

## SGPA Lab - 2

Date 10/12/23  
Page \_\_\_\_\_

```
import java.util.Scanner;  
class Subject {  
    int subjectMarks; credits, grade; }  
class Student {  
    String name;  
    String usn;  
    double usn;  
    double SGPA.  
    Scanner s;  
    Subject subjects[];  
    Student() {  
        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 students USN :");  
        usn = s.nextLine();  
    }  
    public void getMarks() {  
        for (i=0; i<8; i++) {  
            System.out.println("Enter marks of subject " + (i+1) + ":");  
            subjects[i].subjectMarks = s.nextInt();  
            if (subjects[i].subjectMarks > 100) subjects[i].subjectMarks = 100;  
            else if (subjects[i].subjectMarks < 0) subjects[i].subjectMarks = 0;  
            subjects[i].grade = calculateGrade(subjects[i].subjectMarks);  
        }  
    }  
    public String calculateGrade(int marks) {  
        if (marks > 90) return "A";  
        else if (marks > 80) return "B";  
        else if (marks > 70) return "C";  
        else if (marks > 60) return "D";  
        else return "F";  
    }  
}
```

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

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

Subjects[i].Credits = scanner.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

return 6;

}

public void computeSGPA() {

int totalscore = 0; // for total

int totalcred = 0; // for total weight

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

totalscore += Subjects[i].grade \* Subjects[i].

totalcred += Subjects[i].Credits;

}

SGPA = (double) totalscore / (double) totalcred

3

3

Class Student

public static void main (String args[]) {

Student s = new Student();

s.getStudentDetails();

s.getMarks();

s.computeSGPA();

System.out.println("student name" + s1.name);  
System.out.println("student USN" + s1.USN);  
System.out.println("student SGP" + s1.SGPA);

Output:

Enter student name:

Vinuthna

Enter student USN:

1bm22cs193

Enter marks of subject 1

45

Enter credits:

4

Enter marks of Subject 2

56

Enter credits:

3

Enter marks of Subject 3

56

Enter credits:

3

Enter marks of Subject 4

100

Enter credits:

3

Enter marks of subjects

100

Enter credits:

1

Enter marks of Subject 6

99

Enter credits:

4

Enter marks of subject 7

77

Enter credits

3

Enter marks of subjects

100

Enter credits

4

Student name: Vinuthna

Student USN: 1bm22cs193

Student SGPA: 8.318181818181818