29/12/2023 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 & display details and a method to calculate SGPA of a student.

```
import java.util.Scanner;

class Student {
    String usn;
    String name;
    int [] credits = new int [8];
    int [] marks = new int [8];
public void acceptDetails() {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter USN : ");
    usn = scanner.nextLine();
    System.out.print("Enter Name : ");
    name = scanner.nextLine();

    System.out.println("Enter details for each subject : \n");
    for (int i = 0; i < credits.length; i++) {
        System.out.print("\n Enter credits for Subject " + (i+1) + " : ");
        credits[i] = scanner.nextInt();
        System.out.print("\n Enter marks for Subject " + (i + 1) + " : ");
        marks[i] = scanner.nextInt();
    }
    scanner.close();
}
```

```
public double calculateSGPA () {
    int totalCredits = 0;
    int weightedSum = 0;
    double ans;

    for (int i=0; i < credits.length; i++) {

    totalCredits += credits[i];
     int gradePoints;
     gradePoints = (marks[i] / 10) + 1;

     if ( gradePoints == 11 ) {
          gradePoints = 10;
     }
     else if ( gradePoints <=4) {
        gradePoints = 0;
     }
     weightedSum += gradePoints * credits[i];
}
 ans = (double) weightedSum / (double) totalCredits;
    return ans;
}
Public void displayDetails () {
    System.out.println ("\n Students Details : ");
    System.out.println (" USN : " + usn);
    System.out.println (" Name : " + name );
}
}
```

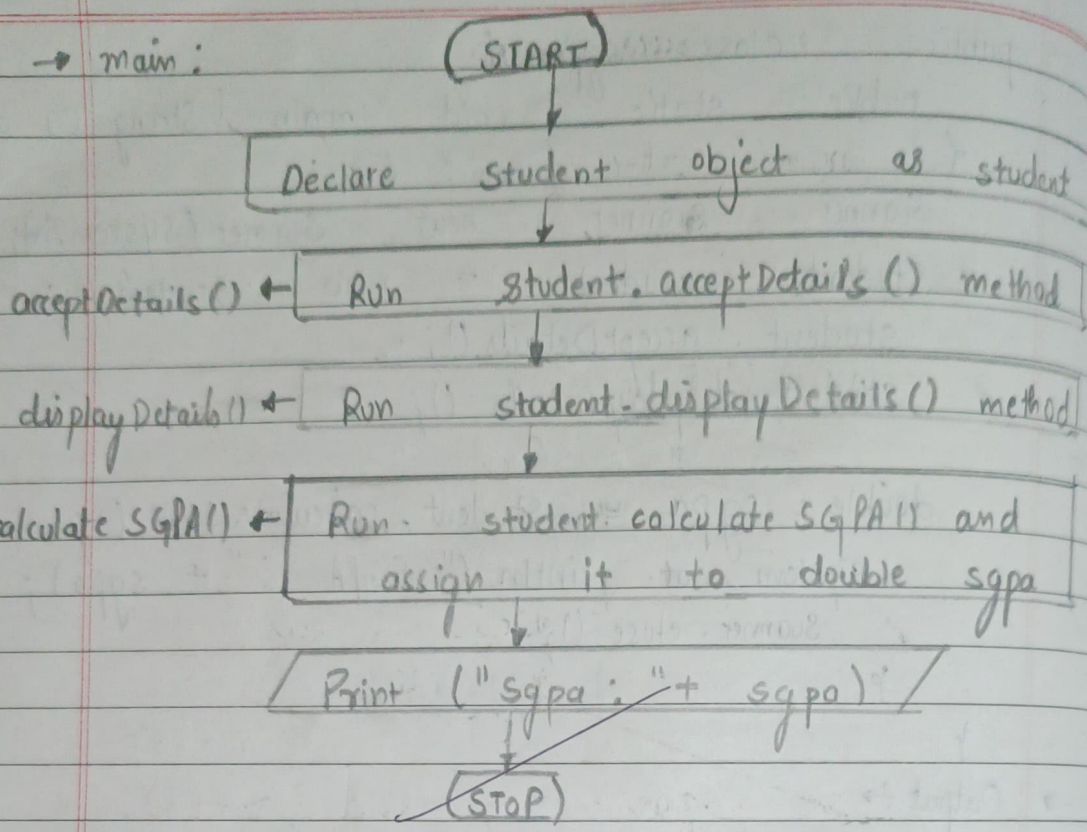
```
public class sgpa {
    public static void main (String [] args)
    {
        Scanner scanner = new Scanner (System.in);
        Student student = new Student ();
        student . acceptDetails ();
        student. displayDetails ();

        double sgpa = student . calculateSGPA ();
        system . out. println (" SGPA :" + sgpa);
        scanner . close ();
    }
}
```

