1.STUDENT SGPA CALCULATION

```java
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) + ": ");
```

```java
            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) {
```

```java
        Student s = new Student();

        s.acceptdetails();

        System.out.println("Your SGPA: " + s.calculateSGPA());

    }

}
```