```java
class Student{
    String usn, name;
    int[] marks;
    int[] credits;

    void get(){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the usn of student: ");
        usn =  sc.next();
        System.out.println("Enter the name of student: ");
        name =  sc.next();

        System.out.println("Enter number of subjects : ");
        int n = sc.nextInt();
        marks = new int[n];
        credits = new int[n];

        for(int i=0; i<marks.length; i++){
            System.out.println("Enter the credits of 3 subjects: ");
            credits[i] = sc.nextInt();
            System.out.println("Enter the marks of 3 subjects: ");
            marks[i] = sc.nextInt();
        }
    }

    void display(){
        System.out.println("Display details of Student: ");
        System.out.println("USN: " + usn);
        System.out.println("Name: " + name);
        System.out.println("Marks scored in various subjects along with
credits are: ");
        for(int i=0; i<marks.length; i++){
            System.out.println(marks[i] + " " + credits[i]);
        }
    }

    double calcSGPA(){
        double sgpa = 0, totalCredits = 0;
        for(int i=0; i<marks.length; i++){
            sgpa += (marks[i] / 10) * credits[i];
            totalCredits += credits[i];
        }
        return sgpa / totalCredits;
    }
}
public class Lab {
    public static void main(String[] args) {
        Student s1 = new Student();
```

```
        s1.get();
        s1.display();
        System.out.println(s1.calcSGPA());
    }
}
```

```
Enter the usn of student:
1BM23CS304
Enter the name of student:
Sarim
Enter number of subjects :
3
Enter the credits:
2
Enter the marks:
70
Enter the credits:
3
Enter the marks:
80
Enter the credits:
4
Enter the marks:
90
Display details of Student:
USN: 1BM23CS304
Name: Sarim
Marks scored in various subjects along with credits are:
70 2
80 3
90 4
8.222222222222221
```

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.

3/10/2024

```
import java.util.Scanner;
class Student {
    String usn, name;
    int[] credits;
    int[] marks;
    void get() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter USN: ");
        usn = sc.nextLine();
        System.out.println("Enter Name: ");
        name = sc.nextLine();
        System.out.println("Enter number of subjects: ");
        int num = sc.nextInt();
        credits = new int[num];
        marks = new int[num];
        for (int i=0; i<num; i++) {
            System.out.println("Enter credits for subject " + (i+1) + ": ");
            credits[i] = sc.nextInt();
            System.out.println("Enter marks for subject " + (i+1) + ": ");
            marks[i] = sc.nextInt();
        }
    }
    void display() {
        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]
                + ", Marks: " + marks[i]);
        }
    }
    double calcSGPA() {
        double sgpa = 0;
        int totalCredits = 0;
        for (int i=0; i<credits.length; i++) {
            sgpa += (marks[i]/10) * credits[i];
            totalCredits += credits[i];
        }
        return sgpa / totalCredits;
    }
}
public class StudentSGPA {
    public static void main(String[] args) {
        Student s = new Student();
        s.get();
        s.display();
        System.out.println("SGPA: " + s.calcSGPA());
    }
}
```

Output:

```
Enter USN: 1BM23CS304
Enter Name: Sarim
Enter number of subjects: 3
Enter credits for subject 1: 2
Enter marks for subject 1: 70
Enter credits for subject 2: 3
Enter marks for subject 2: 80
Enter credits for subject 3: 4
Enter marks for subject 3: 90
```

3/10/24

```
USN: 1BM23CS04
Name: Sarim
Subject 1 - Credits: 2, Marks: 70
Subject 2 - Credits: 3, Marks: 80
Subject 3 - Credits: 4, Marks: 90
SGPA: 8.2222
```