for (int i = 0; i < credits.length; i++){
        weightedMarks += (marks[i] / 10) * credits[i];
        totalCredits += credits[i];
    }

    return totalCredits > 0 ? weightedMarks / totalCredits : 0;
}

public static void main(String[] args){
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter number of subjects: ");
    int numberOfSubjects = scanner.nextInt();

    Student student = new Student(numberOfSubjects);

    student.acceptDetails();
    student.displayDetails();

    double sgpa = student.calculateSGPA();
    System.out.printf("SGPA: %.2f\n", sgpa);

    scanner.close();
}
}

```

```
PS D:\1BM23CS328\Week 2> javac Student.java
```

```
PS D:\1BM23CS328\Week 2> java Student
```

```
Enter number of subjects: 5
```

```
Enter USN: 1CS234
```

```
Enter Name: Cole
```

```
Enter credits for subject 1: 4
```

```
Enter marks for subject 1: 99
```

```
Enter credits for subject 2: 4
```

```
Enter marks for subject 2: 99
```

```
Enter credits for subject 3: 3
```

```
Enter marks for subject 3: 98
```

```
Enter credits for subject 4: 3
```

```
Enter marks for subject 4: 98
```

```
Enter credits for subject 5: 2
```

```
Enter marks for subject 5: 97
```

```
Student Details:
```

```
USN: 1CS234
```

```
Name: Cole
```

```
Subject 1: Credits = 4, Marks = 99
```

```
Subject 2: Credits = 4, Marks = 99
```

```
Subject 3: Credits = 3, Marks = 98
```

```
Subject 4: Credits = 3, Marks = 98
```

```
Subject 5: Credits = 2, Marks = 97
```

```
SGPA: 9.00
```