

```
import java.util.Scanner;
class Student
{
String usn,name;
static int credits[];
static double marks[];
void input(int n)
{
Scanner sc=new Scanner(System.in);
System.out.println("enter usn and name ");
usn=sc.nextLine();
name=sc.nextLine();
System.out.println("enter marks along with credits");
for(int i=0;i<n;i++)
{
marks[i]=sc.nextDouble();
credits[i]=sc.nextInt();
System.out.println();
}
}
double calculate(int n)
{
int c,cred=0;
double tot,total=0.0;
for(int i=0;i<n;i++)
{
tot=marks[i];
if(tot>=90)
c=10;
else if(tot>=80)
c=9;
else if(tot>=70)
c=8;
else if(tot>=60)
c=7;
else if(tot>=50)
c=6;
else if(tot>=40)
c=5;
else
```

```

        c=8;
        else if(tot>=60)
        c=7;
        else if(tot>=50)
        c=6;
        else if(tot>=40)
        c=5;
        else
        c=0;
        total=total+(c*credits[i]);
        cred=cred+credits[i];
    }
    total=total/cred;
    return(total);
}
void display(int n,double total)
{
    System.out.println("name of student : "+name);
    System.out.println("usn of student : "+usn);
    System.out.println("marks of student along with credits of course");
    for(int i=0;i<n;i++)
    {
        System.out.println(marks[i]+"    "+credits[i]);
    }
    System.out.println("sgpa of student : "+total);
}
public static void main(String args[])
{
    Scanner sc=new Scanner(System.in);
    Student obj=new Student();
    System.out.println("enter no of course ");
    int n=sc.nextInt();
    credits=new int[n];
    marks=new double[n];
    obj.input(n);
    double total=obj.calculate(n);
    obj.display(n,total);
}
}

```

```
C:\Users\PUNEETH K\Desktop\JAVA>javac Student.java
```

```
C:\Users\PUNEETH K\Desktop\JAVA>java Student  
enter no of course
```

```
3
```

```
enter usn and name
```

```
125
```

```
Puneeth
```

```
enter marks along with credits
```

```
72
```

```
4
```

```
85
```

```
5
```

```
90
```

```
3
```

```
name of student : Puneeth
```

```
usn of student : 125
```

```
marks of student along with credits of course
```

```
72.0    4
```

```
85.0    5
```

```
90.0    3
```

```
sgpa of student : 8.916666666666666
```

LAB - 2

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

```
class Student{
```

```
    String un, name;
```

```
    static int credits[];
```

```
    static double marks[];
```

```
    void input (int n)
```

```
    {
```

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

```
        System.out.println("enter un and name");
```

```
        un = sc.nextLine();
```

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

```
        System.out.println("enter the marks with credits  
of that subject");
```

```
        for (int i=0; i<n; i++)
```

```
        {
```

```
            marks[i] = sc.nextDouble();
```

```
            credits[i] = sc.nextInt();
```

```
            System.out.println();
```

```
        }
```

```
void display(int n, double total)
```

```
{
    System.out.println("name of student : " + name);
    System.out.println("usrn of student : " + usrn);
    System.out.println("marks of student along with credit");
    for (int i = 0; i < n; i++)
    {
        System.out.println(marks[i] + " " + credits[i]);
    }
    System.out.println("sgpa of student : " + total);
}

public static void main (String args[])
{
    Scanner sc = new Scanner (System.in);
    Student obj = new Student();
    System.out.println ("enter the number of courses");
    int n = sc.nextInt();
    credits = new int[n];
    marks = new double[n];
    obj.setInput(n);
    double total = obj.calculate(n);
    obj.display(n, total);
}
}
```

Output

enter the number of courses

3

enter usrn and name

125

Puneeth

enter the marks along with credits

72

4

85

5

90

name of student : Puneth

usr of student : 125

marks of student along with credits of course

72.0 4

85.0 5

90.0 3

sgpa of student : 8.916666

Algorithm

Step1:- Take value of name, usr, credits and number of courses.

Step2:- assign grade points to each subject.

Step3:- operate (grade point \times credits) for each subject

Step4:- Divide the obtained answer with total number of credits to get sgpa