classmate
Date 19-12-23
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Lab program - 2

→ Develop a java program to creat a Student with member usn, name, an array credits & an array marks. Include methods to calculate SGPA of a student.

INPUT →

```
import java.util.Scanner;

Class Subject {
        int subjectMarks;
        int credits;
        int grade;
*** Constructor
public Subject() {
        this.credits = 0;
        this.subjectMarks = 0;
        this.grade = 0;

}
}
Class Student {
    String name;
    String usn;
    double SGPA;
    Scanner s;
    Subject[] subjects;
*** Constructor to initialize
Student() {
    int i;
    subjects = new Subject[9];
        for (i=0; i<9; i++)
            subjects[i] = new Subject();
            s = new Scanner(System.in);
}
```

Details of student →

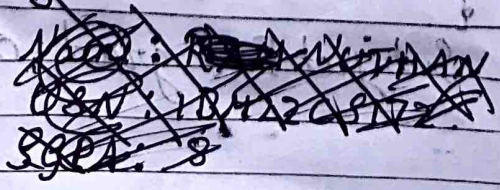
```
public void getStudentDetails() {
        System.out.print("Enter Name: ");
```

```
name = s.next();
System.out.print("Enter usn :");
usn = s.next();
}
// Details of Marks
Public void getMarks() {
for (int i=0; i<8; i++) {
System.out.print("Enter marks for subject "+
(i+1)+":");
Subjects[i].SubjectMarks = s.nextInt();
System.out.print("Enter credits for
subject"+(i+1)+":");
Subjects[i].credits = s.nextInt();

if (Subjects[i].subjectMarks >= 90) {
subjects[i].grade = 10;
}
else if (Subjects[i].SubjectMarks >= 80)
{
else if (Subjects[i].SubjectMarks >= 70).
{
else if (Subject[i] SubjectMarks >= 60).
{
else if (Subject[i] SubjectMarks >= 50).
{
else if (Subject[i] SubjectMarks >= 40).
{
Subjects[i].grade = 6;
} else if (Subjects[i].[redacted]
grade = 5;
} else {
Subject[i] grad = 0;
}
}
}
```

Compute SGPA

```
public void ComputeSGPA() {
    double totalCredits = 0.0;
    double weightedSum = 0.0;

    for (int i = 0; i < 8; i++) {
        totalCredits += subjects[i].credits;
        weightSum += (subjects[i].grade *
            subjects[i].credits);
    }
    SGPA = weightedSum / totalCredits;
}
}
public class Main {
    public static void main(String[]
    args) { // Student object
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        // Compute
        System.out.println("\n Student
            Details: ");
        System.out.println("Name: "+s1+name);
        System.out.println("Usn: "+s1+usn);
        System.out.println("SGPA "+s1.SGPA);
    }
}
```

output.



output

Enter Name : Nuthan
Enter USN : 1BM22CS172
Enter marks for ~~the~~ Subject 1: 80
Enter ~~marks~~ Credits for subject : 4
Enter marks for subject 2: 92
Enter credits for subject: 4
Enter marks for subject 3: 72
Enter credits for subject. 3
Enter marks for subject 4: 81
Enter credits for subject: 3
Enter marks for subject 5: 62
Enter credits for subject : 3
Enter marks for Subject 6: 91
Enter credits for subject: 1
Enter marks for Subject 7: 87
Enter credits for Subject: 1
Enter marks for Subject 8: 83
Enter credits for subject: 1

Student Details :
Name: Nuthan.
USN : 1BM22CS172
SGPA : 8.8.

19/12/2023