Lab program 2 [Week 2]

Student :- 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;
import Java.io.*;

class Student {
    private String USN;
    private String name;
    private int[] credits;
    private int[] marks;

    // Constructor
    public Student(String USN, String name,
                   int numSubject) {
        this.USN = USN;
        this.name = name;
        this.credits = new int[numSubjects];
```

```
// Method to accept details
public void acceptDetails() {
    Scanner scanner = new Scanner(System.in
    System.out.println("Enter details for student
    + name + " (USN: " + USN + ")");
    for (int i = 0; i < credits.length; i++)
    {
        System.out.print("Enter credits for
        Subject " + (i+1) + ": ");
        credit[i] = scanner.nextInt();

        System.out.println("Enter marks for
        subject " + (i+1) + ": ");
        marks[i] = scanner.nextInt();
    }
}

// Method to display details
public void displayDetails() {
    System.out.print("Details for student: "
    name + "(USN: " + USN + ")");
    for (int i = 0; i < credits.length; i++)
    {
        System.out.println("Subject " + (i+1) +
```

```
"- credits : " + credits[i] + ". Marks : " + marks[i];
    }
}

//Method to calculate CGPA
public double calculateCGPA() {
    double totalcredits = 0;
    double tololgrade = 0;

for(int i = 0; i < credits.length ; i++) {
    total credits += credits[i];
    total Grade += calculategrade(marks[i] *
        credits[i];
    }
    return totalgrade / total credits;

public double calculategrade(int marks)
{
    if (marks >= 90) {
        return 10.0;
}
    } else if (marks >= 80) {
        return 90.0%;
    } else if (marks >= 70) {
        return 8.0;
```

```
    } else if (marks >=60) {
        return 7.0;
    } else if (marks >=50) {
        return 6.0;
    } else {
        return 0.0;
    }
  }
}

public class Main {
    public static void main (String [] args) {
    Scanner scanner = new Scanner (System.in)

    System.out.print ("Enter the no of subjects:");
    int noSubjects = scanner.nextInt ();

    System.out.print ("Enter the USN:");
    String USN = scanner.next ();

    System.out.print ("Enter the name");
    String name = scanner.next ();

    Student student = new Student (USN, name
        numberSubject);
```

```
        student.acceptdetails();

        //Display details & SGPA
        student.displaydetails();
        System.out.println("SGPA"+student.
            calculateSGPA());
    }
}
```

Output :-

```
Enter the No of subjects : 8
Enter the USN : 2023bms025 99
Enter the name : Rohit Gandhi
Enter details of student :-

Enter credits for subject 1 : 3
Enter marks for subject 1 : 68

Enter credits for subject 2 : 3
Enter marks for subject 2 : 99

Enter credits for subject 3 : 2
Enter marks for subject 3 : 78
```

Enter credits for subject 4: 3
Enter marks for subject 4: 58

Enter credits for subject 5: 3
Enter marks for subject 5: 58

Enter credits for subject 6: 1
Enter marks for subject 6: 68

Enter credits for subject 7: 3
Enter marks for subject 7: 68

Enter credits for subject 8: 1
Enter marks for subject 8: 88

SGPA = 7.368421052631579

19.12.22