

```
1 import java.util.Scanner;
2
3 class student{
4
5     private int n;
6     private String name,usn;
7     private int credits[];
8     private double marks[];
9     Scanner get=new Scanner(System.in);
10    student()
11    {
12        System.out.printf("\nEnter The number of courses : ");
13        n=get.nextInt();
14        marks=new double[n];
15        credits=new int[n];
16
17    }
18
19    void getinfo()
20    {
21        System.out.printf("\nEnter The USN and Name : ");
22        usn=get.next();
23        name=get.next();
24        System.out.println("\nEnter The Marks (out of 100) and Credits : ");
25        for(int i=0;i<n;i++)
26        {
27            System.out.printf("\nCourse %d : ",i+1);
28            marks[i]=get.nextDouble();
29            credits[i]=get.nextInt();
30        }
31
32    }
33
34    int gpCal(double num)
35    {
36        if(num>=50)
37            return (int)(Math.ceil(num/10));
38        else
39            if(num>=40)
40                return 4;
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```
40     return 4;
41   else
42     return 0;
43 }
44
45 double calculation()
46 {
47   double sgpaSum=0,sgpa=0,creditSum=0;
48   for(int i=0;i<n;i++)
49   {
50
51     sgpaSum+=gpCal(marks[i])*credits[i];
52     creditSum+=credits[i];
53   }
54   System.out.println("\n\nCredit sum: "+creditSum );
55   sgpa=sgpaSum/creditSum;
56   return sgpa;
57 }
58
59 void details()
60 {
61   System.out.println("\n The Student Details Are : ");
62   System.out.println("\n USN: "+usn+"\n Name: "+name);
63   System.out.printf("\n\t");
64   for(int i=0;i<n;i++)
65   System.out.printf(" Course-%d    ",i+1);
66   System.out.printf("\nMarks :  ");
67   for(int i=0;i<n;i++)
68   {
69     System.out.printf(" %.2f      ", marks[i]);
70   }
71   System.out.printf("\nCredits:    ");
72   for(int i=0;i<n;i++)
73   {
74     System.out.printf("%d\t\t", credits[i]);
75   }
76 }
77
78 }
79 class lab2Student
```

```
70     }
71     System.out.printf("\nCredits:    ");
72     for(int i=0;i<n;i++)
73     {
74         System.out.printf("%d\t\t", credits[i]);
75     }
76 }
77 }
78 }
79 class lab2Student
80 {
81     public static void main(String[] args)
82     {
83         double sgpa=0;
84         student s1=new student();
85         s1.getinfo();
86         s1.details();
87         sgpa=s1.calculation();
88         System.out.printf("\nThe SGPA of the Student is : %.2f /10.00 ",sgpa);
89     }
90 }
91 }
```

Enter The number of courses : 5

Enter The USN and Name : 1BM21CS108 Gopal

Enter The Marks (out of 100) and Credits :

Course 1 : 98 5

Course 2 : 78 4

Course 3 : 67 4

Course 4 : 98 3

Course 5 : 89 3

The Student Details Are :

USN: 1BM21CS108

Name: Gopal

	Course-1	Course-2	Course-3	Course-4	Course-5
Marks :	98.00	78.00	67.00	98.00	89.00
Credits:	5	4	4	3	3

Credit sum: 19.0

The SGPA of the Student is : 8.79 /10.00