

3.38 Memory address means the location in memory, memory's addressability is the number of bits in each location.

3.40 (a) 4 locations (b) 4 bits (c) 0001

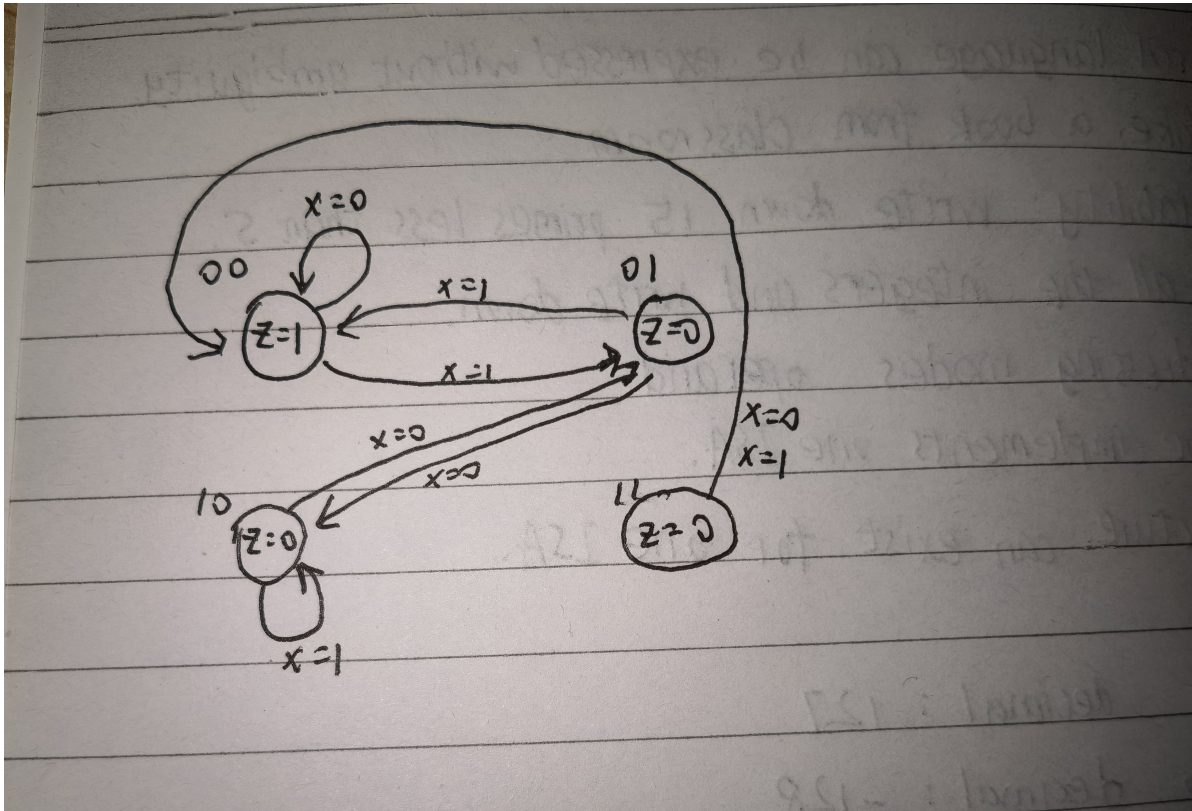
3.53

cycle	0	1	2	3	4	5	6	7
D2	0	1	1	1	1	0	0	0
D1	0	1	1	0	0	1	1	0
D0	0	1	0	1	0	1	0	1

3.61 (a)

S1	S0	X	Z	S1'	S0'
0	0	0	1	0	0
0	0	1	1	0	1
0	1	0	0	1	0
0	1	1	0	0	0
1	0	0	0	0	1
1	0	1	0	1	0
1	1	0	0	0	0
1	1	1	0	0	0

(b)



4.1 Memory: Store the information.

Processing Unit: Computation/Processing of Information.

Input: Getting information into the computer.

Output: Getting information out of the computer.

Control Unit: Makes sure that all the other parts perform their tasks correctly and at the correct time.

4.7 the number of bits for IMM is $32-6-5-5=16$

the range is $[-2^{15}, 2^{15}-1]$