

Lab Program - 2

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

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

```
class Subject {
```

```
    int subjectmarks, credits, grade; }
```

```
class Student {
```

```
    String name;
```

```
    String usn;
```

```
    double SGPA;
```

```
    Scanner s;
```

```
    Subject subjects[];
```

```
Student ()
```

```
{
```

```
    int i;
```

```
    subjects = new Subject[9];
```

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

```
        subjects[i] = new Subject();
```

```
    s = new Scanner(System.in);
```

```
}
```

```
public void getstudentdetails () {
```

```
    System.out.println("Enter student name : ");
```

```
    name = s.nextLine();
```

System.out.println("Enter usn: ");
usn = s.nextLine();

public void getMarks() {

int i;

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

System.out.println("Enter marks of subject "+(i+1)+" : ");

subject[i].subjectMarks = s.nextInt();

if (subject[i].subjectMarks > 40 & subject[i].subjectMarks <= 100) {

subject[i].grade = calculateGrade(subject[i].subjectMarks);

else {

System.out.println("Invalid marks. Marks should be between 40 and 100");

System.out.println("Enter credits: ");

subject[i].credits = s.nextInt();

public int calculateGrade (int marks) {

if (marks == 90)

return 10;

else if (marks >= 70 & marks <= 80)

return 9;

else if (marks >= 60 & marks <= 70)

return 8;

else if (marks >= 50 & marks <= 60)

return 7;

else if (marks <= 40)

return 6;

```
public void computeSGPA() {  
    int totalscore = 0;  
    int totalcred = 0;  
  
    for (int i = 0; i < 8; i++) {  
        totalscore += subjects[i].grade * subjects[i].credits;  
        totalcred += subjects[i].credits;  
    }  
  
    SGPA = (double) totalscore / (double) totalcred;
```

```
class Stud {  
    public static void main (String[] args) {  
        Student s1 = new Student();  
  
        s1.getStudentDetails();  
        s1.getmarks();  
        s1.computeSGPA();  
  
        System.out.println ("student name : " + s1.name);  
        System.out.println ("usn : " + s1.usn);  
        System.out.println ("SGPA : " + s1.SGPA);  
    }  
}
```

Output —

Enter student name : Anjali Enter marks of subject 1 : 45

Enter student usn : 1234567890 Enter credits : 2

Enter marks of subject 2 : 67 Enter marks of subject 3 : 89

Enter credits : 2

Enter credits : 4

Enter marks of subject 4 :

55

Enter credits :

2

Enter marks of subject 5 :

68

Enter credits :

3

Enter marks of subject 6 :

49

Enter credits :

3

Enter marks of subject 7 :

68

Enter credits :

2

Enter marks of subject 8 :

55

Enter credits :

3

Student name : Anjali

USN : 42

SGPA : 7.1

(C) geometry, basic setting

(C) geometry = number, set

8

(C) geometry points, sets

(C) geometry

8