

CIS 351 Sample SL4 Problem Solutions

Thu 6th Jan, 2022

SL4: Tracing Sequential Circuits

(a) Complete the characteristic table for the circuit shown below.

Current state			Next State	
B	A_0	A_1	A_0	A_1
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	0	0
1	0	0	1	0
1	0	1	1	1
1	1	0	0	1
1	1	1	0	0

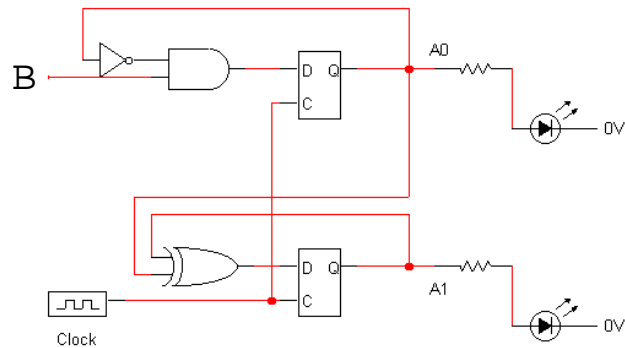


Figure 3-4

(b) Now complete the following timing diagram. Again, remember that the flip-flops are positive-edge triggered. This means that A_0 and A_1 will change **only** when the clock rises from 0 to 1!

