

Lab 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:

```
import java.util.Scanner;

class student
{
    student(){}

    String name;
    String usn;
    double result=0;
    int credits[]=new int[3];
    int marks[]=new int[3];
    int total=0;

    void accept()
    {
        Scanner s=new Scanner(System.in);

        System.out.println("Enter your Name ");
        name=s.nextLine();
        System.out.println("Enter USN ");
        usn=s.nextLine();
        System.out.println("Enter credits and marks of each subject respectively ");
        for(int i=0;i<3;i++)
        {
            this.credits[i]=s.nextInt();
```

```
this.marks[i]=s.nextInt();
}
}
void calculate()
{
for(int i=0;i<3;i++)
{
if(marks[i]>=90 && marks[i]<=100)
result+=10*credits[i];
if(marks[i]>=80 && marks[i]<90)
result+=9*credits[i];
if(marks[i]>=70 && marks[i]<80)
result+=8*credits[i];
if(marks[i]>=60 && marks[i]<70)
result+=7*credits[i];
if(marks[i]>=50 && marks[i]<60)
result+=6*credits[i];
if(marks[i]>=40 && marks[i]<50)
result+=5*credits[i];
else result+=0*credits[i];
}
for(int i=0;i<3;i++)
total+=credits[i];
result=result/total;
}
void display()
{
System.out.println("Name:"+name+" USN:"+usn);
System.out.println("credits Marks");
```

```

for(int i=0;i<3;i++)

System.out.println(credits[i]+"      "+marks[i]);

System.out.println("Total credits="+total);

System.out.println("SGPA="+result);

}

}

```

```

class lab2

{

public static void main(String[] args)

{

student s1=new student();

s1.accept();

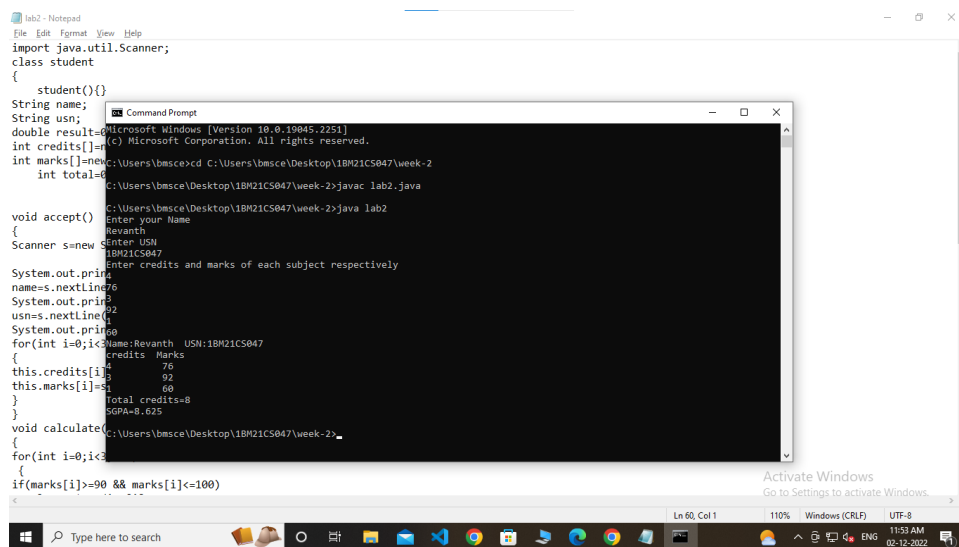
s1.calculate();

s1.display();

}

}

```



The screenshot shows a Windows desktop environment. In the background, a Notepad++ window is open, displaying the Java code for the 'lab2' class. The code includes imports for 'java.util.Scanner', a 'student' class definition with methods 'accept()', 'calculate()', and 'display()', and a 'main' method that creates a 'student' object 's1' and calls these methods. In the foreground, a Command Prompt window is open, showing the execution of the code. The prompt shows the directory 'C:\Users\bmsce\Desktop\1BM21CS047\week-2' and the command 'javac lab2.java' followed by 'java lab2'. The output of the program is displayed in the Command Prompt, showing the user's name 'Revanth', USN '1BM21CS047', and a table of credits and marks for three subjects, resulting in a total of 8 credits and an SGPA of 8.625.

```

lab2 - Notepad
File Edit Format View Help
import java.util.Scanner;
class student
{
    student(){}
    String name;
    String usn;
    double result;
    int credits[]=new int[3];
    int marks[]=new int[3];
    int total=0;
    double result=0;

    void accept()
    {
        Scanner s=new Scanner(System.in);
        System.out.println("Enter your Name");
        name=s.nextLine();
        System.out.println("Enter USN");
        usn=s.nextLine();
        System.out.println("Enter credits and marks of each subject respectively");
        for(int i=0;i<3;i++)
        {
            System.out.print("Credits: ");
            credits[i]=s.nextInt();
            System.out.print("Marks: ");
            marks[i]=s.nextInt();
        }
        calculate();
        display();
    }

    void calculate()
    {
        for(int i=0;i<3;i++)
        {
            if(marks[i]>=90 && marks[i]<=100)
            {
                result+=credits[i]*4;
            }
            else if(marks[i]>=80 && marks[i]<=90)
            {
                result+=credits[i]*3;
            }
            else if(marks[i]>=70 && marks[i]<=80)
            {
                result+=credits[i]*2;
            }
            else if(marks[i]>=60 && marks[i]<=70)
            {
                result+=credits[i]*1;
            }
            else
            {
                result+=credits[i]*0;
            }
        }
        total+=credits[0]+credits[1]+credits[2];
        result=result/total;
    }

    void display()
    {
        System.out.println("Name: "+name);
        System.out.println("USN: "+usn);
        System.out.println("Credits: ");
        for(int i=0;i<3;i++)
        {
            System.out.print(credits[i]);
            System.out.print(" ");
            System.out.print(marks[i]);
            System.out.print(" ");
            System.out.println();
        }
        System.out.println("Total credits: "+total);
        System.out.println("SGPA: "+result);
    }
}

class lab2
{
    public static void main(String[] args)
    {
        student s1=new student();
        s1.accept();
        s1.calculate();
        s1.display();
    }
}

```

```

Microsoft Windows [Version 10.0.19045.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\bmsce\Desktop\1BM21CS047\week-2>javac lab2.java
C:\Users\bmsce\Desktop\1BM21CS047\week-2>java lab2
Enter your Name
Revanth
Enter USN
1BM21CS047
Enter credits and marks of each subject respectively
Credits: 76
Marks: 92
Credits: 92
Marks: 60
Credits: 60
Marks: 80
Total credits=8
SGPA=8.625

```

Activate Windows
Go to Settings to activate Windows.

Ln 60, Col 1 110% Windows (CRLF) UTF-8 11:53 AM 02-12-2022

