

```

import java.util.Scanner;
class Student{
    String usn;
    String name;
    int[] credits;
    int[] marks;
    int no_of_subjects = 3;

    void details(){
        Scanner sc = new Scanner (System.in);

        System.out.println("Enter USN:");
        usn = sc.nextLine();
        System.out.println("Enter name:");
        name = sc.nextLine();
        credits = new int[no_of_subjects];
        marks = new int[no_of_subjects];
        for(int i=0;i<no_of_subjects;i++){
            System.out.println("Enter credits for" + (i+1) + "subject");
            credits[i] = sc.nextInt();
            System.out.println("Enter marks for" + (i+1) + "subject");
            marks[i] = sc.nextInt();
        }
    }

    void display(){
        System.out.println("\n Student Details: \n");
        System.out.println("USN:" + usn);
        System.out.println("Name:" + name);
        System.out.println("Subjects & Credits:");
        for(int i = 0;i<no_of_subjects;i++){
            System.out.println("Subject " + (i+1) + ":Credits = " + credits[i] + ",Marks = " + marks[i]);
        }
        System.out.println("SGPA: " + calculate());
    }

    double calculate(){
        int totalcredits = 0;
        double grade_points = 0.0;
        for(int j=0;j<no_of_subjects;j++){
            int gradepoints = calcgp(marks[j]);
            grade_points += gradepoints * credits[j];
            totalcredits += credits[j];
        }
        return grade_points/totalcredits;
    }
}

```

```
int calcgp(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 static void main(String [] args){  
    Student student1 = new Student();  
    student1.details();  
    student1.display();  
    Student student2 = new Student();  
    student2.details();  
    student2.display();  
    Student student3 = new Student();  
    student3.details();  
    student3.display();  
}}
```

```
C:\Users\Admin\Desktop>javac Student.java
```

```
C:\Users\Admin\Desktop>java Student
```

```
Enter USN:
```

```
1BM23CS004
```

```
Enter name:
```

```
Aarush Garg
```

```
Enter credits for1subject
```

```
4
```

```
Enter marks for1subject
```

```
90
```

```
Enter credits for2subject
```

```
3
```

```
Enter marks for2subject
```

```
87
```

```
Enter credits for3subject
```

```
3
```

```
Enter marks for3subject
```

```
90
```

```
Student Details:
```

```
USN:1BM23CS004
```

```
Name:Aarush Garg
```

```
Subjects & Credits:
```

```
Subject 1:Credits = 4,Marks = 90
```

```
Subject 2:Credits = 3,Marks = 87
```

```
Subject 3:Credits = 3,Marks = 90
```

```
SGPA: 9.7
```

```
Enter USN:
```

```
1BM23CS012
```

```
Enter name:
```

```
Ashish Solanki
```

```
Enter credits for1subject
```

```
4
```

```
Enter marks for1subject
```

```
89
```

```
Enter credits for2subject
```

```
3
```

```
Enter marks for2subject
```

```
78
```

```
Enter credits for3subject
```

```
3
```

```
Enter marks for3subject
```

```
89
```

Student Details:

USN:1BM23CS012

Name:Ashish Solanki

Subjects & Credits:

Subject 1:Credits = 4,Marks = 89

Subject 2:Credits = 3,Marks = 78

Subject 3:Credits = 3,Marks = 89

SGPA: 8.7

Enter USN:

1BM23CS055

Enter name:

Aryan Navlani

Enter credits for1subject

4

Enter marks for1subject

7

Enter credits for2subject

3

Enter marks for2subject

90

Enter credits for3subject

3

Enter marks for3subject

89

Student Details:

USN:1BM23CS055

Name:Aryan Navlani

Subjects & Credits:

Subject 1:Credits = 4,Marks = 7

Subject 2:Credits = 3,Marks = 90

Subject 3:Credits = 3,Marks = 89

SGPA: 5.7