

YRA-12-23

19/12/23

Lab 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 details & a method to calculate SGPA of a student.

$$SGPA = \frac{\sum [(Course\ Credits) (Course\ Ranks)]}{\sum [Course\ Credits]}$$

```
import java.util.Scanner;
```

```
class Subject
```

```
{
```

```
    subject  
    int Subject Marks;
```

```
    int credits;
```

```
    int grade;
```

```
}
```

```
class Student
```

```
{
```

```
    Subject subject[1];
```

```
    String name;
```

```
    String USN;
```

```
    double SGPA;
```

```
    Scanner s;
```

```
    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.print("Enter your Name");
```

```

name = s.next();
System.out.print("Enter your USN: ");
usn = s.next();
}

```

```

void getMarks() {
    for (int i = 0; i < 8; i++)
    {
        System.out.print("Enter marks for subject: ");
        subject[i].subjectMarks = s.nextInt();
        System.out.print("Enter credits for subject: ");
        subject[i].credits = s.nextInt();
        subject[i].grade = (subject[i].subjectMarks / 10) + 1;
        if (subject[i].grade == 11)
            subject[i].grade = 10;
        else if (subject[i].grade == 4)
            subject[i].grade = 0;
    }
}

```

```

void computeSGPA()
{
    int effectiveScore = 0;
    int totalCredits = 0;
    for (int i = 0; i < 8; i++)
    {
        effectiveScore += (subject[i].grade * subject[i].credits);
        totalCredits += subject[i].credits;
    }
    SGPA = (double) effectiveScore / (double) totalCredits;
}
}

```


class Main

{

public static void main(String args[])

{

Student s1 = new Student();

s1. getStudentDetails();

s1. get Marks();

s1. compute SGPA();

System.out.println(" Name: " + s1.name);

System.out.println(" USN: " + s1.USN);

System.out.println(" SGPA: " + s1.SGPA);

}

}

dp

Enter your name : Sindhuja

Enter your USN : 1bm22cs279

Enter marks for subject 1: 90

Enter credits for subject 1: 4

Enter marks for subject 2:

Enter credits for subject 2:

Enter marks for subject 3:

Enter ~~marks~~ credits for subject 3:

Enter marks for subject 4:

Enter credits for subject 4:

Enter ~~credits~~ ^{marks} for subject 5:

Enter credits for subject 5:

Enter marks for subject 6:

Enter marks for subject 6:

Enter marks for subject 7:

Enter credits for subject 7:

Enter marks for subject 8:

Enter credits for subject 8:

Name: Sindhuja

USN: 1bm22cs279

SGPA: 9.78926