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

$$SGPA = \frac{\sum (\text{course credits}) * (\text{Grade points})}{\sum (\text{course credits})}$$

→

```
import java.util.Scanner;
class Subject {
    int subjectMarks;
    int credits;
    int grade;
}
class Student {
    String name;
    String usn;
    double SGPA;
    Subject subject[];
    Scanner s;
    Student() {
        int i;
        subject = new Subject[8];
        for(i=0; i<8; i++)
        { this.subject[i] = new Subject();
          s= new Scanner(System.in);
        }
    }
```

```
void getStudentDetails(){
        s = new Scanner(System.in);
        System.out.println("Enter student's name");
        this.name = s.nextLine();
        System.out.println("Enter usn of student");
        this.usn = s.nextLine();
}

void getMarks(){
        int i
    for(i=0; i<9; i++){
        s = new Scanner(System.in);
        System.out.println("Enter the marks of "+
                (i+1) + "subject");
        this.subject[i].subjectMarks = s.nextInt()
        System.out.println("Enter the credits of"+
                        (i+1) + "subject");
        this.subject[i].credits = s.nextInt();
        this.subject[i].grade = (subject[i].subjectMarks/10
    this.subject[i].grade = (subject[i].subjectMarks / 10 +1);
     if (this.subject[i].grade == 11){
         this.subject[i].grade = 10;
     }
     if (this.subject[i].grade <= 4){
         this.subject[i].gradde = 0;
     }
    }
}
```

```
void computeSGPA(){
    int i;
    float sum_creditsandgrade=0;
    float sum_credits=0;
    for(i=0; i<8; i++){
      sum_creditsandgrade+=(this.subject[i].credits)*
                (this.subject[i].grade);
      sum_credits += this.subject[i].credits;
    }
    this.SGPA=(sum_creditsandgrade)/(sum_credits);
  }
}
class Main{
    public static void main(String args[]){
      Student s1 = new Student();
      s1.getStudentDetails();
      s1.getMarks();
      s1.computeSGPA();
      System.out.println("The name of the student is"
                +s1.name);
      System.out.println("The usn of the student is"
                +s1.usn);
      System.out.println("The SGPA of the student is"
                +s1.SGPA);
    }
}
```

output:-

Enter student's name

Sagar

Enter USN of student

1BM22CS231

Enter the marks of 1 subject

90

Enter the credits of 1 subject

4

Enter the marks of 2 subject

91

Enter the credits of 2 subjects

4

Enter the marks of 3 subject

90

Enter the credits of 3 subject

3

Enter the marks of 4 subject

87

Enter the credits of 4 subject

3

Enter the marks of 5 subject

83

Enter the credits of 5 subject

3

Enter the marks of 6 subject

89

Enter the credits of 6 subject

1

Enter the marks of 7 subject

93

Enter the credits of 7 subject

1

Enter the marks of 8 subject

86

Enter the credits of 8 subject

1

The name of the student is Sagar
The usn of the student is 1BM22CS231
The SGPA of the student is 9.6

Done by - Sagar. I. Bangari
1BM22CS231

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