CSC 3210 – Assignment #3
Spring 2024
Due: Friday, April 12th 2024

Practice with memory access, conditional statements, loops. All of these should be done in Visual Studio.

1. **(5 points) Write an assembly program that does the following:**
   - Define the following 32-bit value **04080102h** in the .data segment, using a 32-bit unsigned variable named dVal.
   - Consider the 4 bytes that make up dVal: 04, 08, 01, 02
   - **Extract these bytes from dVal using the OFFSET and PTR operators.**
   - Find the **sum** of the bytes. The sum should be 0Fh.
   - Store the result in any 8-bit register.
   - >=
     - **Submit the following:**
       - Submit the asm file using your last name and question number as Lastname_1.asm
       - Screenshot of the code
       - Screenshot of Register window, showing the result in a 8-bit register.

2. **(5 points) Consider the following code:**

```
if (var1 > var2) OR (var3 < var2){
    var1 = var2 + var3;
    var2++;
    var3++;
}
else{
   var1--;
   var2--;
   var3--;
}
```

Here `var1, var2` and `var3` are DWORD variables.

`var1` is initialized with 10(decimal),
`var2` is initialized with 11 (decimal),
and `var3` is initialized with 12 (decimal).

Implement the above code in Assembly (MASM).

Hint:
Check the slides for reference.
You will be implementing the logic of this `if-else statement` with a compound condition.

Submit the following:
- Submit the asm file using your last name and question number as Lastname_2.asm
- Also submit a screenshot of the code