Name: Akram

USN: 1BM21CS013

Class: 3A

Lab 2 Question: 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.

Program:

```java
                    SGPA Calculator

import    Java.util.Scanner;

class  Subject
{
    int subjectMarks;
    int credits;
    int grade;
}
class  Student
{
    Subject subject[];
    String name;
    String usn;
    double SGPA;

    Student ()
    {
        subject = new Subject [9];
        for (i=0; i<9; i++)
            subject [i] = new Subject ();
    }
    void  getStudentDetails ()
    {

        Scanner s= new Scanner (System.in);
        System.out.print ("Enter your name: ");
        name = s.next();
        System.out.print ("Enter your USN:  ");
        usn = s.next();
    }
```

```java
void getMarks()
{
    Scanner s = new Scanner (System.in);
    for (int i=0; i<9; i++)
    {
        System.out.print ("Enter marks for subject "+(i+1)+": ");
        subject[i].subjectMarks = s.nextInt();
        System.out.print ("Enter credits : ");
        subject[i].credits = s.nextInt();

        Subject[i].grade = (subject[i].subjectMarks/10) + 1;
        if (subject[i].grade <=4 )
            subject[i].grade = 0;
    }
}

void getSGPA()
{
    int effectiveScore = 0;
    int totalCredits = 0;
    for (int i = 0; i< 9; i++)
    {
        effectiveScore += subject[i].grade * subject[i].credits;
        totalCredits += subject[i].credits;
    }
    SGPA = (double) effectiveScore / (double) totalCredits;
}
```

```java
class Main
{
    public static void main (String args[])
    {
        Student s1 = new Student ();
        s1. getStudentDetails ();
        s1. getMarks ();
        s1. getSGPA ();
        System.out.println ("Name: "+ s1.name );
        System.out.println ("USN: "+ s1.usn );
        System.out.println ("SGPA: "+ s1.SGPA );
    }
}
```

Output :

Enter you name: Akram
Enter you USN: 1BM21CS013

Enter marks for subject 1:   88
Enter credits for subject 1:   3
———————"——————— : 94
———————"——————— : 4
                              : 98
                              : 1
                              : 89
                              : 3
                              : 93
                              : 1
                          4: 75
                              : 3

Output:

```
Command Prompt                                                    —    ☐    ✕

D:\BMSCE\Academics\Semester III\Object Oriented JAVA Programming\Lab Programs\Lab2_SGPA_Calcu
lator.java

D:\BMSCE\Academics\Semester III\Object Oriented JAVA Programming\Lab Programs\Lab2_SGPA_Calculator>java Main
Enter your Name: akram
Enter your USN: 1bm21cs013
Enter marks for subject 1 : 88
Enter credits for subject 1 : 3
Enter marks for subject 2 : 94
Enter credits for subject 2 : 1
Enter marks for subject 3 : 98
Enter credits for subject 3 : 4
Enter marks for subject 4 : 89
Enter credits for subject 4 : 3
Enter marks for subject 5 : 93
Enter credits for subject 5 : 1
Enter marks for subject 6 : 75
Enter credits for subject 6 : 3
Enter marks for subject 7 : 88
Enter credits for subject 7 : 1
Enter marks for subject 8 : 93
Enter credits for subject 8 : 3
Enter marks for subject 9 : 88
Enter credits for subject 9 : 1
Name: akram
USN: 1bm21cs013
SGPA: 9.3
```