Lab Week - 2

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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.

```
import java.util.Scanner;

class Subject {
    int subjectMarks;
    int credits;
    int grade;
}

class Student {
 String name;
 String usn;
 double SGPA;
 Scanner s;
 Subject subject[

 //constructor
 Student()
{ subjects = new Subject[9];
    for (int i=0; i<9; i++)
        subjects[i] = new Subject();
  s = new Scanner (System.in);
}

void getStudentDetails() {
 System.out.println("Enter student name:");
 name = s.nextLine();
 System.out.println("Enter student usn:");
} usn = s.nextLine();
```

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

  System.out.println("Enter credits for subject"
          +(i+1)+" : ");
  ~~subjects[i].subjectMarks~~ subjects[i].credits = s.nextInt

  if(subjects[i].subjectMarks >=90)
   { subjects[i].grade =10; }
  else if (subject[i].subjectMarks >=80)
   { subjects[i].grade = 9; }
  else if(subject[i].subjectMarks >=70)
  { subjects[i].grade =8; }
  else if(subject[i].subjectMarks >=60)
   { subjects[i].grade = 7; }
  else if(subject[i].subjectMarks >=50)
   { subjects[i].grade = 6; }
  else if(subject[i].subjectMarks >=40)
  { subjects[i].grade = 5; }
  else
  { subjects[i].grade = 0; }
  }
  } // void getMarks ending paranthesis

void computeSGPA() {
double totalCredits = 0;
double creditsGained = 0;

for(int i=0; i<8; i++)
{ int totalCredits += subjects[i].credits;
```

```
        creditsgained += subject[i].credits * subjects[i].grade;
    }
    SGPA = creditsgained / totalCredits;
}

void displayResult() {
    System.out.println("Student Name: " + name);
    System.out.println("Student USN: " + usn);
    System.out.println("SGPA" + SGPA);
}
} // class Student ending parantheses

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

        Student s1 = new Student();
        s1.getStudentDetails();
        s1.getMarks();
        s1.computeSGPA();
        s1.displayResult();
    }
}
```

Output: Enter student name:
Prabhanjan
Enter student USN:
1BM22CS196
Enter marks for subject 1:
90
Enter credits for subject 1:
4
Enter marks for subject 2:
89
Enter credits for subject 2:
4

Enter marks for subject 3:
85
Enter credits for subject 3:
4
Enter marks for subject 4:
92
Enter credits for subject 4:
3
Enter marks for subject 6:
95
Enter credits for subject 6:
2
.
.
.
Enter marks for subject 8:
85
Enter credits for subject 8:
1

Student Name : Prabhanjan
Studen USN : 1BM22CS196
SGPA : 9.5909090

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