19/12/2023

Lab Program 2:

Q. Program in Java to calculate SGPA of a student.

Ans:
```java
import java.util.Scanner;
class Subject {
    int subjectMarks;
    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 your name: ");
        name = s.next();
        System.out.println("Enter your USN: ");
        usn = s.next();
    }
```

```java
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.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 () {
    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 Result {
    public static void main (String args[]) {
        Student s1 = new Student ();
        s1.getStudentDetails ();
```

```java
            sl.getMarks();
            sl.computeSGPA();
            System.out.println("Name of Student: " + sl.name);
            System.out.println("USN of Student: " + sl.usn);
            System.out.println("SGPA of the Student: " + sl.SGPA);
        }
}
```

Output:

```
Enter your Name:
Navs
Enter your USN:
IBM 22CS599
Enter marks for subject 1:
98
Enter the credits for subject 1:
4
Enter marks for subject 2:
92
Enter the credits for subject 2:
4
Enter marks for subject 3:
86
Enter the credits for subject 3:
3
Enter marks for subject 4:
92
Enter the credits for subject 4:
3
Enter marks for subject 5:
97
Enter the credits for subject 5:
```

3

Enter marks for subject 6:
98
Enter the credits for subject 6:
1
Enter marks for subject 7:
99
Enter the credits for subject 7:
1
Enter marks for subject 8:
95
Enter the credits for subject 8:
1
Enter marks for subject 9:
87
Enter the credits for subject 9:
1
Name of Student : ~~Nikhil~~ Naves
USN of Student : IBM22CS599
SGPA of the student : 9.80952380952381