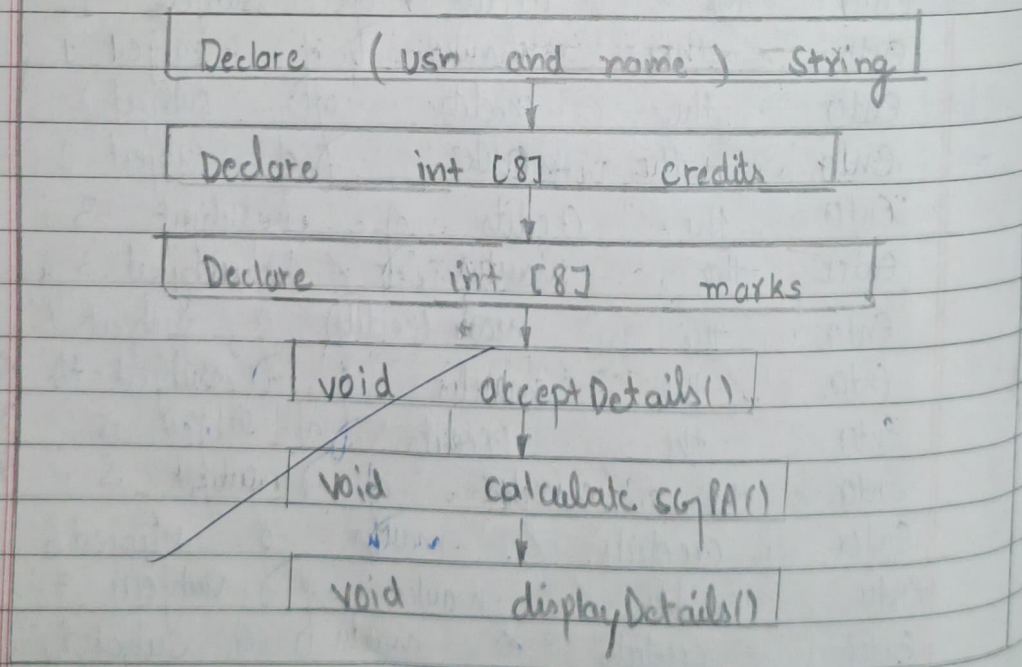
→ Output :→

Enter the Student USN : 1BM22CS011
Enter the student Name : ADARSH DEV SINGH
Enter the subject Details :
Enter the credits of subject 1 : 4
Enter the marks of subject 1 : 92
Enter the credits of subject 2 : 4
Enter the marks of subject 2 : 93
Enter the credits of subject 3 : 3
Enter the marks of subject 3 : 97
Enter the ~~marks~~ credits of subject 4 : 3
Enter the marks of subject 4 : 95
Enter the credits of subject 5 : 3
Enter the marks of subject 5 : 92
Enter credits & marks of subject 6 : 1 91
Enter credits & marks of subject 7 : 1 85
Enter ~~credits~~ & marks of subject 8 : 1 82
~~Student~~ Details :
The Student USN : 1BM22CS011
The Student Name : ADARSH DEV SINGH
SGPA : 9.9

