Q. Develop a Java program to create a class Student with members usn, name, an array credits, array marks. Include methods to accept and display details and a method to calculate SGPA of a student.

$$SGPA = \frac{\sum(course\ credit \times grade\ point)}{\sum course\ credit}$$

⇒
```java
import java.util.Scanner;
class Subject
{
    int SubjectMarks;
    int credit;
    int grade;
}
class Student
{
    Subject subject[];
    String name;
    String USN;
    double SGPA;
    Scanner s;
    Student()
    {
        int i;
        subject = new Subject[9];
        for(i=0; i<8; i++)
        {
            subject[i]=new Subject();
            s=new Scanner(System.in);
        }
    }
}
```

```java
void getStudentDetails()
{
    System.out.print("Enter your name");
    name = s.next();
    System.out.println("Enter UIN:");
    UIN = s.next();
}

void getMarks()
{
    for(int i=0; i<8; i++)
    {
        System.out.print("Enter marks for subject"+ (i+1)+":");
        subject[i].subjectMarks = s.nextInt();
        System.out.print("Enter your credits for subject "+(i+1)" :"
        subject[i].credits = s.nextInt();
        subject[i].grade = (subject[i].subjectMarks /10)+1;
        if(subject[i].grade == 11)
        {
            subject[i].grade =10;
        }
        if(subject[i].grade <=4)
        { 
            subject[i].grade=0;
        }
    }
}

void computeSGPA()
{
    int effectivescore=0;
    int totalCredits=0;
    for(int i=0; i<8; i++)
    {
```

```java
            effectivescore += (subject[i].grade * subject[i].credits);
            totalcredits += subject[i].credits;
        }
        sGPA = (double) effectivescore / (double) total credits;
    }
}

class Main
{
    public static void main(String args[])
    {
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        System.out.println("Name:" + s1.name + " USN: " + s1.USN +
                           "SGPA:" + s1.SGPA);
    }
}
```

Output

Enter your name Shruti
Enter your USN:
1BM22C274
Enter marks for subject1 : 88
enter your credits for subject1 : 4
Enter marks for subject2 : 89
enter your credits for subject2 : 4
Enter marks for subject3 : 92
enter your credits for subject3 : 3
Enter marks for subject4 : 90
enter your credits for subject4 : 3

Enter marks for subject 5: 87
enter your credits for subjects: 3
Enter marks for subject 6: 86
Enter your credits subj6: 2
Enter marks for subject 7: 89
Enter your Credits subj7: 2
Enter marks for subject 8: 95
enter your credits subj8: 1
Name: Shruti   USN: 1BM22CS274   SGPA: 9.3/8 18 18 18 18 18 18/8