

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 and display details and a method to calculate SGPA of a student.

SGPA

$$SGPA = \frac{\sum [(Course Credits)(Grade Points)]}{\sum [Course Credits]}$$

~~CGPA~~

```
import java.util.Scanner;
```

```
class Subject
```

```
{
```

```
    int subjectMarks;
```

```
    int credits;
```

```
    int grade;
```

```
}
```

```
class Student
```

```
{
```

```
    Subject subject[];
```

```
    String name;
```

```
    String usn;
```

```
    Scanner s;
```

```
    Student()
```

```
{
```

```
        int i;
```

```
        subject = new Subject[9];
```

```
        for (i = 0; i < 9; i++)
```

```
            subject[i] = new Subject();
```

```
        s = new Scanner(System.in);
```

```
}
```


//_

```
void getStudentDetails()
```

```
{
```

```
    System.out.print("Enter your Name:");
```

```
    name = s.next();
```

```
    System.out.print("Enter your USN:");
```

```
    usn = s.next();
```

```
}
```

```
}
```

```
void getMarks()
```

```
{
```

```
    for (int i=0; i<9; i++)
```

```
        System.out.print("Enter marks for subject "
```

```
        + (i+1) + " : ");
```

```
        subject[i].subjectMarks = s.nextInt();
```

```
        System.out.print("Enter credits for "
```

```
        subject + (i+1) + " : ");
```

```
        subject[i].credits = s.nextInt();
```

```
        subject[i].grade = (subject[i].subjectMarks
```

```
        / 10) + 1;
```

```
        if (subject[i].grade == 11)
```

```
            subject[i].grade = 10;
```

```
        if (subject[i].grade <= 4)
```

```
            subject[i].grade = 0;
```

```
    }
```

```
}
```

```
void computeSGrPA()
```

```
{
```

```
    public static void main(String args[])
```

```
{
```

```
        St
```

```
        int effectiveScore = 0;
```

```
        int totalCredits = 0;
```


//_

```

for(int i=0; i<9; i++)
    effectiveScore += (subject[i].grade *
                      subject[i].credits);
totalCredits += subject[i].credits;
}
SGPA = (double) effectiveScore / (double)
      totalCredits;
}

```

```

}
class Main
{

```

```

    public static void main(String args[])
    {
        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        System.out.println("Name:" + s1.name);
        System.out.println("USN:" + s1.usn);
        System.out.println("SGPA:" + s1.SGPA);
    }
}

```

Output:

Enter your Name: Sakshi
 Enter your USN: 1BM22CS233
 Enter marks for subject 1: 80
 Enter credits for subject 1: 5
 Enter marks for subject 2: 70
 Enter credits for subject 2: 6
 Enter marks for subject 3: 50
 Enter credits for subject 3: 5

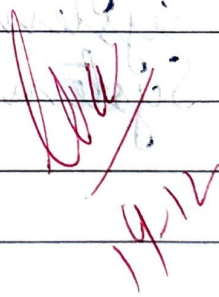
Enter marks for subject 4: 90
Enter credits for subject 4: 9
Enter marks for subject 5: 83
Enter credits for subject 5: 7
Enter marks for subject 6: 65
Enter credits for subject 6: 5
Enter marks for subject 7: 70
Enter credits for subject 7: 6
Enter marks for subject 8: 80
Enter credits for subject 8: 8
Enter marks for subject 9: 50
Enter credits for subject 9: 4
Name: Sakshi

USN: Sakshi IBM22CS233

SGPA: 8.2727

Name: Sakshi.B.R

USN: IBM22CS233


14/12