ECE 175: Computer Programming for Engineering Applications

Lab Assignment #1

Relevant Programming Concepts:

- Data type declaration and initialization
- Input/Output functions
- Control structures – conditional branching

Problem 1: Write a C program that reads three integers *x*, *y*, *z* from the keyboard and displays the largest integer.

Sample Output:

Enter three integers: 2 21 5

Max integer = 21

Test values: (1, 2, 5) (5, -3, 3) (0, 3, 1) (2, 2, 2)

Problem 2: Write a C program that reads the numeric grade of a student and converts it to a letter grade. The grade conversion should be based on the following table:

Numeric Grade	Letter Grade
[3.5-4.0]	A
[2.5-3.5)	B
[1.5-2.5)	C
[0.5-1.5)	D
[0.0-0.5)	F

Sample Output:

Enter your numeric grade: 3.7

Your letter grade is: A

Test values: (0.2) (1.5) (2.7), (3.8) (4.0), (4.5) (-2.0)

Problem 3: In a course exam, each test is graded by two graders. If the difference of their grades is less than x, the final grade is their average. Otherwise, the test is reviewed by a third grader, as follows:

a) If the grade of the third reviewer is equal to the average of the first two grades, that is the final grade.
b) If it is less than the minimum (e.g., min) of the first two grades, the final grade is min.
c) Otherwise, the final grade is the average of the grade of the third reviewer and the one of the first two grades closest to it.

Write a program that reads the two grades and the difference x and displays the final grade according to that procedure

Sample Output:

Enter the grades by the two graders: 85 88
Enter the maximum difference between the two grades: 5
The final grade is 86.5

//condition a
Enter the grades by the two graders: 80 88
Enter the maximum difference between the two grades: 5
Enter the grade of the third grader: 84
The final grade is 84

//condition c
Enter the grades by the two graders: 80 88
Enter the maximum difference between the two grades: 5
Enter the grade of the third grader: 82
The final grade is 81

//condition b
Enter the grades by the two graders: 80 88
Enter the maximum difference between the two grades: 5
Enter the grade of the third grader: 78
The final grade is 80