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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

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

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 computeSGPA()
{
    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~~ 1BM22CS233
SGPA: 8.272727

Name: Sakshi.B.R
USN: 1BM22CS233

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