Create a class students with members usn, name, array credits. Display details & a method to calculate SGPA

```
import java.util.Scanner;

class student
{
    String usn, name;
    int credits[], marks[];
    [illegible]
    public void takeinput()
    {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter USN");
        usn = scanner.nextLine();
        System.out.println("Enter name");
        name = scanner.nextLine();
        System.out.println("Enter the total no of credit");
        int ttcredits = scanner.nextInt();
        System.out.println("Enter the no of subjects");
        int numsubs = scanner.nextInt();
        credits = new int[numsubs];
        marks = new int[numsubs];
        for(int i=0; i<numsubs; i++)
        {
            System.out.println("Enter the no of credit for subject "+
            (i+1)+" ");
            credits[i] = scanner.nextInt();
            System.out.println("Enter the no of mark for subs "+(i+1));
            marks[i] = scanner.nextInt();
        }
    }
}
```

```
public void giveoutput()
{
    System.out.println("Name: " + name);
    System.out.println("USN: " + usn);
    System.out.println("Student Subject details");

    for(i=0; i<numsubs; i++)
    { System.out.println("Subject" + sub(i+1) + "- credits" + credits[i] + "
      marks" + marks[i]);
    }
}

public double SGPA()
{ double gradepoints=0;
  for(int i=0; i<numsubs; i++)
  { gradepoints += calcgradepoints(marks[i]) * credits[i];
  }
  return gradepoints/tot credits;
}

public double calcgradepoints(int marks)
{  if(marks >=90)
   { return 10.0;
   }
   else if (mark >=80 && mark <90)
   { return 9.0;
   }
   else if (mark >=70 && mark <80)
   { return 8.0;
   }
   else if (mark >=60 && mark <70) {
   return 7.0; }
```

```
else if(mark >= 50 && mark < 60){
 return 6.0;}
else if(mark >= 40 && mark < 50){
 return 5.0;}

 else
 { return 0.0;
 }
}

}

public class main{
    public static void main(String[] args)
    {
        Student student = new Student();
        student.takeinput();
        student.giveoutput();
        double SGPA sgpa = student.SGPA();
        System.out.println("SGPA : %.2f", sgpa);
    }
}
```

Algorithm:

STEP 1: START

STEP 2: string usn, name
int marks[], credits[]

STEP 3: take input name, usn, number of credits, no. of subjects in another method. take input
{
for (int i=0; i<noofsubs; i++)
{ print("Enter no of credits for each subject");
credit[i] = scanner.nextInt();
print("Enter the mark for each subject");
mark[i] = scanner.nextInt();
}
}

STEP 4: create a new method give output
{ system.out.println("Name" +name);
System.out.println("USN" + usn);
for(i=0; i<noofsub; i++)
{ system.out.println("sub" + (i+1) + "credit" + credits[i] + "marks" + mark[i]);
}
}

STEP 5: write a method SGPA
{ double gradepoint = 0;
for(i=0; i<no.ofsub; i++)
{ gradepoint += calgradepoints(mark[i]) * credits[i]
}
return gradepoint
}

STEP 6: create method calcgradepoint (int mark)

```
{ if(marks >=90)
   return 10
  else if (mark >=80 && <90
   return 9
  else if (mark>=70 && <80)
   return 8
  else if(mark >=60 && <70)
   return 7
  else if(mark >=50 && <60)
   return 6
  else if(mark >=40 && <50)
   ret 5
  else
   return 0
 }
```

STEP 7: main method

```
{
 Student student = new student()
 student.giveoutput();
 student.takeinput();
 double sgpa = student.SGPA();
}
```

STEP 8: END

~~Flow chart:~~

~~START~~

~~string usn, name [illegible]~~

Output:

Enter USN:

1BM22CS004

Enter name:

abhinav

Enter no of credits

22

Enter no. of ~~credits~~ subjects

8

Enter credits for sub 1

4

Enter mark for sub 1

89

Enter credits for sub 2

4

Enter mark for sub 2

75

Enter credits for sub 3

4

Enter mark for sub 3

82

Enter credit for sub 4

3

Enter mark for sub 4

77

Enter credits for sub 5

Enter mark for sub 5

59

Enter ~~mark~~ credit for sub 6

2

Enter mark for sub 6

80

Enter ~~mark~~ credit for sub 7

1

Enter marks for sub 7

90

Enter credits for sub 8

1

Enter mark for sub 8

89

Name: abhinav

USN: 1BM22CS004

Sub details

Sub 1: credit 4 mark 89

Sub 2: credits 4 mark 75

Sub 3: credit 4 mark 82

Sub 4: credits 3 mark 77

Sub 5: credit 3 mark 59

Sub 6: credits 2 mark 80

sub 8: credit : mark 89

SGPA: 8.32

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```
C:\java lab>java Student
Enter name of student
abhinav
Enter USN
1
Enter Credits and marks
For subject1
4
50
For subject2
4
59
For subject3
4
100
For subject4
3
68
For subject5
3
66
SGPA of student is:7.222222222222222
Name of student:abhinav
USN:1
For subject1
Credits:4
Marks:50
For subject2
Credits:4
Marks:59
For subject3
Credits:4
Marks:100
For subject4
Credits:3
Marks:68
For subject5
Credits:3
Marks:66
1BM22CS004 ABHINAV INAMDAR
```