URBAN EDGE 19/12/23

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 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 marks and credits
                                for course "+i+" :");
            System.out.println("marks :");
            int marks = s.nextInt();
            System.out.println("credits :");
            int credits = s.nextInt();
            subject[i].subjectmarks = marks;
            subject[i].credit = 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 = "B";
}
else if (marks >=40 && marks<50)
{
    subject[i].grade = "C";
}
else if (marks >= 30 && marks <40)
{
    subject[i].grade = "F";
}
}
}
Void computeSGPA()
{
    int i;
    double Sgpa;
    double totalcredits = 0;
    double totalgradepoint = 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("the 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 : Rakesh
enter your usn : 216
enter the marks and credits for course 0:
marks : 90
credits : 4
marks enter the marks and credits for course 1:
credits marks : 92
credits : 4
```

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enter the marks and credits for course 2:
marks :94
Credits : 3

enter the marks and credits for course 3:
marks : 96
Credit : 2.

name : rakesh
usn : 216
the sgpa is : 10.00