

Develop a java program to create a class Student with members usn , name an array of credits and array of marks include methods to accept and display details and a method to calculate sgpa of a student.

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

```
class Student{
```

```
    int n;
```

```
    String usn;
```

```
    String name;
```

```
    int[] marks;
```

```
    int[] credits;
```

```
    void calculate(){
```

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

```
        System.out.println("Enter student name: ");
```

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

```
        System.out.println("Enter student usn: ");
```

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

```
        System.out.println("Enter the number of subjects: ");
```

```
        n=sc.nextInt();
```

```
        marks=new int[n+1];
```

```
        credits=new int[n+1];
```

```
        for(int i=1;i<=n;i++){
```

```
            System.out.println("Enter subject "+i+" marks and credits: ");
```

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

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

```
        }
```

```
    }
```

```
void display(float sgpa){  
    System.out.println("Student name: "+name);  
    System.out.println("usn: "+usn);  
    System.out.printf("Sgpa: %.2f\n",sgpa);  
}
```

```
float sgpa(){  
    int result=0;  
    int sum=0;  
    for(int i=1;i<=n;i++){  
        result+=grade(marks[i])*credits[i];  
        sum+=credits[i];  
    }  
    return (float) result/sum;  
}
```

```
int grade(int marks){  
  
    if (marks>=90) return 10;  
    else if (marks>=80) return 9;  
    else if (marks>=70) return 8;  
    else if (marks>=60) return 7;  
    else if (marks>=50) return 6;  
    else if (marks>=40) return 5;  
    else return 0;  
}
```

```
}
```

```
public class Sgpa{  
    public static void main(String[] args){  
        Student s1=new Student();  
        s1.calculate();  
        float r=s1.sgpa();  
        s1.display(r);  
    }  
}
```

Output:

```
PS C:\Users\n6787\OneDrive\Desktop\java> cd "C:\Users\n6787\OneDrive\Desktop\java" ; if ($?) { javac Sgpa.java } ; if ($?) { java Sgpa }  
Enter student name:  
Arya  
Enter student usn:  
18M24CS1222  
Enter the number of subjects:  
5  
Enter subject 1 marks and credits:  
78  
3  
Enter subject 2 marks and credits:  
67  
2  
Enter subject 3 marks and credits:  
78  
3  
Enter subject 4 marks and credits:  
78  
2  
Enter subject 5 marks and credits:  
89  
1  
Student name: Arya  
usn: 18M24CS1222  
Sgpa: 7.91  
PS C:\Users\n6787\OneDrive\Desktop\java>
```