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

$$SGPA = \frac{\sum [(\text{course credits})(\text{course points})]}{\sum [\text{course credits}]}$$

```
import java.util.*;
class Subject {
        int sub_marks;
        int credits;
        int grade;
}
class student {
        Subject subject[];
        String name;
        String usn;
        double SGPA;
        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.println("Enter name and USN");
    this.name = s.nextLine();
    this.usn = s.nextLine();
}

void getmarks()
{
    for(int i=0;i<8;i++)
    {
        System.out.println("Enter the marks of "+(i+1)+
        "subject");
        subject[i].sub_marks = s.nextInt();
        System.out.println("Enter the credits of "+(i+1)+
        "subject");
        subject[i].credits = s.nextInt();
        subject[i].grade = (subject[i].sub_marks/10);
        if(subject[i].grade>10){
            subject[i].grade = 10;
        }
        if(subject[i].grade<4){
            subject[i].grade=0;
        }
    }
}
void computeSGPA(){
    int totalcredits=0;
    int sum=0
    for(int i=0;i<8;i++){
        sum=sum+subject[i].grade*subject[i].credits;
        totalcredits=totalcredits+subject[i].credits;
}
```

```
        this.SGPA = (double).sum / totalcredits;
    }
}

public class Main{
public static void main (String args[]){
    Student S1 = new Student ();
    S1.getStudentdetails ();
    S1.get marks ();
    S1.computeSGPA();
    System.out.println ("Name :" + S1.name );
    System.out.println ("USN :" + S1.usn);
    System.out.println ("SGPA :" + S1.SGPA);
  }
}
```

Output:

```
Enter name and usn
Sanketh M. Hanagi
1BM22CS242
Enter marks of 1 subject : 85
Enter credits of 1 subject : 4
Enter marks of 2 subject : 86
Enter credits of 2 subject : 4
Enter marks of 3 subject : 90
Enter credits of 3 subject : 3
Enter marks of 4 subject : 88
Enter credits of 4 subject : 3
Enter marks of 5 subject : 79
Enter credits of 5 subject : 3
Enter marks of 6 subject : 84
Enter credits of 6 subject : 1
Enter marks of 7 subject : 99
```

Enter credits of 7 subject : 1
Enter marks of 8 subject : 90
Enter credits of 8 subject : 1
Name: Sanketh M Hanasi
USN: 1BM22CS242
SGPA : 9.1

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