// Calculating SGPA of a given student.

```java
import java.util.*;
class student
{
    private String USN;
    private String name;
    private int n;
    private double SGPA = 0;
    private int n;
    private double SGPA = 0;
    private int total credits = 0;
    Scanner ss = new Scanner (System.in);
    void Details ()
    {
        System.out.println ("Enter the USN of
the student");
        USN = ss.nextLine ();
        System.out.println (" Enter the name
of the student");
        name = ss.nextLine ();
        System.out.println ("Enter no. of subjects");
        n = ss.nextInt ();
        int credits [] = new int [n];
        double marks [] = new double [n];
        System.out.println ("Enter the details of
the subjects");
        for (int i = 0 ; i<n; i++)
        {
            System.out.println ("Enter credits alloted
to the subject " + (i+1));
```

```java
credits [i] = ss. nextInt ();
System.out.println(" Enter marks in the
subject " + (i+1)) ;
marks [i] = ss. nextInt () ;
calculate (credits [i], marks [i], i);
}
}

void calculate (int credit, double mark, int j)
{
    total credits = 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 && mark <= 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("Name : " + name);
    System.out.println(" USN : " + USN);
    System.out.println(" SGPA of student "
+ (SGPA / total credits));
}
}
```

```
class Main.
{
    public static void main (String args [])
    {
        student S1 = new Student ();
        S1. Details ();
        S1. Display ();
    }
}
```

Algorithm:

1. Start.
2. Input USN, Name, no. of subjects and the details of the subjects i.e. credits and marks as USN, name, n, credits[i], marks[i].
3. Set total Credits = total Credits + credit.
4. Set SGPA = SGPA + (credit * number) where the number = 10, 9, 8, 6, 7, 8 5 acc. to marks[i]
5. ~~if number = 5~~
5. else print "Failed in Subject".
6. Print "Details of the Student", name, USN and the calculated SGPA of the student.
7. End.

Sample Output :

```
Enter USN of the student.
IBM19CS143
Enter name of the student.
Sannidhi
Enter no. of subjects.
2.
Enter details of the subjects:
Enter credits alloted to subject 1
4.
Enter marks in subject 1.
90
Enter credits alloted in subject 2
4
Enter marks in subject 2
100
        Details of the student.
        Name: Sannidhi
        USN: IBM19CS143
        SGPA of student :10.0
```