Program 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.

```
import java.util.*;

class student {
  String USN;
  String name;
  int n;
  double SGPA = 0;
  int totalCredits = 0;
  int credits[];
  double marks[];
  Scanner in = new Scanner(System.in);

void accept() {
System.out.println("Enter USN of the
                    student");
```

```
USN = in.nextLine();
System.out.println("enter Name of the student");
name = in.nextLine();
System.out.println("enter no. of subjects");
n= in.nextInt();
credits = new int[n];
marks = new double[n];
System.out.println("enter details of the subject:");
for(int i=0; i<n; i++){
System.out.println("enter credits for
                    subject" + (i+1));
credits[i] = in.nextInt();
System.out.println("enter marks for subject"
                    + (i+1));
marks[i] = in.nextInt();
calculate(credits[i], marks[i], i);
}
}
void calculate(int credit, double mark, int j){
totalCredits = totalCredits + credit;
if(mark >= 90 && mark <= 100)
  SGPA = SGPA + (10*credit);
else if(mark >= 80 && mark <= 89)
  SGPA = SGPA + (9*credit);
```

```
else if (mark >= 70 && mark <= 79)
  SGPA = SGPA + (8 * credit);
else if (mark >= 60 && mark <= 69)
  SGPA = SGPA + (7 * credit);
else if (mark >= 50 && mark <= 59)
  SGPA = SGPA + (6 * credit);
else if (mark >= 40 && marks <= 49)
  SGPA = SGPA + (5 * credit);
else
  System.out.println("Failed in Subject "
                     + (j+1));
}
void Display()
{
System.out.println("Details of the Student");
System.out.println("USN:" + USN);
System.out.println("Name:" + name);
System.out.println("SGPA of Student"
                   + (SGPA / totalcredits
}}
class StudentMain {
public static void main (String args[]) {
  Student s1 = new student();
  s1.accept();
  s1.Display();
}}
```

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Algorithm

1. Class student with member's USN, name, array of credits, array of marks, total credits and SGPA is created.
2. Create method accept, calculate and display.
3. USN, name, credit and marks are input.
4. SGPA = SGPA + (Grade point * credit) for each subject
5. Do SGPA = SGPA / totalcredit to find SGPA of student.
6. Display all the details of student.

Output:

Enter USN of the student
1BM19CS119
Enter Name of the student
PRATIBHA
Enter no. of subjects
3
Enter details of the subjects:
Enter the credits for subject 1

3
Enter marks for subject 1
89
Enter credits for subject 2
4
Enter marks for subject 2
97
Enter credits for subject 3
4
Enter marks for subject 3
85
Details of the student
USN: 1BM19CS119
Name: PRATIBHA
SGPA of Student: 9.363636363636363.