

# Homework – Add four memory locations and subtract the fifth

This is a programming assignment that will be graded and scored as a homework since it is so simple.

Write a program for the LC3. This program should be named ***hwAdd5Mem.hex***. This hex file will be a machine language program for the LC3 processor.

**This program will be written as an ASCII hex file.**

**DON'T TRY TO ASSEMBLE IT WITH AN LC3 ASSEMBLER.**

The hex file must contain only hex characters; 0-9 and A-F with no x, X, 0x, or 0X.

Each line should be a four digit hex number. Do not include a 0x or x at the beginning of this number.

The first line should be the starting address in memory, use 3000 to be safe.

The last line should be a halt (F025)

The lines between the first and last line should do the following:

Add the values from memory locations 0x3080, 0x3081, 0x3082, and 0x3083. Subtract the value stored in 0x3084. Store the sum in memory location 0x3085

**Write your program in assembly. Convert it manually to hex. Put the hex in hwAdd5Mem.hex.**

Test your program using the simulator. Make sure to test with numbers OTHER than the ones we discussed in class.

Do not submit a program that somehow stores values in 0x0x3080, 0x3081, 0x3082, 0x3083, and 0x3084. Doing this will work for testing but will overwrite the test values that my testing software inserts. You have been warned.

Submit your hwAdd5Mem.hex file to Web-CAT. Make sure you didn't name it hwAdd5Mem.txt or that Notepad or WordPad didn't rename it hwAdd5Mem.hex.txt.

NOTE: You will lose 1 point for every submission over 5. You will lose 10 points for each day late. Submitting more than 2 days late will result in a zero.

Note that late days start at 9:00 am. So submitting after 9:00 am on the due date will result in -10 points. Submitting after 9:00 am on the day after that will result in an additional -10 points. You will not be able to submit after 9:00 am on the day after that.