LAB PROGRAM 02

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

```java
import java.util. Scanner;

class Subject {
    int subjectMarks;
    int credits;
    int grade;
}
class Student {
    String name;
    String usn;
    double SGPA;
    Subject[] subjects;
    Scanner s;
```

```java
//Constructor
Student () {
    subjects = new Subject[8];
    for (int i=0; i<8; i++) {
        subjects[i] = new Subject();
    }
    s = new Scanner(System.in);
}

//Method to get subject marks & credits
void getMarks() {
    for (int i =0; i<8; i++) {
        System.out.println("Enter marks for
        subject "+ (i+1) + ": ");
        subjects[i].subjectMarks = s.nextInt();

        System.out.println("Enter credits for subject
        + (i+1) + ": ");
        subject[i].credits = s.nextInt();

        // Calculate grade based on marks;
        if (subjects[i].subjectMarks >= 90) {
            subjects[i].grade =10;
        }
        else if (subjects[i].subjectMarks >80 {
            subjects[i].grade = 9;
```

```java
        else if (subjects[i].subjectMarks >= 70){
            subjects[i].grade = 8;
        }
        else if (subjects[i].subjectMarks >= 60){
            subjects[i].grade = 7;
        }
        else if (subjects[i].subjectMarks >= 50){
            subjects[i].grade = 6;
        }
        else {
            subjects[i].grade = 0;
        }
    }
}

void computeGPA() {
    double totalCredits = 0;
    double totalGradepoints = 0;

    for (int i = 0; i < 8; i++) {
        totalCredits += subject[i].credits;
        totalgradepoints += subjects[i].grade
                            * subjects[i].credits;
    }
    GPA = totalGradepoints / totalCredits;
}
```

```java
public class StudentSGPA {
    public static void main(String[] args) {
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.gainmarks();
        s1.computeSGPA();

        System.out.println("\nStudent Details:
        System.out.println("Name:" + s1.name)
        System.out.println("USN:" + s1.usn);
        System.out.println("SGPA:" + s1.SGPA)
    }
}
```

3

3

OUTPUT:

Enter Student name:

NUVEETH &7P7 B7

Enter Student USN:

2023BMP

Enter Marks for subject 1:

80

Enter Credits for subject 1:

4

Enter marks for subject 2:
75

Enter credits for subject 2:
3

Enter marks for subject 3:
89

Enter credit for subject 3:
4

Enter marks for subject 4:
58

Enter credit for subject 4:
2

Enter mark for subject 5:
76

Enter credit for subject 5:
3

Enter mark for subject 6:
82

Enter credit for subject 6:
4

Enter marks for subject 7:
77

Enter credit for subject 7:
3

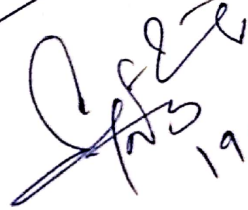Enter marks for subject 8:
50

Enter credit for subject 8:
1

Student Details:

Name: PUNEETH GIRI B T

USN: 2023BMS

SGPA: 8.25

19.12.23