

(Q) To Calculate the SGPA

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

```
class Student {
```

```
    private String usn;
```

```
    private String usnname;
```

```
    private int[] marks;
```

```
    private int[] credits;
```

```
    public Student() {
```

```
        usn = "";
```

```
        name = "";
```

```
    }
```

```
    public void acceptDetails () {
```

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

```
        System.out.print("Dishabh Kumar, 18MCE0221");
```

```
        System.out.print("Enter usn: ");
```

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

```
        System.out.print("Enter Name:");
```

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

```
        System.out.print("Enter number of subjects");
```

```
        int numSubjects = scanner.nextInt();
```

```
        credits = new int[numSubjects];
```

```
        marks = new int[numSubjects];
```

```

for (int i=0; i < credits.length; i++) {
    System.out.println("Subject" + (i+1) + "-credits"
        + credits[i] + "Marks:" + marks[i]);
}
}

```

```

{

```

```

}

```

```

public double calculate GPA () {

```

```

    double total credits = 0;

```

```

    double total GradePoints = 0;

```

```

    for (int i=0; i < credits.length; i++) {

```

```

        totalCredits += credits[i];

```

```

        totalGradePoints += calculateGradePoints(marks[i])
            * credits[i];

```

```

    return total GradePoints / totalCredits;

```

```

}

```

```

private double calculate GradePoints (int marks) {

```

```

    if (marks >= 90) {

```

```

        return 100;

```

```

    }

```

```

    else if (marks >= 80) {

```

```

        return 90;

```

```

    }

```

```

    else if (marks >= 70) {

```

```

        return 80;

```

```

    }

```

```

    else if (marks >= 60) {

```

```

        return 70;

```

```

    }

```

```

    else if (mark < 60) {
        return 3.0;
    }
    else {
        return 0.0;
    }
}
}

```

```

public class Main {

```

```

    public void main (String [] args) {

```

```

        Student student = new Student ();

```

```

        Student.accept Details ();

```

```

        Student.display Details ();

```

```

        double sgpa = Student.calculate SGPA ();

```

```

        System.out.println ("SGPA = " + sgpa);

```

```

    }

```

```

}

```

 19.12.22

Sample Output:

Rishabh, IBM22C8221

Enter USN: ABC123

Enter Name: John Doe

Enter no. of subjects: 3

Enter credits for Subject 1: 4

Enter marks for Subject 1: 85

Enter credits for subject 2: 3

Enter marks for subject 2: 25

Enter credits for subject 3: 5

Enter mark for subject 3: 90

SGPA: 8.43333333