

LAB - II

Date: 19/12/2023
CLASSMATE

Date _____
Page _____

(i) HSGPA & CGPA of Student.

```
import java.util.Scanner;
```

```
class Subject {
```

```
    int SubjectMarks;
```

```
    int credits;
```

```
    int grade;
```

```
}
```

```
class Student {
```

```
    String name;
```

```
    String USN;
```

```
    double SGPA;
```

```
    Subject[] subjects;
```

```
    Scanner scanner;
```

```
// constructor
```

```
Student() {
```

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

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

```
        subjects[i] = new Subject();
```

```
}
```

```
Scanner = new Scanner (System.in);
```

```
{
```

```
// method to get student details
```

```
void getStudentDetails() {
```

```
    System.out.println("Enter student  
name:");
```

```
    name = scanner.nextLine();
```

```
System.out.println("Enter student USN:");
```

```
USN = scanner.nextLine();
```

```
}
```

/* Method to get subject marks & credits

Void getMarks()

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

System.out.println("Enter marks for")

subject " + (i+1) + ":";

subjects[i].SubjectMarks = scanner.

nextInt();

System.out.println("Enter credits for")

subject " + (i+1) + ":";

subjects[i].Credits = scanner.nextInt();

/* calculate grade based on marks

if (subject[i].SubjectMarks >= 90) {

subjects[i].Grade = 10;

? else if (subjects[i].SubjectMarks >= 80)

{ subjects[i].Grade = 9;

? else if (subjects[i].SubjectMarks >= 70) {

subjects[i].Grade = 8;

? else if (subjects[i].SubjectMarks >= 60) {

subjects[i].Grade = 7;

? else if (subjects[i].SubjectMarks >= 50) {

{

subjects[i].Grade = 6;

? else if (subjects[i].SubjectMarks >= 40) {

subjects[i].Grade = 5;

? else {

subjects[i].Grade = 0;

}

}

// Method to compute SGPA

```
void computeSGPA() {
```

```
    double totalCredits = 0;
```

```
    double totalGradePoints = 0;
```

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

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

```
        totalGradePoints += subjects[i].grade;
```

```
* subjects[i].credits;
```

```
} // End of for loop
```

$$\text{SGPA} = \frac{\text{totalGradePoints}}{\text{totalCredits}}$$

```
public class Student {
```

```
S1 = new Student();
```

```
S1.getStudentDetails();
```

```
S1.getMarks();
```

```
S1.computeSGPA();
```

```
System.out.println("Student details")
```

```
System.out.println("Name: " + S1.name);
```

```
System.out.println("USN: " + S1.USN);
```

```
System.out.println("SGPA: " + S1.SGPA)
```

out put :-

Enter student name:

raghu

Enter student USN:

CS813

Enter Marks for Subject 1:

68

Enter credits for subject 1:

4

Enter Marks for Subject 2:

69

Enter credits for Subject 2:

4

Enter marks for Subject 3:

59

Enter credits for Subject 3:

3

Enter marks for Subject 4:

60

Enter credits for Subject 4:

3

Enter marks for Subject 5:

65

Enter credits for Subject 5:

3

Enter marks for Subject 6:

97

Enter credits for Subject 6:

1

Enter marks for Subject 7:

as

Enter credits for Subject 7:

1

Enter marks for Subject 8:

99

Enter credits for Subject 8:

1

Student Details:

Name : raghu

USN : C8213

SGPA : 7.3

19/12/23