LAB PROGRAM 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.

CODE :

```
import java.util.*;

class Student
{
 String USN;

 String name;

 int credits[];

 int marks[];

 int n,total=0;

 double SGPA;


Student()
{
 SGPA=0;
}
void input()
{
 Scanner sc=new Scanner(System.in);

 System.out.println("\n Enter the USN and the name of the student: ");

 USN=sc.nextLine();

 name=sc.nextLine();

 System.out.println("\n Enter the number of subjects: ");

 n=sc.nextInt();

 credits=new int[n];

 marks =new int[n];

 for(int i=0;i<n;i++)
```

```java
{
System.out.println("\n Enter the credits for subject: "+(i+1));
credits[i]=sc.nextInt();
total=total+credits[i];
}
for(int i=0;i<n;i++)
{
System.out.println("\n Enter the marks of the student for subject: "+(i+1));
marks[i]=sc.nextInt();
}
}
void grade_points()
{
    int i;
    for(i=0;i<n;i++)
    {
        if(marks[i]>=90 && marks[i]<100)
        {
            marks[i]=10;
        }
        else if(marks[i]>=80 && marks[i]<90)
        {
            marks[i]=9;
        }
        else if(marks[i]>=70 && marks[i]<80)
        {
            marks[i]=8;
        }
        else if(marks[i]>=60 && marks[i]<70)
        {
            marks[i]=7;
```

```java
        }
        else if(marks[i]>=50 && marks[i]<60)
        {
            marks[i]=6;
        }
        else if(marks[i]>=40 && marks[i]<50)
        {
            marks[i]=4;
        }
        else if(marks[i]<40)
        {
            marks[i]=0;
        }
    }
}
void calculate_SGPA()
{
 int i;
 for(i=0;i<n;i++)
 {
 SGPA=SGPA+(credits[i]*marks[i]);
 }
 SGPA=SGPA/total;
}
void display_details()
{
   System.out.println("\n The student with USN: "+USN+" and Name: "+name+" has secured SGPA: "+SGPA);
}
public static void main(String[] args)
{
```

```
Student obj=new Student();

obj.input();

obj.grade_points();

obj.calculate_SGPA();

obj.display_details();

}

}
```
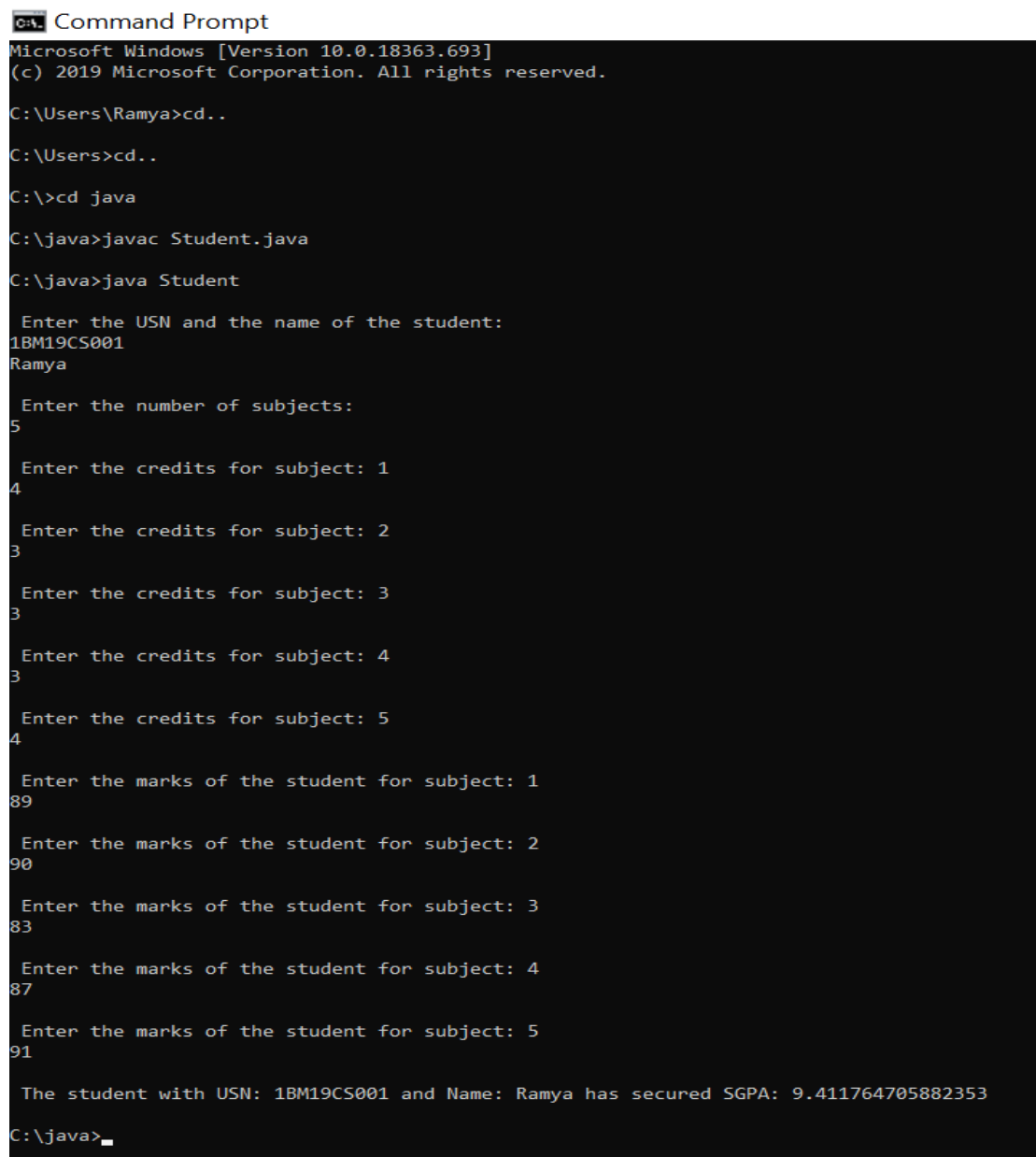
OUTPUT :

```
Command Prompt
Microsoft Windows [Version 10.0.18363.693]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Ramya>cd..

C:\Users>cd..

C:\>cd java

C:\java>javac Student.java

C:\java>java Student
 Enter the USN and the name of the student:
1BM19CS001
Ramya

 Enter the number of subjects:
5

 Enter the credits for subject: 1
4

 Enter the credits for subject: 2
3

 Enter the credits for subject: 3
3

 Enter the credits for subject: 4
3

 Enter the credits for subject: 5
4

 Enter the marks of the student for subject: 1
89

 Enter the marks of the student for subject: 2
90

 Enter the marks of the student for subject: 3
83

 Enter the marks of the student for subject: 4
87

 Enter the marks of the student for subject: 5
91

 The student with USN: 1BM19CS001 and Name: Ramya has secured SGPA: 9.411764705882353

C:\java>
```