13.2 Finite-State Machines with Output

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Draw the state diagrams for the finite-state machines with these state tables.

a)

State	Input	
	0	1
s_0	$s_1, 0$	$s_0, 1$
s_1	$s_0, 0$	$s_2, 1$
s_2	$s_1, 0$	$s_1, 0$

b)

State	Input	
	0	1
s_0	$s_1, 0$	$s_0, 0$
s_1	$s_2, 1$	$s_0, 1$
s_2	$s_0, 0$	$s_3, 1$
s_3	$s_1, 1$	$s_2, 0$

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Find the output generated from the input string 01110 for the finite-state machine with the state table in

a) Exercise 1(a).

b) Exercise 1(b).

Lecture Notes 25 Exercise

Construct a finite-state machine with output that produces a 1 if and only if the last 3 input bits read are 0s.

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Construct a finite-state machine that delays an input string two bits, giving 00 as the first two bits of output.