

Homework – Print big value then small value.

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 **hwBigSmall.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 **MUST** 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). Although you can put some data after halt if you want.

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

Get two characters from the user.

Print the one that has the biggest ASCII value first, then the other.

For example:

If 5 and 6 are entered, print 65.

If 6 and 5 are entered, print 65.

if A and X are entered, print XA.

if X and A are entered, print XA.

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

Test your program using the simulator. Make sure to test with all possible values for R1.

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

One possible algorithm:

```
Get first character
Get second character
if (first > second)
{
    print first
    print second
}
else
{
    print second
    print first
}
```