

ALGORITHM:

STEP 1 START

STEP 2 Read number of subjects, usn, name, credit P, mark[] from the user

STEP 3 fun() (grade.)
 if i = 0 to n
 if mark[i] >= 90 & & mark[i] <= 100
 Return 10 else if mark[i] >= 80 & & mark[i] < 90
 return 7 else if mark[i] >= 70 & & mark[i] < 60
 return 8 else if mark[i] >= 60 & & mark[i] < 50
 return 7 else if mark[i] >= 50 & & mark[i] <= 40
 return 6 else
 return "fail"

STEP 4. PTO (NextPage) . . .

Date: / /

STEP 4

for i = 0 to n

c = grade (mark[i])

sum_credit += credit[i];

sum += c * credit[i];

sgpa = sum / sum - credit;

STEP 5

PRINT sgpa

Date _____

A program to calculate SGPA of student

import java.util.*;

public class Lab2

{

private static int n;

private static String usn;

private static String name;

private static int credit[];

private static double mark[];

public static void read()

{

Scanner sc = new Scanner(System.in);

System.out.println("Enter the number
of students");

n = sc.nextInt();

credit = new int[n];

mark = new double[n];

System.out.println("Enter the name of
student").

name = sc.next();

System.out.println("Enter the usn");

usn = sc.next();

System.out.println("Enter the credits
of subject");

Date / /

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

{

```
System.out.print("Enter credit in  
subject " + " " +  
(i+1));
```

```
credit[i] = sc.nextInt();
```

}

```
System.out.print("Enter the marks in subject  
" + ");
```

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

{

```
System.out.print("Enter marks in  
subject " + " " +  
(i+1));
```

```
mark[i] = sc.nextDouble();
```

}

```
public static int grade(double marks)
```

```
if (marks >= 90 & & marks <= 100)  
return 10
```

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

```
{ return 9
```

{

Date _____ / _____ / _____

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

```
    return 4.8;
```

```
}
```

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

```
    return 3.7;
```

```
}
```

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

```
    return 6;
```

```
}
```

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

```
    return 5;
```

```
}
```

```
else
```

```
{
```

```
    System.out.println ("You have failed");  
    return 0;
```

```
}
```

```
}
```

public static double calculate()

```

    read()
    double sgpa;
    double sum_credits = 0;
    double sum = 0;
    int c;
    for (int i = 0; i < n; i++)
    {
        c = 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 Student"
                    + name);

```

System.out.println ("Marks are ");

```

for (int i = 0; i < n; i++)
{

```

```

    System.out.print ("Mark in Subject "
                    + " " + (i + 1)
                    + " is " + "(t)");
}
```

System.out.println (mark[i]);

Date _____

System out.println ("SGPA of Student is "+
sgpa);