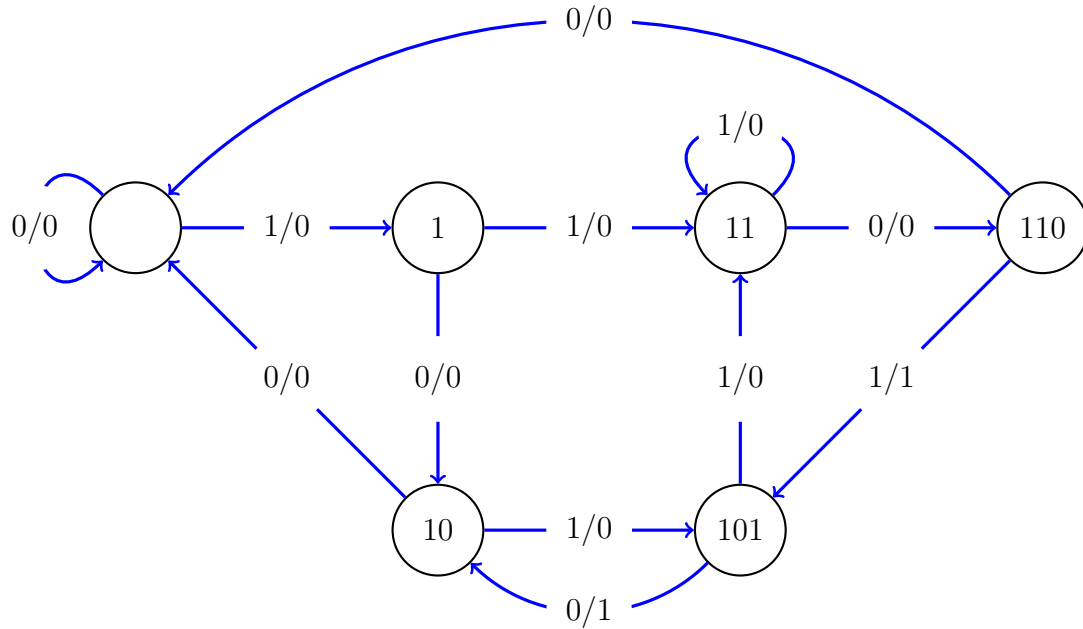


Group Homework 9

G2 - Robert Krenzy, Austin Pringle, Anthony Stepich

November 8, 2021

- Minimal State Diagram with output of 1 when sequences 1010 or 1101 are detected; overlapping allowed.



- Minimal State Table for the above sequence detector, beginning with state A.

	$X = 0$	$X = 1$
P	NS,z	NS,z
A	A,0	B,0
B	EH,0	C,0
C	D,0	C,0
D	A,0	FG,1
EH	A,0	FG,0
FG	EH,1	C,0

3. Transition Table

P	abc	$X = 0$	$X = 1$	$X = 0$				$X = 0$			
		NS,z	NS,z	Ja	Ka	Jb	Kb	Ja	Ka	Jb	Kb
A	000	000,0	001,0								
B	001	100,0	010,0								
C	010	011,0	010,0								
D	011	000,0	101,1								
EH	100	000,0	101,0								
FG	101	100,1	010,0								
	110	xxx,x	xxx,x								
	111	xxx,x	xxx,x								