19/12.

Lab prgm:

8. 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.

formula: $SGPA = \frac{\Sigma[(\text{course credits})(\text{Grade Points})]}{\Sigma[(\text{course credits})]}$

$$CGPA = \frac{\Sigma[(\text{course credits})(\text{Grade Points})]}{\Sigma[\text{course credits}]}$$

```
import java.util.Scanner;
class subject
{
  int subjmarks;
  int grade;
  int credits;
}
```

```
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 getStudentDetail()
{
    System.out.println("Enter your name");
    name = s.next();
    System.out.println("Enter your usn");
    usn = s.next();
}
void getMarks()
{
    for(int i=0; i<9; i++)
    {
        System.out.println("Enter marks for subject "+(i+1)
        +" :");
        subject[i].subjectMarks = s.nextInt();
        System.out.println("Enter the credits for subject
        "+(i+1)+" :");
```

```
subject[i].credits = s.next();
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()
{
  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.getStudentDetail();
    s1.getMarks();
    s1.computeSGPA();
    System.out.println("Name: " + s1.name);
    System.out.println("USN: " + s1.usn);
    System.out.println("SGPA:" + s1.SGPA);
  }
}
```

O/P: Enter your name shreya
Enter your usn : 1BM22CS265
Enter your marks for subject 1: 90
Enter your credits for subject 1: 4
Enter your mark for subject 2: 99
Enter your credits for subject 2: 3
Enter your marks for subject 3: 89
Enter your credit for subject 3: 4
Enter your marks for subject 4: 90
Enter your credits for subject 4: 3
Enter your ~~name~~ marks for subject 5: 99
Enter your credits for subject 5: 1
Enter your marks for subject 6: 96
Enter your credit for subject 6: 3
Enter your marks for subject 7: 87
Enter your credit for subject 7: 4
Enter your mark for subject 8: 91
Enter your credits for subject 8: 3
Name: shreya
USN: 1BM22CS265
SGPA: 9.68.

19/12/23