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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

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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