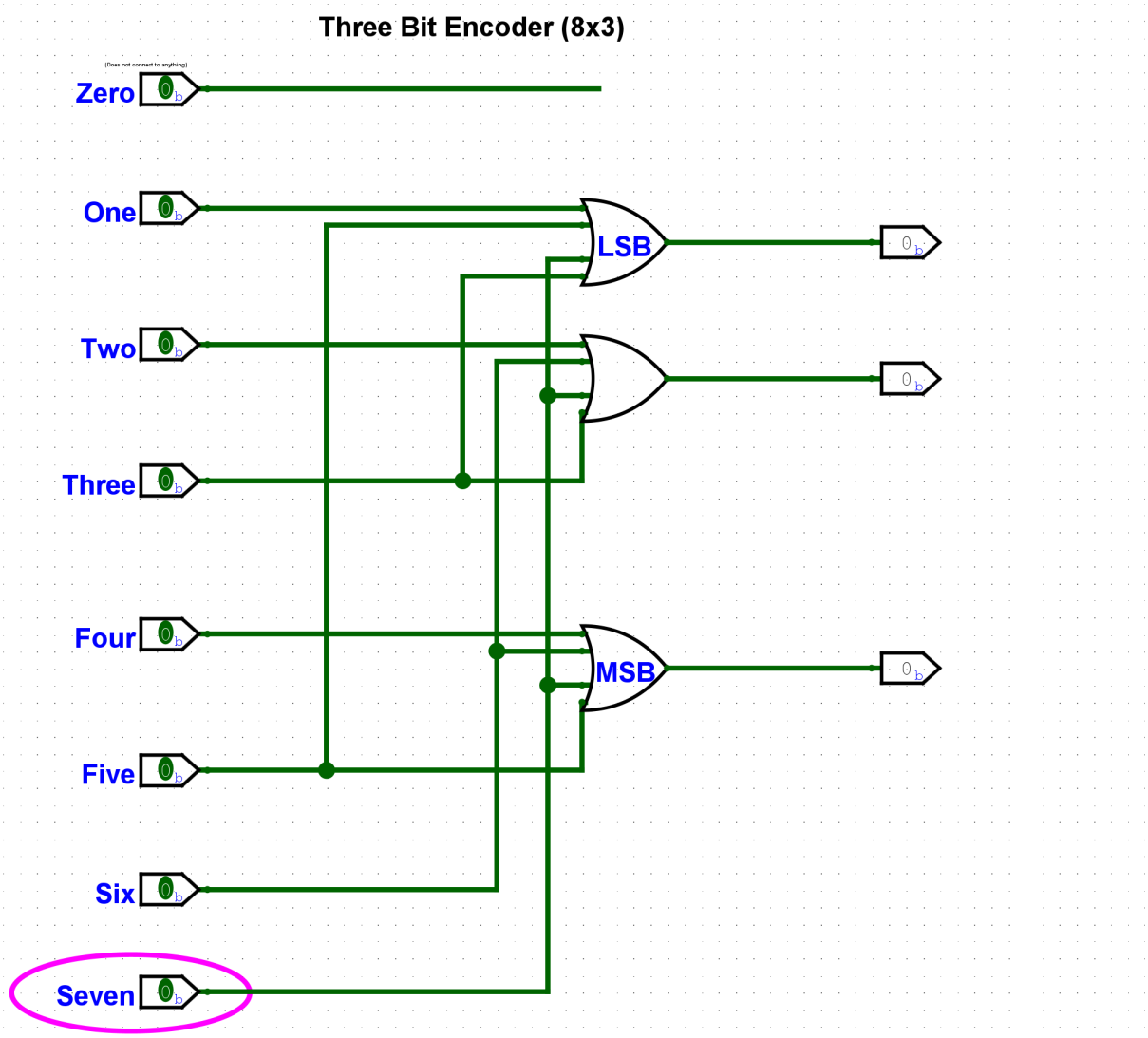

The encoder converts decimal representation of numbers, into binary. It does this by using OR gates. Think about how you count in binary, 1 in binary is 001, two is 010, three is 011. Thats how you want to connect the inputs to the gates. The three input connect to the LSB OR gate, and the middle OR gate, and so on. An encoder takes 2^n inputs and returns n inputs. There is also a 2^2 bit encoder in the folder as well.

8x3 encoder truth table

Inputs								Outputs		
I_7	I_6	I_5	I_4	I_3	I_2	I_1	I_0	O_2	O_1	O_0
0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	1	0	0	0	1
0	0	0	0	0	1	0	0	0	1	0
0	0	0	0	1	0	0	0	0	1	1
0	0	0	1	0	0	0	0	1	0	0
0	0	1	0	0	0	0	0	1	0	1
0	1	0	0	0	0	0	0	1	1	0
1	0	0	0	0	0	0	0	1	1	1