

ALGORITHM

Step 1: START

Step 2: READ usn, name, credits[], marks[]

Step 3: grade() func.

```
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  
    print fail  
    return 0
```

Step 4: calculate gpa() func

```
initialise i = 0, till i < 5    i++  
sum of credits += credits[i]  
total sum of marks t += grade * credits[i]  
  
return sum / sum - credits;
```

Step 5: Print gpa

Step 6: end.

LAB - 2

Program to calculate sgpa of student

```
import java.util.*;

class student
{
    public static String usr;
    public static String name;
    public static int credits[];
    public static int marks[];
    public static void main(String args[])
    {
        System.out.println("Enter your details:");
        getgetdetails();
        System.out.println(name + " got " + calculateSgpa()
+ " sgpa");
    }
    public static void getdetails()
    {
        Scanner input = new Scanner(System.in);
        System.out.print("Enter your USN: ");
        usr = input.next();
        System.out.print("Enter your name: ");
        name = input.next();
        credits = new int[5];
        marks = new int[5];
        for (int i = 0; i < 5; i++)
        {
            System.out.print("Enter your marks in
```



```

subject "(i+1) + ":";
marks[i] = input.nextInt();
system.out.print("Enter the credits of
subject "(i+1) + ":";
credits[i] = input.nextInt();

```

```

}
}
public static double calculateGpa()
{

```

```

    int c;
    int sum = 0, sumCredits = 0;
    for (int i = 0; i < 5; i++)
    {

```

```

        c = subjectPoints(marks[i]);
        sumCredits += credits[i];
        sum += c * credits[i];
    }

```

```

    return (double) sum / sumCredits;
}

```

```

public static int subjectPoints(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
{
    System.out.println("You Failed in this
Subject");
    return 0;
}
}
```