

2) 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 {
```

```
    int cdt[], marks[];
```

```
    String sname, usn;
```

```
    Student () {
```

```
        cdt = new int[5];
```

```
        marks = new int[5];
```

```
    }
```

```
    void getdc() {
```

```
        Scanner ss = new Scanner(System.in);
```

```
        sname = ss.next(); usn = ss.next();
```

```
        for (int i=0; i<5; i++)
```

```
        { System.out.println("Enter credits " + (i+1) + ":");
```

```
          cdt[i] = ss.nextInt();
```

```
          System.out.println("Enter marks " + (i+1) + ":");
```

```
          marks[i] = ss.nextInt();
```

```
        }
```

```
    }
```

```
    void display() {
```

```
        System.out.println("Details are: \n Name: " + sname);
```

```
        System.out.println("USN: " + usn);
```

```
        for (int i=0; i<5; i++)
```

```
        { System.out.println("Credits: " + (i+1) + ": " + cdt[i]);
```

```
          System.out.println("Marks: " + (i+1) + ": " + marks[i]);
```

```
        }
```

```

void calc()
{
    int tc=0;
    double tp=0.0;
    for (int i=0; i<8; i++) {
        tc+=cdt[i];
        int gp=getpoint(marks[i]);
        tp+=gp*cdt[i];
    }
    double s=tp/tc;
    System.out.println("sgpa: " + s);
}

```

```

int getpoint(int marks)
{

```

```

    if (marks >= 90 && marks <= 100)

```

```

        return 10;

```

```

    else if (marks >= 80 && marks <= 90)

```

```

        return 9;

```

```

    else if (marks >= 70 && marks <= 80)

```

```

        return 8;

```

```

    else if (marks >= 60 && marks <= 70)

```

```

        return 7;

```

```

    else if (marks >= 50 && marks <= 60)

```

```

        return 6;

```

```

    else if (marks >= 40 && marks <= 50)

```

```

        return 5;

```

```

    else

```

```

        return 0;

```

```

    }

```

```

}

```

```

public class main
{
    public static void main
        (String[] args)

```

```

{

```

```

    student s1=new student

```

```

        s1.getdc();

```

```

        s1.display();

```

```

        s1.calc();

```

```

    }

```

```

}

```

Output: enter details:

Harry

IBM23CS106

Enter credits 1: 4

Enter marks 2: 89

Enter ~~credits~~ 2: 3

Enter marks 2: 93

Enter credits 3: 2

Enter marks 3: 94

Details are:

Name: Harry

USN: IBM23CS106

Credits 1: 4

Marks 1: 89

Credits 2: 3

Marks 2: 93

~~Credits 3: 2~~

credits : 94

Marks : 94

sgpa : 9.55

N
3/10/24

contains four

```

import java.util.Scanner;
class Student {

    int[] cdt, marks;
    String sname, usn;
    Student() {

        cdt = new int[10];

        marks = new int[10];

    }
    void getd() {

        Scanner ss = new Scanner(System.in);
        System.out.println("Enter student details:");
        System.out.print("Name: ");
        sname = ss.next();
        System.out.print("USN: ");
        usn = ss.next();
        for (int j = 0; j < 3; j++) {

            System.out.print("Enter credits for subject " + (j + 1) + ": ");
            cdt[j] = ss.nextInt();
            System.out.print("Enter marks for subject " + (j + 1) + ": ");
            marks[j] = ss.nextInt();

        }

    }

    void display() {

        System.out.println("\nStudent Details:");
        System.out.println("Name: " + sname);
        System.out.println("USN: " + usn);
        for (int j = 0; j < 3; j++) {

            System.out.println("Subject " + (j + 1) + ": Credits = " + cdt[j] + ", Marks = " + marks[j]);

        }

    }

    void calc() {

        int tc = 0;
        double tp = 0.0;
        for (int i = 0; i < 3; i++) {

```

```

        tc += cdt[i];

        int gp = getpoints(marks[i]);

        tp+= gp*cdt[i];

