0011000000000000 ;Start the program at x3000

0010001001001111 ;Load mem[x3050] into R1

0010011001010001 ;Load mask val from mem[x3053] into R3

0101100100100000 ;Clear R4

0010010001001101 ;Load mem[x3051] into R2

1001010010111111 ;Not R2

0001010010100001 ;Add #1 to R2

0001010010101111 ;Add #15 to R2

0000100000001000 ;goto x3010 , BRn

0101100001000011 ;Mask R1 with R3, store into R4

0000010000000011 ;goto x300D ,BRz

0001001001000001 ;Add R1 with R1

0001001001100001 ;Add #1 to R1

0000111000000001 ;goto x300E, BRnzp

0001001001000001 ;Add R1 with R1

0001010010111111 ;Decrement R2

0000111111110111 ;goto x3007, BRnzp

0011001001000001 ;Store R1 to mem[x3052]

1111000000100101 ;HALT