

Q: Develop a Java program to create a class Student with members usn, name, an array credits and an array mark. Include methods to accept and display details and a method to calculate SGPA of a student.

Answer:

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

```
class Student {
```

```
    String name,USN;
```

```
    int marks[] = new int[10];
```

```
    int credits[] = new int[10];
```

```
    double SGPA=0;
```

```
    int n;
```

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

```
    void Input(){
```

```
        System.out.print("Enter name of the student: ");
```

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

```
        System.out.print("Enter USN: ");
```

```
        USN=s.nextLine();
```

```
        System.out.print("Enter the number of courses: ");
```

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

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

```
            System.out.println("Enter the credits of subject "+(i+1));
```

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

```
        }
```

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

```
        System.out.println("Enter the marks of subject "+(i+1));
        marks[i]=s.nextInt();
    }

}
```

```
void Display(){
    System.out.println();
    System.out.println("NAME :"+name);
    System.out.println("USN: "+USN);
    System.out.println("SGPA is "+SGPA);
}
```

```
void CalcSGPA(){
    double grade=0, totalcred=0;
    int i;

    for(i=0;i<n;i++){
        totalcred=totalcred+credits[i];
    }
```

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

        if(marks[i]>=90)
        {
            grade+=credits[i]*10;
        }
        else if(marks[i]>=80)
        {
            grade+=credits[i]*9;
```

```

    }
    else if(marks[i]>=70)
    {
        grade+=credits[i]*8;
    }
    else if(marks[i]>=60)
    {
        grade+=credits[i]*7;
    }
    else if(marks[i]>=50)
    {
        grade+=credits[i]*6;
    }
    else if(marks[i]>=40)
    {
        grade+=credits[i]*5;
    }
    else{
        grade=0;
    }
}

SGPA=grade/totalcred;
}
}

```

```

class SGPA{
    public static void main(String args[]){

        Student st= new Student();
    }
}

```

```
        st.Input();

        st.CalcSGPA();

        st.Display();

    }

}
```

Command Prompt

```
Microsoft Windows [Version 10.0.22000.1281]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>cd Desktop
The system cannot find the path specified.

C:\Users\Admin>cd Desktop

C:\Users\Admin\Desktop>cd 1BM21CS233

C:\Users\Admin\Desktop\1BM21CS233>javac SGPA.java

C:\Users\Admin\Desktop\1BM21CS233>java SGPA
Enter name of the student: Vaibhav
Enter USN: 1bm21cs233
Enter the number of courses: 5
Enter the credits of subject 1
3
Enter the credits of subject 2
2
Enter the credits of subject 3
3
Enter the credits of subject 4
4
Enter the credits of subject 5
3
Enter the marks of subject 1
90
Enter the marks of subject 2
80
Enter the marks of subject 3
85
Enter the marks of subject 4
75
Enter the marks of subject 5
65

NAME :Vaibhav
USN: 1bm21cs233
SGPA is 8.533333333333333

C:\Users\Admin\Desktop\1BM21CS233>
```