0	I_0
1	I_1

* Practice Questions.

1.

Sun(S)	Ants(A)	HB(H)	LB(L)	E
0	0	0	0	0
0	0	0	1	0
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

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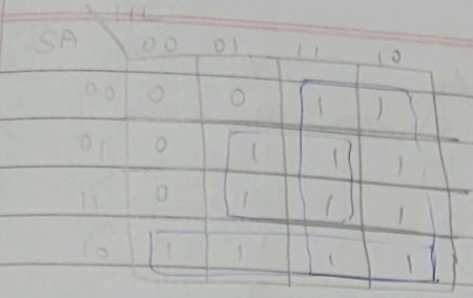

$E = H + AL + S\bar{A}$

2. Already done in prev. Assignment.

3

A_7	A_6	A_5	A_4	A_3	A_2	A_1	A_0	Y_2	Y_1	Y_0	None
0	0	0	0	0	0	0	0	0	0	0	1
							1	0	0	0	0
						1		0	0	1	0
					1			0	1	0	0
				1				1	0	1	0
			1					1	1	0	0
		1						1	1	1	0
	1										

4.

A_2	A_1	A_0	Y_6	Y_5	Y_4	Y_3	Y_2	Y_1	Y_0
0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	1
0	1	0	0	0	0	0	1	1	1
0	1	1	0	0	1	1	1	1	1
1	0	0	1	1	1	1	1	1	1

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6.

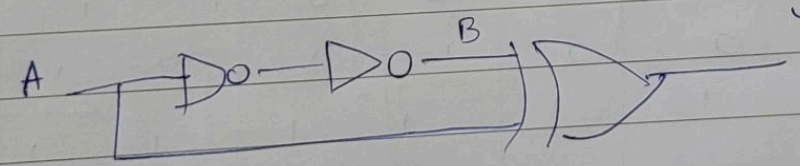
A_3	A_2	A_1	A_0	Y
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	0
0	1	1	1	1
1	0	0	0	0
1	0	0	1	1
1	0	1	0	0
1	0	1	1	1
1	1	0	0	1

$$Y = \bar{A_2}\bar{A_1}A_0 + \bar{A_3}\bar{A_2}A_1A_0 + \bar{A_3}A_2\bar{A_1}A_0 + \bar{A_3}A_2A_1\bar{A_0}$$

7.

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

XOR



edge detector

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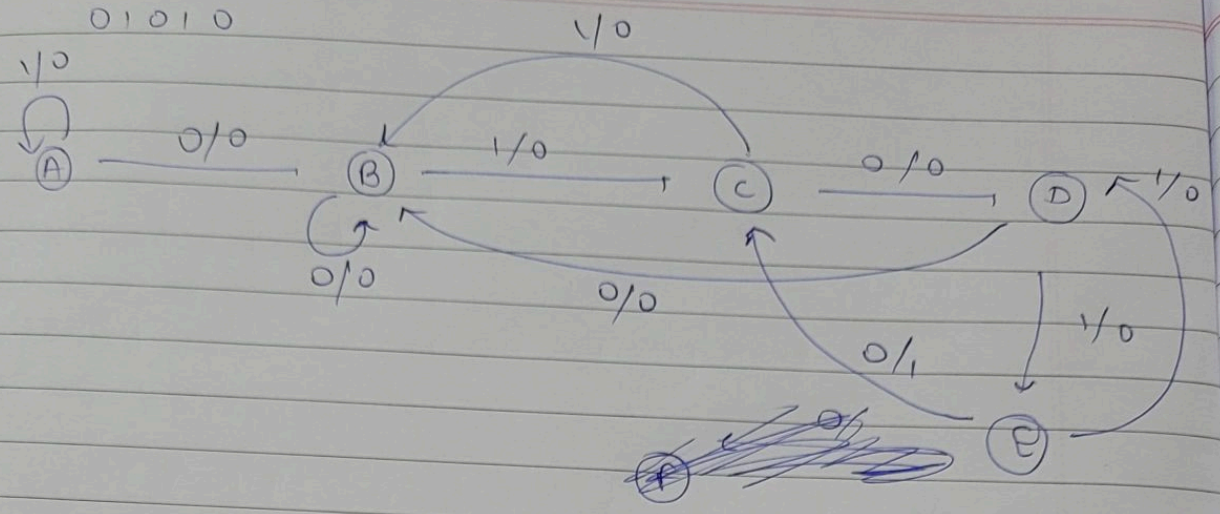
0/00

9. 01010



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0	I_0
1	I_1

* Practice Questions.

1.

Sun(S)	Ants(A)	HB(H)	LB(L)	E
0	0	0	0	0
0	0	0	1	0
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	

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