

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

2) Import Develop a java prog to create a class  
import java student with members usn, name  
credits array, grade point array, calculate  
SGPA

import java.util.

class Stud{

private String usn;

private String name;

private int[] credits;

private double[] marks;

public Stud(int numSub){

credits = new int[numSub];

marks = new double[numSub];

{

public void get(){

Scanner sc = new Scanner(System.in);

System.out.println("Enter Usn, Name");

usn = sc.nextLine();

name = sc.nextLine();

for(int i=0; i<credits.length; i++){

{

System.out.println("Enter Credits for subject "+  
i+1+" :");

credits[i] = sc.nextInt();

```
System.out.println("Enter marks");
```

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

```
}
```

```
}
```

```
public void displayDetails() {
```

```
System.out.println("UN: " + un);
```

```
System.out.println("Name: " + name);
```

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

```
System.out.println("Subject " + (i + 1) + " : "
```

```
credits: " + credits[i] + ", Marks: " + marks[i]);
```

```
}
```

```
}
```

```
public double cal() {
```

```
double totalPoints = 0;
```

```
int totalCredits = 0;
```

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

```
totalPoints += (marks[i] * credits[i]);
```

```
totalCredits += credits[i];
```

```
}
```

```
return totalPoints / totalCredits;
```

```
}
```

```
}
```

```
public class MainSGP {
```

```
public static void main(String[] args) {
```

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

```
System.out.println("Enter no of subjects");
```

```
int numSub = sc.nextInt();
```

```
Student student = new Student(numSub);
```

```
student.get();
```

```

System.out.println("Student details.");
stud.displaydetails();
student.displaydetails();
double sgpa = student.calsgpa();
System.out.println("SGPA" + sgpa);
sc.close();
?
}

```

Enter number of subjects 2  
 Enter usn: 234  
 Enter name wert  
 Enter credits for subject 1: 2  
 Enter grade point for subject 1: 9  
 Enter credits for subject 2: 4  
 Enter grade point for subject 2: 7

Student details  
 USN: 234

Name wert

Subject 1 - credits: 2, grade points: 9  
 Subject 2 - credits: 4, grade point: 7  
 SGPA: 7.666

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

```
class Student {
```

```
    private String usn;
```

```
    private String name;
```

```
    private int[] credits;
```

```
    private double[] marks;
```

```
    public Student(int numSubjects) {
```

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

```
        marks = new double[numSubjects];
```

```
    }
```

```
    public void acceptDetails() {
```

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

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

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

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

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

```
        for (int i = 0; i < credits.length; i++) {
```

```
            System.out.print("Enter credits for subject " + (i + 1) + ": ");
```

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

```
            System.out.print("Enter gradepoint for subject " + (i + 1) + ": ");
```

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



```

    }
}

public void displayDetails() {
    System.out.println("USN: " + usn);
    System.out.println("Name: " + name);
    for (int i = 0; i < credits.length; i++) {
        System.out.println("Subject " + (i + 1) + " - Credits: " + credits[i] + ", grade points: " + marks[i]);
    }
}

public double calculatesgpa() {
    double totalPoints = 0;
    int totalCredits = 0;

    for (int i = 0; i < credits.length; i++) {
        totalPoints += (marks[i] * credits[i]);
        totalCredits += credits[i];
    }

    return totalPoints / totalCredits;
    //totalCredits == 0 ? 0 : totalPoints / totalCredits;
}
}

```

```

public class Mainsgpa {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
    }
}

```

```
System.out.print("Enter the number of subjects: ");  
int numSubjects = sc.nextInt();  
  
Student student = new Student(numSubjects);  
student.acceptDetails();  
  
System.out.println("\nStudent Details:");  
student.displayDetails();  
  
double sgpa = student.calculatesgpa();  
System.out.println("SGPA: " + sgpa);  
  
sc.close();  
}  
}
```

output

```
C:\Users\hp\Desktop\java>java Mainsgpa  
Enter the number of subjects: 3  
Enter USN: 348  
Enter Name: ritik  
Enter credits for subject 1: 6  
Enter gradepoint for subject 1: 8  
Enter credits for subject 2: 2  
Enter gradepoint for subject 2: 10  
Enter credits for subject 3: 4  
Enter gradepoint for subject 3: 5  
.  
Student Details:  
USN: 348  
Name: ritik  
Subject 1 - Credits: 6, gradepoints: 8.0  
Subject 2 - Credits: 2, gradepoints: 10.0  
Subject 3 - Credits: 4, gradepoints: 5.0  
SGPA: 7.333333333333333  
C:\Users\hp\Desktop\java>
```