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LAB Program - 2

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

```
import java.util.Scanner;

class Subject
{
    int subjectMarks;
    int credits;
    String grade;
}

class Student
{
    String name;
    String usn;
    double SGPA;
    Scanner s;
    Subject subject[];
    Student()
    {
        int i;
        subject = new Subject[9];
        for(i=0 ; i<9 ; i++)
            subject[i] = new Subject();
        s = new Scanner(System.in);
    }
    void getStudentDetails()
    {
        System.out.println("enter your name : ");
        name = s.nextLine();
```

```
        System.out.println ("enter your usn : ");
        usn = s.nextLine();
    }

    void getMarks()
    {
        int i;
        for(i=0; i<8 ; i++)
        {
            System.out.println("enter the marks & credits for course"+i+":");
            System.out.println("marks : ");
            int marks = s.nextInt();
            System.out.println("credits : ");
            int credit = s.nextInt();
            subject[i].subjectMarks = marks;
            subject[i].credits = credit;
            if (marks>=90 && marks<=100)
            {
                subject[i].grade = "O";
            }
            else if (marks>=80 && marks<90)
            {
                subject[i].grade = "A+";
            }
            else if (marks>=70 && marks<80)
            {
                subject[i].grade = "A";
            }
            else if (marks>=60 && marks<70)
            {
                subject[i].grade = "B+";
            }
            else if (marks>=50 && marks<60)
```

```
        {
            subject[i].grade = "C";
        }
        else if (marks >= 0 && marks < 40)
        {
            subject[i].grade = "F";
        }
    }
}
void computeSGPA()
{
    int i;
    double sgpa;
    double totalcredits = 0;
    double totalgradepoints = 0;
    for (i=0; i<8; i++)
    {
        totalcredits += subject[i].credits;
        switch (subject[i].grade)
        {
            case "O" : totalgradepoints += 10* subject[i].credits;
            break;
            case "A+" : totalgradepoints += 9* subject[i].credits;
            break;
            case "A" : totalgradepoints += 8* subject[i].credits;
            break;
            case "B+" : totalgradepoints += 7* subject[i].credits;
            break;
            case "B" : totalgradepoints += 6* subject[i].credits;
            break;
            case "C" : totalgradepoints += 5* subject[i].credits;
            break;
```

```
                case 'F': totalgradepoints += 0*subject[i].credits;
                break;
            }
        }
        sgpa = totalgradepoints / totalcredits;
        System.out.println("Name : "+name);
        System.out.println("USN : "+usn);
        System.out.println("sgpa is : "+sgpa);
    }
}
class sgpa
{
    public static void main(String args[])
    {
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
    }
}
```

Output:

```
enter your name: dhoni
enter your usn: 215
enter the marks and credits for course 0:
marks : 90
credits : 4
enter the marks and credits for course 1:
marks : 99
credits : 4
enter the marks and credits for course 2:
marks : 94
credits : 3
```

enter the marks and credits for course 3:
marks: 96
credits: 1

name: dhoni
usn: 215
the sgpa is: 10.00