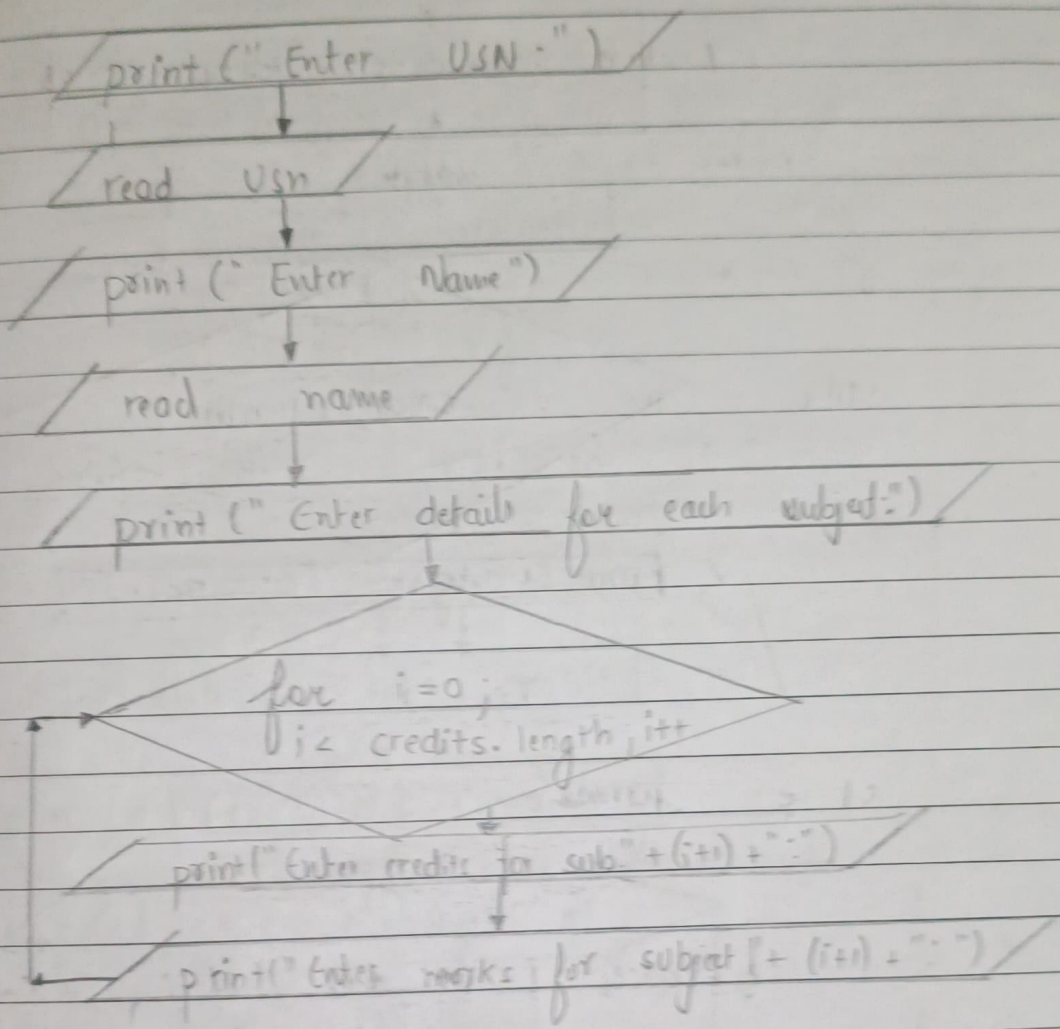
→ main :



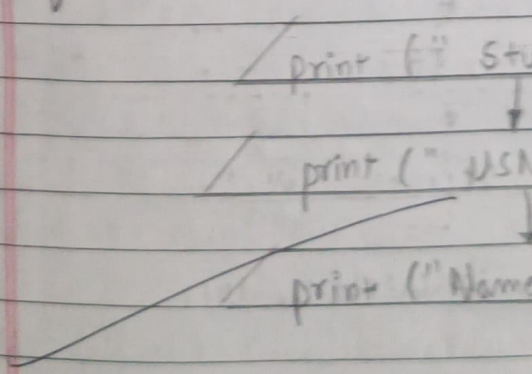
→ class Student :



