import java.util.Scanner;

public class FinalMarks {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter number of students: ");

int n = sc.nextInt();

int[] midSemMarks = new int[n];

int[] endSemMarks = new int[n];

int[] finalMarks = new int[n];

String[] grades = new String[n];

// Input marks

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

System.out.print("Enter mid-semester marks for student " + (i + 1) + ": ");

midSemMarks[i] = sc.nextInt();

midSemMarks[i] = (int) Math.round(((double) midSemMarks[i] / 100) \* 30);

System.out.print("Enter end-of-semester marks for student " + (i + 1) + ": ");

endSemMarks[i] = sc.nextInt();

endSemMarks[i] = (int) Math.round(((double) endSemMarks[i] / 100) \* 70);

}

// Calculate final marks

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

finalMarks[i] = midSemMarks[i] + endSemMarks[i];

}

// Determine grades

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

if (finalMarks[i] >= 70) {

grades[i] = "A";

} else if (finalMarks[i] >= 60) {

grades[i] = "B";

} else if (finalMarks[i] >= 50) {

grades[i] = "C";

} else if (finalMarks[i] >= 40) {

grades[i] = "D";

} else {

grades[i] = "F";

}

}

// Print results

System.out.println("\nFinal Marks and Grades");

System.out.println("=====================");

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

System.out.println("Student " + (i + 1) + ": " + finalMarks[i] + " (" + grades[i] + ")");

}

}

}