

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("\n Course " + i + ":");
            System.out.print("Credit (Max 3): ");
            double credit = sc.nextDouble();
            System.out.print("Gr (Max 30): ");
            double cr = sc.nextDouble();
            System.out.print("AT (Max 10): ");
            double at = sc.nextDouble();
```

```

System.out.print("FE (Max 60)!" );
double fe = sc.nextDouble();
double totalMarcks = ct + at + fe;
double gradePoint = 0.0;
string grade = "";
if (totalMarcks >= 80) {
    gradePoint = 4.0;
    grade = "A+";
} else if (totalMarcks >= 75) {
    gradePoint = 3.75;
    grade = "A";
} else if (totalMarcks >= 70) {
    gradePoint = 3.50;
    grade = "A-";
} else if (totalMarcks >= 65) {
    gradePoint = 3.25;
    grade = "B+";
} else if (totalMarcks >= 55) {
    gradePoint = 3.0;
    grade = "B-";
} else if (totalMarcks >= 50) {
    gradePoint = 2.5;
    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 +
    " | Grade Point: " + gradePoint + " | Grade: " + 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: %.2f\n", cgpa);
System.out.println("Grade: " + finalGrade);
sc.close();
```

```
} }
```