

Title: Developing student CGPA and Grade Calculation using if else (java);

Program:

```
import java.util.Scanner;
public class CGPACalculator {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter student ID: ");
        String studentID = sc.nextLine();
        System.out.print("Enter number of courses: ");
        int n = sc.nextInt();
        double totalCredittaken = 0;
        double totalCreditEarned = 0;
        double totalGradePoints = 0;
        for (int i = 1; i <= n; i++) {
            System.out.println("In Course " + i + ":");
            System.out.print("Credit (Max 3): ");
            double credit = sc.nextDouble();
            System.out.print("Cr (Max 30): ");
            double ct = sc.nextDouble();
            System.out.print("AT (Max 10): ");
            double at = sc.nextDouble();
```

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System.out.print("FE (Max 60)!: ");  
double fe = sc.nextDouble();  
double totalMarks = cf + cd + fe;  
double gradePoint = 0.0;  
String grade = "";  
if (totalMarks >= 80) {  
    gradePoint = 9.0;  
    grade = "A+";  
} else if (totalMarks >= 75) {  
    gradePoint = 8.75;  
    grade = "A";  
} else if (totalMarks >= 70) {  
    gradePoint = 8.50;  
    grade = "A-";  
} else if (totalMarks >= 65) {  
    gradePoint = 8.25;  
    grade = "B+";  
} else if (totalMarks >= 55) {  
    gradePoint = 8.0;  
    grade = "B-";  
} else if (totalMarks >= 50) {  
    gradePoint = 7.5;  
    grade = "C+";  
}  
}
```

```
else if (totalMarks >= 50) {
    gradePoint = 2.5;
    grade = "B+";
} else if (totalMarks >= 45) {
    gradePoint = 2.25;
    grade = "C";
} else if (totalMarks >= 40) {
    gradePoint = 2.00;
    grade = "D";
}
else {
    gradePoint = 0.0;
    grade = "F";
}

totalCreditTaken += credit;
if (gradePoint > 0.0) totalCreditEarned += credit;
totalGradePoints += gradePoint * credit;

System.out.println("Total Marks: " + totalMarks +
    "\nGrade Point: " + gradePoint + "\nGrade: " + grade);

double cgpa = totalGradePoints / totalCreditTaken;

String finalGrade;
if (cgpa >= 4.0)
    finalGrade = "A+";
```

```
else if (cgpa >= 3.75)
    finalGrade = "A",
else if (cgpa >= 3.50)
    finalGrade = "A-",
else if (cgpa >= 3.25)
    finalGrade = "B+",
else if (cgpa >= 3.0)
    finalGrade = "B",
else if (cgpa >= 2.75)
    finalGrade = "B-",
else if (cgpa >= 2.50)
    finalGrade = "C+",
else if (cgpa >= 2.25)
    finalGrade = "C",
else if (cgpa >= 2.00)
    finalGrade = "D",
else
    finalGrade = "F",

System.out.println("\n == Result Summary == \n");
System.out.println("Student ID: " + studentID);
System.out.println("Credit Taken: " + totalCreditTaken);
System.out.println("Credit Earned: " + totalCreditEarned);
System.out.println("GPA: " + 2.2f, cgpa);
System.out.println("Grade : " + finalGrade);
sc.close()
```

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