Name: _____ Date of demonstration: _____ Marks earned: /5

LAB 5 (Due by 10 AM on October 14)

Maximum Points: 5, Weight: 5%

Pre-requisites: Readings assigned thus far have been completed. Notes taken during lectures have been reviewed.

To complete the lab, please follow the instructions below. Not following these instructions may result in deduction of marks.

1. To receive any credit, you need to:
    a. Demonstrate your work during the week 7 lab; Please print this handout, write your name and date of demonstration, and bring the printout with you for demonstration;
    b. Upload your work to eConestoga as instructed in step 2 by the deadline.
2. Once you complete this lab, add weekly status report to the Visual Studio solution folder. Compress the entire solution folder to create a file with ".zip" extension. Upload the "zip" file to the appropriate assignment folder on eConestoga. You will not receive any credit if you fail to upload this file, even if you have finished and demonstrated your work. No credit is awarded without demonstration.
3. At the top of each C file, add your name and date of program creation.
4. Any variables or functions you create must be named following "camelCase" notation. Variables must be initialized before use. In case of multiple variables, define only one variable per line.
5. Write a C program to:

    a. [0.5 points] Prompt the user to enter letter grades for five courses. Store these values in a char array.

    b. [0.5 points] Prompt the user to enter hours for each of the five courses. Store the hours in a char array.

    c. [4 points] Using these two arrays and the functions described below, calculate grade point average (gpa).

    Use the following formula for calculating gpa:

$$\mathbf{gpa = (\Sigma(gradePoints * hours))/(\Sigma hours)}$$

In the formula above, **gradePoints** refers to grade points received in a course and **hours** refers to hours for that course. For example, for PROG1955, the hours would equal to 5 and grade points will depend on the grade received. For this program, use the following table to find grade points corresponding to a received grade:

Grade	Grade Points
A	4.0
B	3.0
C	2.0
D	1.0
F	0

For example, if you wanted to find gpa for two courses in which grades were ‘A’ and ‘B’ respectively and hours were 5 and 4 respectively, the gpa would be ((4.0*5)+(3.0*4))/(5+4). Your program must use functions with the following prototypes:

float Gpa(char grades[], char hours[], int arrLength);

float GradePoints(char grade);

Please be prepared to answer any questions during the demo. You are expected to correctly understand your programs. Any lack of understanding may result in deduction of points.