Assembly programmer's model of a computer

(All registers and memory locations are 4 bytes wide)

	Register bank			Stack		Data memory
R0		A1	0x1074	caller-LR	0x007C	
R1		A2	0x1070			
R2		A3	0x106C			
R3	0x0006	A4	0x1068		↓	
R4	caller-R4	V1	0x1064			
R5		V2	0x1060			
R6		V3	0x105C			
R7		V4/WR				
R8		V5				
R9		V6/SB				
R10		V7/SL				
R11		V8/FP				
R12		IP :				
R13	0x1070	SP				
R14	caller-LR	LR				
R15	0x000F	PC				
		-				
0000		י י				
CSPR		j				
		_				
					_	
0	0 0	0				
N	Z C	<u></u>				
ın		1				
IR		J			0x000C	1
MAR]	0x1000		0x0008	
					0x0004	
MDR]			0x0000	0x0006

Processor core

Memory hierarchy

COMMENTS:

Compares 0x0006 to the immediate value of #0 by subtracting #0 from 0x0006 but doesn't update any flags because the resultant is not zero, negative, carry or an overflow