

LAB PROGRAM – 2

Q. 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;
class student{
void display(String name, String usn)
{
System.out.println("USN of the student "+usn);
    System.out.println("Name of the student "+ name);
}
void calculategpa(double[] marks, double[] credits, int number)
{
double gradepoints[]=new double[number];
double sgpa,sum=0,tsum=0;
for (int i=0;i<number;i++)
{
if(marks[i]>=90)
gradepoints[i]=10;
else if(marks[i]>=80)
gradepoints[i]=9;
else if(marks[i]>=70)
gradepoints[i]=8;
else if(marks[i]>=60)
gradepoints[i]=7;
else if(marks[i]>=50)
gradepoints[i]=6;
else if(marks[i]>=40)
gradepoints[i]=4;
else
gradepoints[i]=0;
}
for(int i=0;i<number;i++)
{
sum+=credits[i]*gradepoints[i];
}
for(int i=0;i<number;i++)
{
tsum+=credits[i];
}
sgpa=sum/tsum;
System.out.println("SGPA is "+sgpa);
}
}

class sgpa{
public static void main(String args[]){
Scanner s=new Scanner(System.in);
System.out.println("Enter name and usn of student");
```

```
String name=s.next();
String usn=s.next();
student s1=new student();
System.out.println("Enter the number of courses");
int number=s.nextInt();
double credits[]=new double[number];
double marks[]=new double[number];
for(int i=0;i<number;i++)
{
    System.out.print("Credit of subject "+(i+1) +" : ");
    credits[i]=s.nextDouble();
    System.out.print("Marks of subject "+(i+1) +" : ");
    marks[i]=s.nextDouble();
}
s1.display(name,usn);
s1.calculatesgpa(marks,credits,number);
}
}
```

lab-program-2

Q. 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;
class Student
{
    void display (String name, String usn)
    {
        System.out.println("USN of the student " + usn);
        System.out.println("Name of the student " + name);
    }
    void calculatesgpa (double [] marks, double [] credits, int
        number)
    {
        double gradePoints [] = new double [number];
        double sgpa, sum = 0, tsum = 0;
        for (int i = 0; i < number; i++)
        {
            if (marks[i] >= 90)
                gradePoints[i] = 10;
            else if (marks[i] >= 80 && marks[i] < 90)
                gradePoints[i] = 9;
            else if (marks[i] >= 70 && marks[i] < 80)
                gradePoints[i] = 8;
            else if (marks[i] >= 60 && marks[i] < 70)
                gradePoints[i] = 7;
            else if (marks[i] >= 50 && marks[i] < 60)
```



```

gradePoints[i] = 6;
elseif (marks[i] >= 40 & marks[i] < 50)
grade points [i] = 4;
else
grade points [i] = 0;
}
for (int i = 0 ; i < number ; i++)
{
sum + = Credits [i] * gradePoints [i];
}
for (i = 0 ; i < number ; i++)
{
tsum + = credits [i];
}
sgpa = sum / tsum
System.out.println (" SGPA is " + sgpa);
}
}

```

Class sgpa

```

{
public static void main (String x[])
{
Scanner s = new Scanner (System.in);
System.out.println ("Enter name and usn of student");
String name = s.next ();
String usn = s.next ();
Student s1 = new student ();
System.out.println ("Enter the number of course");
int number = s.nextInt ();
double credits [] = new double [number];
double marks [] = new double [number];
}
}

```

Date _____
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```
for (int i=0; i<number; i++)  
{  
    System.out.println("Credit of subject "+(i+1)+" : ");  
    credits[i] = s.nextDouble();  
    System.out.println("Marks of subject "+(i+1)+" : ");  
    marks[i] = s.nextDouble();  
}  
s1.display(name, usn);  
s2.calculate sgpr (marks, credits, number);  
}  
}
```


Output.

Enter name and usn of student

aryan 1BM21CS034

Enter the number of courses

2

Credit of subject 1 : 3

Marks of subject 1 : 70

Credit of subject 2 : 3

Marks of subject 2 : 80

USN of the student 1bm21cs034

Name of the student aryan

SGPA is 8.5

or 12/12

```
Microsoft Windows [Version 10.0.19045.2251]
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C:\Users\bmsce>cd C:\Users\bmsce\Desktop\1BM21CS034
C:\Users\bmsce\Desktop\1BM21CS034>javac stu.java
C:\Users\bmsce\Desktop\1BM21CS034>java sgpa
Enter name and usn of student
aryan 1bm21cs034
Enter the number of courses
2
Credit of subject 1 : 3
Marks of subject 1 : 70
Credit of subject 2 : 3
Marks of subject 2 : 80
USN of the student 1bm21cs034
Name of the student aryan
SGPA is 8.5

C:\Users\bmsce\Desktop\1BM21CS034>
```