Lab program (2)

(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.

```java
import java.util.Scanner;

class Subject {
    int subjedMarks;
    int credits;
    int grade;
}
class student {
    subject subject[];
    String name;
    String USN;
    double SGPA;
    Scanner sc;

    public student() {
        subject = new Subject [8];
        for (int i=0; i<8; i++) {
            subject[i] = new Subject();
        }
    }
```

```java
void getStudentDetails () {
    sc = new Scanner (system.in);
    System.out.print("Enter name : ");
    this.name = sc.next();

    System.out.print("Enter your USN : ");
    this.USN = sc.next();
}


void getMarks () {
    sc = new Scanner (system.in);
    for (int i = 0; i < 8; i++) {
        System.out.print("Enter " + (i+1) + " subject
                        marks : ");
        subject[i].subjectMarks = sc.nextInt();

        System.out.print("Enter number of credits :");
        subject[i].credit = sc.nextInt();

        subject[i].grade = (subject[i].subjectMarks/10)+1;

        if (subject[i].grade == 11) subject[i].grade = 10;

        if (subject[i].grade <= 4) subject[i].grade = 0;
    }
}
```

```java
void computeSGPA() {
    int totalCredits = 0;
    for (int i=0; i<8; i++) {
        totalCredits += subject[i].credits;
    }

    int totalGradeAndCredit = 0;
    for (int i=0; i<8; i++) {
        totalGradeAndCredit += (subject[i].credits *
                                subject[i].grade);
    }

    this.SGPA = (float)totalGradeAndCredit/totalCredit);

    System.out.println("SGPA of the student is: " + this.SGPA);
    }
}

class StudentMain {

    public static void main (String[] args) {
        Student S1 = new student();
        s1.getStudentDetails();
        s1.getMark();
        s1.computeSGPA();
    }
}
```

output:-

Enter name : Santosh
Enter your USN : 1BM22CS243
Enter 1 subject marks : 100
Enter number of credit : 4
Enter 2 subject marks : 95
enter number of credits : 4
Enter 3 subject marks : 90
Enter number of credits : 3
enter 4 subject marks : 88
Enter number of credit : 1
Enter 5 subject marks : 93
enter number of credit : 1
Enter 6 subject marks : 98
Enter number of credit : 3
Enter 7 subject marks : 93
Enter number of credit : 3
Enter 8 subject marks : 99
Enter number of credits : 1

SGPA of the student is : 9.94999802651 37.

name : Santosh B
USN : 1BM22CS243