

## 1.STUDENT SGPA CALCULATION

```
import java.util.*;  
  
class Student {  
    String name;  
    String usn;  
    int[] credits;  
    int[] marks;  
    int n; // number of subjects  
  
    void acceptdetails() {  
        Scanner sc = new Scanner(System.in);  
  
        System.out.print("Enter name: ");  
        name = sc.nextLine();  
  
        System.out.print("Enter USN: ");  
        usn = sc.nextLine();  
  
        System.out.print("Enter number of subjects: ");  
        n = sc.nextInt();  
  
        credits = new int[n];  
        marks = new int[n];  
  
        for (int i = 0; i < n; i++) {  
            System.out.print("Credits of subject " + (i + 1) + ": ");  
            credits[i] = sc.nextInt();  
  
            System.out.print("Marks of subject " + (i + 1) + ": ");
```

```
marks[i] = sc.nextInt();

}

}

int getCreditPoints(int marks) {

    if (marks >= 90) return 10;

    else if (marks >= 80) return 9;

    else if (marks >= 70) return 8;

    else if (marks >= 60) return 7;

    else if (marks >= 50) return 6;

    else if (marks >= 40) return 5;

    else if (marks >= 30) return 4;

    else return 0;

}

double calculateSGPA() {

    int totalCredits = 0;

    int obtainedSum = 0;

    for (int i = 0; i < n; i++) {

        int gradePoints = getCreditPoints(marks[i]);

        totalCredits += credits[i];

        obtainedSum += credits[i] * gradePoints;

    }

    return (double) obtainedSum / totalCredits;

}

}

public class Main {

    public static void main(String[] args) {
```

```
Student s = new Student();  
  
s.acceptdetails();  
  
System.out.println("Your SGPA: " + s.calculateSGPA());  
  
}  
  
}
```

The screenshot shows a Java application running in the terminal. The user has entered the command `java Main`. The application prompts for the name and USN, and then asks for the number of subjects. It then iterates through three subjects, asking for credits and marks, and calculates the SGPA. The output is as follows:

```
PS C:\Users\naveen\Desktop\coding> java Main
● Enter name: GHAITHANYA
Enter USN: 1M24CS067
Enter number of subjects: 3
Credits of subject 1: 10
Marks of subject 1: 70
Credits of subject 2: 10
Marks of subject 2: 90
Credits of subject 3: 10
Marks of subject 3: 95
Your SGPA: 9.333333333333334
```