LRA 19-12-23 Date: 19-12-23

2) Develop a Java program to create a class Student with members usn, name, an array credit, an array marks. Include methods to accept and display details and a method to calculate SGPA of the Student.

formula for SGPA

$$SGPA = \frac{\sum [(\text{Course Credits})(\text{grade points})]}{\sum [(\text{Course credits})]}$$

$$CGPA = \frac{\sum [(\text{Course credits})(\text{grade points})]}{\sum [(\text{Course Credits})]}$$

```
import java.util.*;
class subject {
 int subjectMarks;
 int credits;
 int grade;
}
class student {
 Student student[];
  String name;
  String usn;
  double SGPA;
  Scanner sc = new Scanner(System.in);
 Student() {
  int i;
  subject = new Subject[8];
  for(i=0; i<8; i++){
  Subject[i] = new Subject();
 }
public void getStudentDetails() {
    System.out.println("enter your name");
    name = sc.nextLine();
   System.out.println("usn");
     usn = sc.nextline();
 }
```

```
public void getMarks() {
    for (int i=0; i<8; i++) {
        System.out.println("Enter the marks for " +
                                        (i+1);
        subject[i].subjectMarks = sc.nextInt();

        System.out.println("Enter the credits for "
                + (i+1) "subject");
        subject[i].credits = sc.nextInt();
        Subject[i].grade = (subject[i].marks / 10) + 1;
        if (subject[i].grade == 101) {
            Subject[i].grade = 10
        }
        if (subject[i].grade <= 4) {
            subject[i].grade = 4
        }
    }

public void computeSGPA() {
    int effectiveScore = 0;
    int total = 0;
    float SGPA = 0;
```

```
for (int i=0; i<8; i++) {
    effectiveScore += (subject[i].credits * subject[i].
                                        grade);
    total += subject[i].credits;
    }
}
System.out.println("effective score : "+effectiveScore);
System.out.println(" total : " + total);
SGPA = effectiveScore / total;
System.out.println("SGPA; "+SGPA);

}
}
class javaMain {
    public static void main(String args[]) {

    Student s = new Student();
    s.getStudentDetails();
    s.getMarks();
    s.computeSGPA();

    System.out.println("name : " + s.name);
    System.out.println("usn :" + s.usn);

    System.
}
```

Output :-

```
enter your name
SOHAN
usn
2023BMS02532
enter the marks for 1 subject
80
enter the credits of 1 subject
4
enter the marks for 2 subject
70
enter the credits of 2 subject
4
enter the marks for 3 subject
67
enter the credits of 3 subject
3
enter the marks for 4 subject
58
enter the credits of 4 subject
3
enter the marks for 5 subject
69
enter the credits of 5 subject
4
```

enter the marks for 6 subject

87

enter the credits of 6 subject

2

enter the ~~credits~~ marks for 7 subject

59

enter the credits of 7 subject

1

enter the marks for 8 subject

50

enter the credits of 8 subject

1

effective score : 165

total credits : 22

SGPA; 7.0

name: SOHAN

USN: 2023BMS02532