1) 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.

```java
import java.util.*;
class Subject {
    int subjectMarks;
    int credits;
    int gradef;
}

class Student {
    String name;
    String usn;
    double SGPA;

    Scanner s;
    Subject [] subjects;

    Student() {
        int i;
        subjects = new Subject [8];
        for (i=0; i<=8; i++) {
            subject [i] = new Subject();
            s = new Scanner (System.in);
    }

    void getStudentDetails() {
        System.out.println (s "Enter student
                                name : ");
        this.name = s.next ();
        System.out.println (" enter USN:");
        this.usn = s. next ();
    }
```

```java
void getMarks() {
    for (int i=0; i<8; i++) {
        System.out.println("Enter details
                for subject" + (i+1));
        System.out.println("Enter marks");
        subjects[i].subjectMarks = s.nextInt();
        System.out.println("Enter credits:");

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

        if (subjects[i].credits; subjectMarks
                                    >= 90)
        {
            subjects[i].grade = 10;
        }
        elseif (subjects[i].subjectMarks >= 80)
        {
            subjects[i].grade = 9;
        }
        elseif (subjects[i].subjectMarks >= 70)
        {
            subjects[i].grade = 8;
        }
        elseif (subjects[i].subjectMarks >= 60)
        {
            subjects[i].grade = 7;
        }
        elseif (subject[i].subjectMarks >= 50) {
            subjects[i].grade = 6;
        }
        elseif (subject[i].subjectMarks >= 40) {
            subjects[i].grade = 5; }
        else {
            subject[i].grade = 0; }
    }
}
```

```java
void computeSGPA(){
    double totalCredits=0;
    double weightedSum=0;
    for( int i=0; i<=8; i++){
        totalCredits += subjects[i].credits;
        weightedSum += subjects[i].grade
                     * subjects[i].
                                 credits;}
    SGPA = weightedSum/totalCredits;


}

void displayResult(){
    System.out.println("Student details");

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

    System.out.println("USN:" + usn);

    System.out.println("SGPA:" + SGPA);

}

public class Main{
    public static void main(String[] args){
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        s1.displayResults();

    }

}
```

output:

Enter student name: Aayra
Enter student usn: 1BM22CS250
Enter details for subject1

Enter marks: 9 8
Enter credits: 4
Enter marks: 89
Enter credits: 3
 Enter marks: 91
Enter credits: 3
Enter marks: 87
Enter credits: 3
Enter marks: 78
Enter credits: 2
Enter marks: 87
Enter credits: 3
Enter marks: 93
Enter credits: 3
Enter marks: 89
Enter credits: 3
Enter marks: 76
Enter credits: 3
Student details
Name: Aayra
USN: 1BM22CS250
SGPA: 9.185185