

CIS 351 Sample SL4 Problem

06 January 2022

SL4: Tracing Sequential Circuits

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

Current state			Next State	
<i>B</i>	<i>A</i> ₀	<i>A</i> ₁	<i>A</i> ₀	<i>A</i> ₁
0	0	0		
0	0	1		
0	1	0		
0	1	1		
1	0	0		
1	0	1		
1	1	0		
1	1	1		

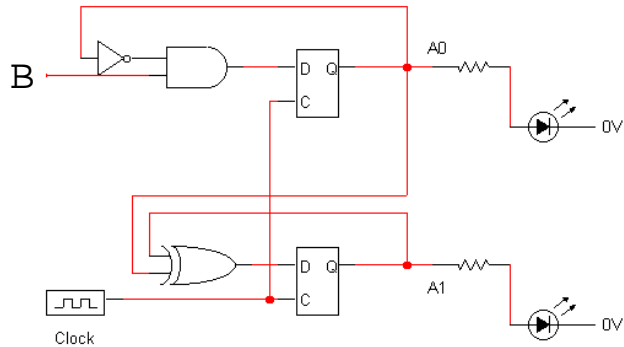


Figure 3-4

(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!