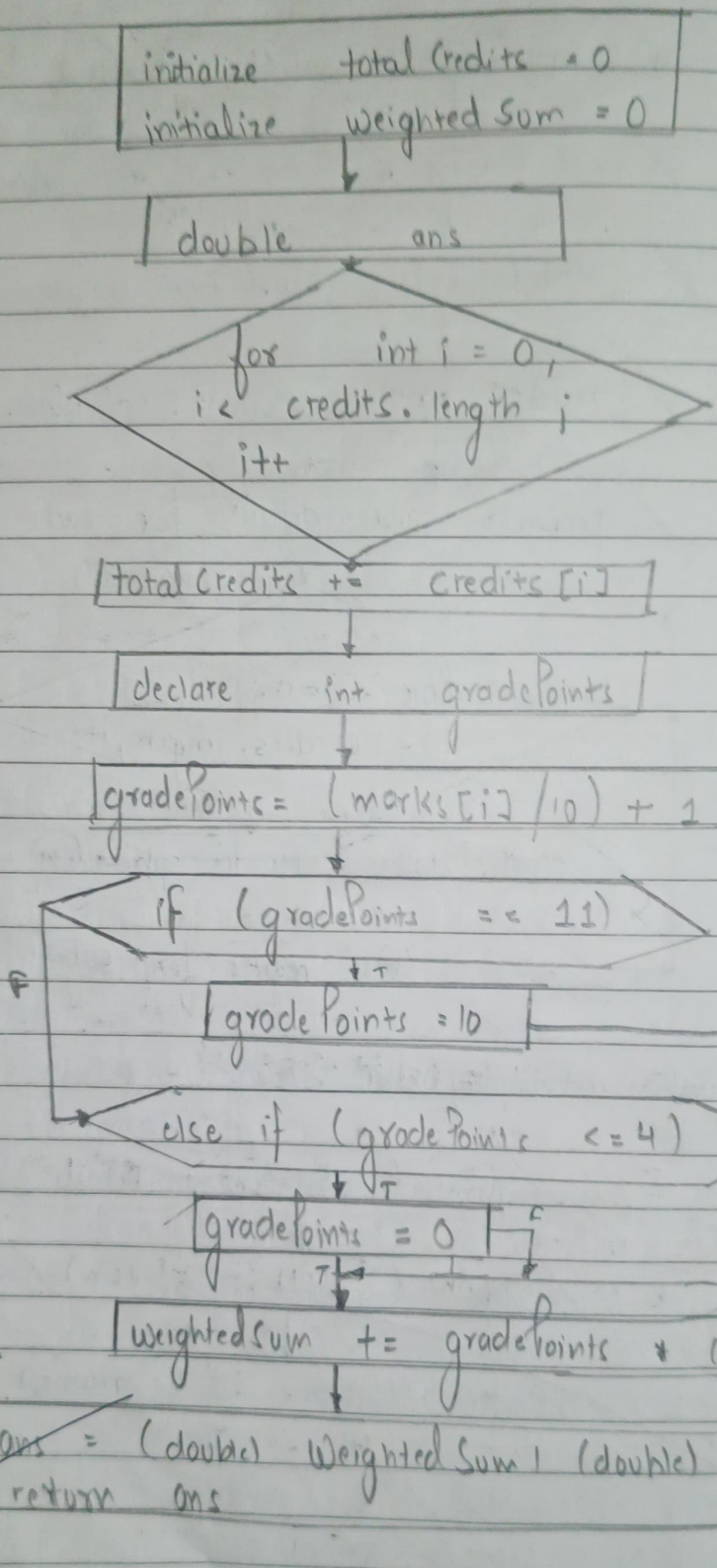
→ function void acceptDetails :



→ function void displayDetails :



function void calculate SGPA ()



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