

QUIZ #02
CSCI-410
40pts (+5pt EC)

DIRECTIONS

Write Hack assembly language routines for each of the following tasks. Save the code for each task in the file with the indicated name.

In each case, the data to be manipulated is located at memory location 0. The final value after the operation is performed must be placed in memory location 0.

For functions with a variable shift/rotate amount, the amount by which to shift/rotate, referred to as n , is located at memory location 1. There is no requirement to preserve this value.

For all but the `shiftn.asm` and `rotaten.asm`, the value n (stored in location 1) is an unsigned integer value. For `shiftn.asm` and `rotaten.asm`, the amount is a signed integer which indicates an operation to the left if positive and to the right if negative.

You may use memory locations 11 through 15 for any purpose you choose. All other memory locations must be left alone.

FILE NAME	PTS	DESCRIPTION
<code>sll1.asm</code>	3	Logical Shift Left by 1
<code>slr1.asm</code>	3	Logical Shift Right by 1
<code>sar1.asm</code>	3	Arithmetic Shift Right by 1
<code>rotl1.asm</code>	3	Rotate Left by 1
<code>rotr1.asm</code>	3	Rotate Right by 1
<code>slln.asm</code>	4	Logical Shift Left by n
<code>slrn.asm</code>	4	Logical Shift Right by n
<code>sarn.asm</code>	4	Arithmetic Shift Right by n
<code>rotln.asm</code>	4	Rotate Left by n
<code>rotrn.asm</code>	4	Rotate Right by n
<code>shiftn.asm</code>	5	Shift by n (Left if $n > 0$, Right if $n < 0$)
<code>rotaten.asm</code>	5	Rotate by n (Left if $n > 0$, Right if $n < 0$)

SUBMISSION

Submit this code in a manner analogous to how ECS and PY assignments are submitted. Place all of the files in a directory named `QZ02` and Zip up the entire directory into a Zip file named `CS410_UserID_QZ_02.zip` and submit to Blackboard.