```java
// student details lab program 2

import java.util.Scanner;
class Student {
        String name;
        String usn;
        int array_credits[];
        double array_marks[];
        int n;
        void getStudentData()
        {
                System.out.println("enter the student details");
                Scanner s = new Scanner(System.in);
                System.out.println("enter the student name");
                name = s.next();
                System.out.println("enter the student usn");
                usn = s.next();
                System.out.println("enter the number of subjects");
                n = s.nextInt();

                array_credits = new int[n];
                array_marks = new double[n];
                System.out.println("enter the credits of each subject");
                for(int i=0; i<n; i++)
                {
                        array_credits[i] = s.nextInt();
                }
                System.out.println("enter the marks of each subject");
                for(int i=0; i<n; i++)
                {
                        array_marks[i] = s.nextDouble();
                }

        void calculate_SGPA()
        {
                double sgpa=0;
                double tot_credits = 0;
                for(int i=0; i<n; i++)
                {
                        tot_credits = tot_credits + array_credits[i];
                        sgpa = sgpa + (array_credits[i]*array_marks[i]);
                }
```

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        sgpa = sgpa / tot_credits;
        System.out.println(" the total marks of the student is " + sgpa);

        if (sgpa >= 90)
        System.out.println(" sgpa = S");

        else if (sgpa >= 80)
        System.out.println(" sgpa = A");

        else if (sgpa >= 70)
        System.out.println(" sgpa = B");

        else if (sgpa >= 60)
        System.out.println(" sgpa = C");

        else if (sgpa >= 50)
        System.out.println(" sgpa = D");

        else if (sgpa >= 40)
        System.out.println(" sgpa = E");

        else if (sgpa >=
        System.out.println(" sgpa = F");
    }

    void display_details()
    {
        System.out.println(" Student details:");
        System.out.println(" name = " + name);
        System.out.println(" usn = " + usn);
        System.out.println(" marks obtained by the student are:");
        for (int i = 0; i < n; i++)
        {
            System.out.println(array_marks[i]);
        }
    }
}

class stdmain{
    public static void main(String args[])
    {
        Student s1 = new Student();
        s1. getStudentData();
        s1. display_details();
        s1. calculate_SGPA();
    }
}
```