0011000000000000 ;Start the program at x3000

0101010010100000 ;clear R2

0101011011100000 ;clear R3

0101100100100000 ;clear R4

0101101101100000 ;clear R5

0101110110100000 ;clear R6

0010000001001010 ;load mem[x3050] into R0

0010001001001010 ;load mem[x3051] into R1

1001010000111111 ;Not R0 store into R2

1001011001111111 ;Not R1 store into R3

0101100010000011 ;And R2 with R3, store into R4

1001100100111111 ;Not R4

0011100001000110 ;Store R4 into mem[x3052], OR result

0101100100100000 ;clear R4

0101101011000000 ;And R3 and R0, store into R5

0101110001000010 ;And R1 and R2, store into R6

1001101101111111 ;Not R5

1001110110111111 ;Not R6

0101100101000110 ;And R5 with R6, store into R4

1001100100111111 ;Not R4

0011100000111111 ;Store R4 into mem[x3053]

1111000000100101 ;HALT