

12/23

LAB Program - (2)

⇒ Develop a java prog to create a class Student with member usn, name, an array credits and an array marks. Include method to accept and display details and a method to calculate SGPA of a student.

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

```
import java.util.Scanner;
class subject
{
```

```
    int subjectMarks;
```

```
    int credits;
```

```
    int grade;
```

```
}
```

```
class student
```

```
{
```

```
    subject subject[8];
```

```
    String name;
```

```
    String usn;
```

```
    double sgpa = 0;
```

```
    Scanner s;
```

```
    student()
```

```
{
```

```
    int i;
```

```
    subject = new Subject[8];
```

```
    for (i = 0; i < 8; 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();
```

```
}
```

```
void getMarks()
```

```
{
```

```
    for (int i=0; i<8; 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 compute SGPA()
```

```
{
```

```
    int totalCredits = 0;
```

```
    for (int i=0; i<8; i++)
```

```
{
```

```
        sgpa += (subject[i].credits * subject[i].grade);
```

```
        totalCredits += subject[i].credits;
```

```
}
```

```
    sgpa = sgpa / totalCredits;
```

```
}
```

```
}
```


class main

{

public static void main(String args[])

{

student s1 = new student();

s1.getStudentsDetails();

s1.getMarks();

s1.computeSGPA();

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

System.out.println("Usn: " + s1.usn);

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

}

}

Output:-

Enter your Name

~~Shreyas~~ Shreyas

Enter your usn

IBN22CS271

Enter ~~marks~~ marks of subject 1

91

Enter credits of subject 1

4

Enter marks of subject 2

60

Enter ~~marks~~ credits of subject 2

4

Enter marks of subject 3

85

Enter credits of subject 3

3

Enter marks of subject 4

88

Enter credits of subject 4

3.

Enter marks of subject 5

81

Enter credits of subject 5

3.

Enter marks of subject 6

85

Enter ~~marks~~ ^{credits} of subject 6

1

Enter marks of subject 7

95

Enter credits of subject 7

1

Enter marks of subject 8

98

Enter credits of subject 8

1

Name: ~~Shreyas~~

USN: ~~IBM22CS271~~

SGPA: ~~9.4~~

26/12/23