LAB Program 2

A 29-12-23

Q Develop a java program to create a class students with members USN, name and array credits and array marks. Include methods to accept and display details and a method to calculate SGPA of a student

```java
import java.util.Scanner;

class subject {
    int subjectMarks;
    int credits;
    double grade;
}

class student {
    String name;
    String usn;
    double SGPA;
    Scanner s;
    Subject [] subjects;

    student() {
        int i;
        subjects = new subject [9];
        for (i=0; i<9; i++)
            subjects[i] = new Subject();
        s = new Scanner(System.in);
    }

    void getStudentDetails() {
        System.out.println("Enter the student name");
        name = s.next Line();
```

```java
        System.out.println("Enter USN");
        usn = s.nextLine();
    }

    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) + ":");
            subjects[i].credits = s.nextInt();
            subjects[i].credits as

            subjects[i].grade = subjects[i].subjectMarks/10.0 + 1.0;
            if (subjects[i].grade == 11)
                subjects[i].grade = 10;
        }
    }

    void computeSGPA() {
        double totalCredits = 0;
        double weightedSum = 0;

        for (int i = 0; i < 8; i++) {
            totalCredits += subjects[i].credits;
            weightedSum += subjects[i].credits * subjects[i].grade;
        }

        SGPA = weightedSum / totalCredits;
    }

    void displayResult() {
        System.out.println("Student Name:" + name);
        System.out.println("USN:" + usn);
        System.out.println("SGPA:" + SGPA);
    }
}
```

```java
public class main {
    public static void main ( string [ ] args ) {
        Student s1 = new Student ();
        s1 . get StudentDetails ();
        s1 . get Marks ();
        s1 . compute SGPA ();
        s1 . display Result ();
    }
}
```

Output:

Enter Student Name :
Sohan
Enter USN :
1BM77CS285
Enter marks for Subject 1 :
90
Enter credits for Subject 1 :
4
Enter marks for Subject 2 :
90
Enter credits for Subject 2:
4
Enter marks for Subject 3:
85
Enter credits for Subject 3:
3
Enter marks for Subject 4 :
89
Enter credits for Subject 4 :
4

Enter marks for Subject 5

85

Enter credits for Subject 6

3

Enter marks for Subject 6 :

90

Enter credits for Subject 6 :

2

Enter marks for Subject 7 :

90

Enter credits for Subject 7

Enter marks for Subject 8

90

Enter credits for Subject 8 :

1

Student Name : Sohan

USN : 1BM22CS285

SGPA : 9.84 S4 S4 S4 S4 S6