

LAB 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.

CODE:

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Lab Program 2

II 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.Scanner;
class Student
{
    String name, usn;
    int marks[] = new int[5];
    int credits[] = new int[5];

    void input()
    {
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter your name:");
        name = ss.nextLine();
        System.out.println("Enter your usn:");
        usn = ss.next();
        System.out.println("Enter the marks of each subject:");
        for (int i = 0; i < 5; i++)
        {
            marks[i] = ss.nextInt();
        }
        System.out.println("Enter the number of credits for each subject:");
        for (int i = 0; i < 5; i++)
            credits[i] = ss.nextInt();
    }
}
```

```
void display()
{
    System.out.println("NAME :" + name);
    System.out.println(" & USN :" + usn);
    for (int i = 0; i < 5; i++)
    {
        System.out.println("Marks of each subject" + (i + 1) + " = " + marks[i]);
        System.out.println("Number of credits for each subject" + (i + 1)
                           + " = " + credits[i]);
    }
}
```

```
void calc()
{
    int gr-point[] = new int[5];
    int sgpa = 0;
    int sum = 0; float res;
    for (int i = 0; i < 5; i++)
    {
        if (marks[i] >= 90)
            gr-point[i] = 10;
        else if (marks[i] >= 80)
            gr-point[i] = 9;
        else if (marks[i] >= 70)
            gr-point[i] = 8;
        else if (marks[i] >= 60)
            gr-point[i] = 7;
        else if (marks[i] >= 50)
            gr-point[i] = 6;
        else if (marks[i] >= 40)
            gr-point[i] = 5;
    }
}
```

```
else if (marks[i] >= 35)
    gr-point = 4;
else if (marks[i] < 35 && marks[i] > 0)
    gr-point = 0;
else
    System.out.println (" Invalid
marks for subject " + (i+1) + "
entered. Try Again!");
    sgpa += (gr-point[i] * credits[i]);
    sum += (credits[i]);
}
res = (float) sgpa / sum;
System.out.println (" SGPA = " + res);
}

class sgpa
{
    public static void main (String zx[])
    {
        Student s1 = new Student ();
        s1.input ();
        s1.display ();
        s1.calc ();
    }
}
```

Output:

Enter your name:

Dhiksha Rathis

Enter your usn:

IBM21CS055

Enter the marks of each subject:

98

88

78

67

98

Enter the number of credits for each subject:

4

3

2

1

4

NAME: Dhiksha Rathis

USN: IBM21CS055

Marks of subject 1: 98

Number of credits for subject 1: 4

Marks of subject 2: 88

Number of credits for subject 2: 3

Marks of subject 3: 78

Number of credits for subject 3: 2

Marks of subject 4: 67

Number of credits for subject 4: 1

Marks of subject 5: 98

Number of credits for subject 5: 4

SGPA = 9.285714

OUTPUT:

```
Command Prompt
Microsoft Windows [Version 10.0.22000.1219]
(c) Microsoft Corporation. All rights reserved.

C:\Users\dhiks>cd C:\Users\dhiks\Desktop

C:\Users\dhiks\Desktop>javac sgpa.java

C:\Users\dhiks\Desktop>java sgpa
Enter your name:
Dhiksha Rathis
Enter your USN:
1BM21CS055
Enter the marks of each subject:
98
88
78
67
98
Enter the number of credits of each subject:
4
3
2
1
4
NAME: Dhiksha Rathis
USN: 1BM21CS055
Marks of subject 1= 98
Number of credits for subject 1= 4
Marks of subject 2= 88
Number of credits for subject 2= 3
Marks of subject 3= 78
Number of credits for subject 3= 2
Marks of subject 4= 67
Number of credits for subject 4= 1
Marks of subject 5= 98
Number of credits for subject 5= 4
SGPA= 9.285714
```