# Homework6

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## 6.3

Since the x4001 may correctly indirect which mechine is busy, we CAN'T just add to x4001, while using OR operation to make it.

x3000 1010 000 000001111; LDI R0, S

x3001 1010 001 000001101; LDI R1, I

x3002 0101 010 010 1 00000; AND R2, R2, #0

x3003 0001 010 010 1 00001; ADD R2, R2, #1

x3004 0001 001 001 1 11111; Loop ADD R1, R1, #-1

x3005 0000 100 000000010; BRz Decrement

x3006 0001 010 010 0 00 010; ADD R2, R2, R2

x3007 0000 111 111111100; BRz Loop

x3008 0001 001 010 1 00000; Decement ADD R1, R2, #0

x3009 1001 000 000 111111; NOT R0, R0

x300a 1001 001 001 111111; NOT R1, R1

x300b 0101 000 000 0 00001; AND R0, R0, R1

x300c 1001 000 000 111111; NOT R0, R0

x300d 1011 000000000001; STI R0, S

x300e 1111 000000100101; TRAP x25

x300f 0100000000000000; I .FILL x4000

x300e 0100000000000001; S .FILL x4001

## 7.4

| Symbol | Address |
|--------|---------|
| TEST   | x301F   |
| FINSH  | x3027   |
| SAVE3  | x3029   |
| SAVE2  | x302A   |

## 7.18

(a) LDR R3, R1, #0

(b) NOT R3, R3

(c) ADD R3, R3, #1

## 7.20

In program(a), the value will be stored when the program runs, while program(b) will store the vaule once the object module is loaded into Memory.