    }
    double s = tp / tc;
    System.out.printf("SGPA: %.2f\n", s);
}

int getpoints(int marks) {

    if (marks >= 90 && marks <= 100)

        return 10;

    else if (marks >= 80 && marks < 90)

        return 9;

    else if (marks >= 70 && marks < 80)

        return 8;

    else if (marks >= 60 && marks < 70)

        return 7;

    else if (marks >= 50 && marks < 60)

        return 6;

    else if (marks >= 40 && marks < 50)

        return 5;

    else

        return 0;

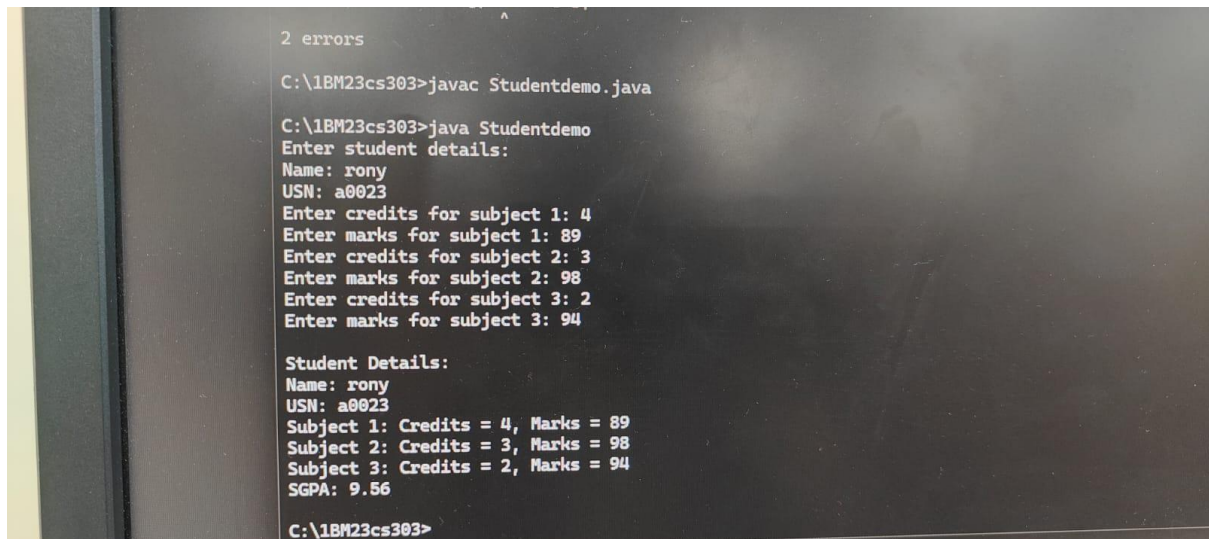
}

}

```



```
class Studentdemo {  
  
    public static void main(String[] args) {  
  
        Student s1 = new Student();  
        s1.getd();  
        s1.display();  
        s1.calc();  
  
    }  
}
```



The screenshot shows a Java IDE with a dark background. At the top, it says "2 errors". Below that, the command prompt shows the compilation of Studentdemo.java. The output of the program is displayed, showing student details and calculated SGPA.

```
2 errors  
C:\IBM23cs303>javac Studentdemo.java  
  
C:\IBM23cs303>java Studentdemo  
Enter student details:  
Name: rony  
USN: a0023  
Enter credits for subject 1: 4  
Enter marks for subject 1: 89  
Enter credits for subject 2: 3  
Enter marks for subject 2: 98  
Enter credits for subject 3: 2  
Enter marks for subject 3: 94  
  
Student Details:  
Name: rony  
USN: a0023  
Subject 1: Credits = 4, Marks = 89  
Subject 2: Credits = 3, Marks = 98  
Subject 3: Credits = 2, Marks = 94  
SGPA: 9.56  
  
C:\IBM23cs303>
```