

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

$$\text{Formula: SGPA} = \frac{\sum (\text{course credits}) (\text{Grade Points})}{\sum (\text{course credits})}$$

Class Subject

{

int subjectMarks;

int credits;

int grade;

}

class Student.

{

Subject subject[9];

String name;

String ~~name~~ 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 VSN:");
```

```
VSN = s.nextInt();
```

```
}
```

```
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 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;
```

```
}  
P: SGPA = (double)effectiveScore / (double)totalCredits;
```

```
Class Main
```

```
{  
    public static void main (String args [])
```

```
    Student s1 = new Student ();
```

```
    s1.getStudentDetails ();
```

```
    s1.getMarks ();
```

```
    s1.computeSGPA ();
```

```
    System.out.println ("Name: " + s1.name);
```

```
    System.out.println ("UEN: " + s1.uen);
```

```
    System.out.println ("SGPA: " + s1.SGPA);
```

```
}
```

O/P

Enter your name Shreyas

Enter your USN:

1bm22cs286

Enter marks for subject 1: 88

Enter your credits for subject 1: 4

Enter marks for subject 2: 89

Enter your credits for subject 2: 4

Enter marks for subject 3: 92

Enter your credits for subject 3: 3

Enter marks for subject 4: 90

Enter your credits for subject 4: 3

Enter marks for subject 5: 87

~~Enter your credits for subject 5: 3~~

Enter marks for subject 6: 86

Enter your credits for subject 6: 2

Enter marks for subject 7: 89

Enter your credits for subject 7: 2

Enter marks for subject 8: 95

~~Enter your credits for subject 8: 1~~

Name: Shreyas

USN: 1bm22cs286

SOPA: 9.3181818

19/12/23