Assignment #3 – Arrays, Loops, and Conditionals CS 218 Fall 2020

Purpose: This assignment will cover the use of loops and conditional code created from jump instructions to work with arrays.

To begin, download the data.txt file, it contains two lists of 50 unsigned integer values from 1 to 9999. You will need to copy these values into your program.

For this program, no template file is provided, you must make the assembly source code from scratch.

Program Specifications
The program will need to calculate the averaged values between each array.

For each element i in the lists:

$$List3[i] = \frac{List1[i] + List2[i]}{2}$$

In addition, for the calculated values, the program must determine the **minimum** value, the **maximum** value, the count of **odd values**, the count of **even values**, the **sum** and the integer **average**.

The lists of values must be stored as double words. The calculated list must be declared in the bss section.
The sum must be stored as a quad word.
The minimum, maximum, and average must be stored as double words.
The odd and even counts must be stored as bytes.
The length of the lists must be defined as a constant and used within the program.

Submission
Once you are satisfied with the program, upload the assembly source code (.asm) file to the class website.