

Step 1 = start

Step 2 :- Read number of subjects, user, Name, credit array marks of array from the user

Step 3 :- $i=0$ if $\text{mark}[i] \leq 100$ & $\text{mark}[i] \geq 90$ return 10

else if $\text{mark}[i] \geq 80$ & $\text{mark}[i] < 90$ return 9

else if $\text{mark}[i] \geq 70$ & $\text{mark}[i] < 80$ return 8

else if $\text{mark}[i] \geq 60$ & $\text{mark}[i] < 70$ return 7

else if $\text{mark}[i] \geq 50$ & $\text{mark}[i] < 60$ return 6

else return "fail"

Step 4 :- Sum $i=0$ to n

if $\text{mark}[i] \geq 0$ $c = \text{grade}(\text{mark}[i])$

sum - credit = credit $[i]$

sumt = $c * \text{credit}[i]$

sgpa = $\text{sum} / \text{sum - credit}$

Step 5 - print sgpa

```
import java.util.*;
public class lab2
{
    int n;
    String usn;
    String name;
    int credit[];
    double mark[];
    public static void read()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Number of subjects");
        n = sc.nextInt();
        credit = new int[n];
        mark = new double[n];
        System.out.println("Enter the name of subjects");
        name = sc.nextLine();
        System.out.println("Enter USN of the student");
        usn = sc.next();
        System.out.println("Enter the credits of the subject");
        for (int i = 0; i < n; i++)
        {
            credit[i] = sc.nextInt();
        }
        System.out.println("Enter the marks of corresponding subject");
        for (int i = 0; i < n; i++)
        {
            mark[i] = sc.nextDouble();
        }
    }
}
```



```
public static int grade (double marks)
{
    if (marks >= 90 && marks <= 100)
    {
        return 10;
    }
    if (marks >= 80 && marks <= 90)
    {
        return 9;
    }
    if (marks >= 70 && marks <= 80)
    {
        return 8;
    }
    if (marks >= 60 && marks <= 70)
    {
        return 7;
    }
    if (marks >= 50 && marks <= 60)
    {
        return 6;
    }
    if (marks >= 40 && marks <= 50)
    {
        return 5;
    }
    else
    {
        System.out.println (" You have failed ");
        return 0;
    }
}
```

```
public static double calculate ()
{
    read ();
    double sgpa;
    double sumCredits = 0;
    double sum = 0;
    int C;
```

```

for (int i=0; i<n; i++)
{
    r = grade(mark[i]);
    sum = credits += credit[i];
    sum = sum + c * credit[i];
}
sgpa = (double) (sum / sum - credits);
return sgpa;
}

```

```

public static void main (String[] args)
{
    Scanner sc = new Scanner(System.in);
    double sgpa = calculate();
    System.out.println("Name of the student is " + name);
    System.out.println("SGPA of student is " + sgpa);
}
}

```

~~expected output:-~~