

16/10/24

LAB - PROGRAM - 2

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

```
→ import java.util Scanner;
class Subject {
    int subjectMarks;
    int credits;
    int grade;
```

```
void calculateGrade() {
    if (subjectMarks >= 90)
        grade = 10;
    else if (subjectMarks >= 80)
        grade = 9;
    else if (subjectMarks >= 70)
        grade = 8;
    else if (subjectMarks >= 60)
        grade = 7;
    else if (subjectMarks >= 50)
        grade = 6;
```


else if (Subject Marks \geq 40)

grade = 5;

else

grade = 0;

Class Student {

String usn;

String name;

double SGPA;

Subject[] subjects = new Subject[8];

Scanner scanner = new Scanner(System.in);

Student () {

for (i = 0; i < 8; i++) {

subject[i] = new Subject();

}

void Get Student Details () {

System.out.print("Enter usn: ");

usn = scanner.next();

System.out.print("Enter name: ");


```

    name = scanner.next();
}

void GetMarks () {
    for (int i=0; i<8; i++){
        System.out.println("Enter marks for " + (i+1) +
            " Subject : ");
        subject[i].SubjectMarks = scanner.nextInt();
        System.out.println("Enter credits for " + (i+1) +
            " Subject : ");
        subject[i].credits = scanner.nextInt();
        subject[i].CalculateGrade();
    }
}

```

```

void SGPA () {
    double score = 0;
    int total-credits = 0;
    for (int i=0; i<8; i++){
        score = score + (subject[i].credits *
            subject[i].grade);
        total-credits + = subject[i].credits;
    }
    if (total-credits > 0) {
        SGPA = score / total-credits;
    } else {
        SGPA = 0;
    }
}

```


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```
void Display() {  
    System.out.print("USN: " + usn);  
    System.out.print("Name: " + name);  
    System.out.print("SGIPA: " + SGIPA);  
}
```

```
}  
  
public class StudDetails {  
    public static void main(String[] args) {  
        Student[] students = new Student[3];  
  
        for (j=0; j<3; j++) {  
            System.out.print("Enter details for  
                Student " + (j+1) + " ");  
            students[j] = new Student();  
            students[j].get  
            students[j].GetStudentDetails();  
            students[j].GetMarks();  
            students[j].SGIPA();  
        }  
  
        for (int i=0; i<3; i++) {  
            students[i].display();  
        }  
    }  
}
```

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opp: Enter details for student 1:
Enter the USN: IBM23CSD16

Enter Name: Afireen

Enter marks for subject 1: 97

Enter credits for subject 1: 4

Enter marks for subject 2: 87

Enter credits for subject 2: 3

Enter marks for subject 3: 95

Enter credits for subject 3: 4

Enter marks for subject 4: 86

Enter credits for subject 4: 3

Enter marks for subject 5: 89

Enter credits for subject 5: 3

Enter marks for subject 6: 95

Enter credits for subject 6: 2

Enter marks for subject 7: 96

Enter credits for subject 7: 1

Enter marks for subject 8: 93

Enter credits for subject 8: 1

USN: IBM23CSD16

Name: Afireen

CGPA: 9.5714285714

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