

Hack Assembly Language

A-Instruction

@<value>	Loads <value> into the A register
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C-Instructions

<dest>=<comp>	puts the result of the computation into <dest>
<dest>=<comp>;<jmp>	puts the result of the computation into <dest> and does a jump based on the result of the computation
<comp>	does a computation without storing the result
<comp>;<jmp>	does a computation and jumps based on the result of the computation

Dest can be:	Comp can be:	
null	0	D-1
M	1	A-1
D	-1	M-1
MD	D	D+A
A	A	D+M
AM	M	D-A
AD	!D	D-M
AMD	!A	A-D
	!M	M-D
	D+1	D&A
	A+1	D&M
	M+1	D A
		D M

Jmp can be:	
null	No jump
JGT	Jump if result > 0
JEQ	Jump if result = 0
JGE	Jump if result >= 0
JLT	Jump if result < 0
JNE	Jump if result <> 0
JLE	Jump if result <= 0
JMP	Jump no matter what the result is