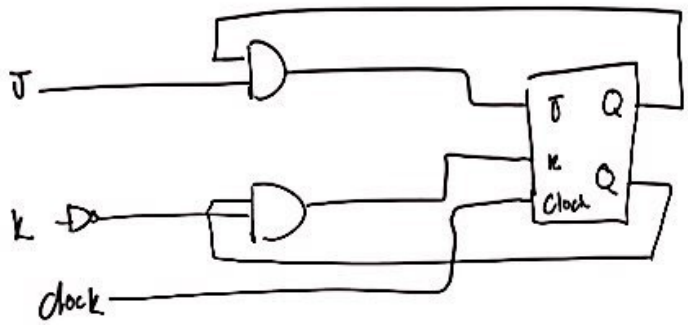
(b) J' and K' in the table you just completed are functions of T' (the input) and Q' (present state). This is a small state machine. Write the MSOP forms for J' and K'. You may minimize to MSOP format any way you see fit.

MSOP $J(T', Q') = T^b Q^b (m_2)$

MSOP $K(T', Q') = \overline{T^b} Q^b (m_1)$

(c) Sketch a schematic for this state machine showing the combinational logic for inputs J', K' and also the JK FF with Q output. Draw by hand or use Logisim to sketch your circuit schematic.

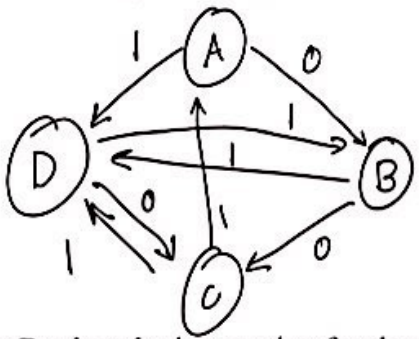


3. You are provided the following state table (assume 1-bit output z; state assignments in parentheses):

	x	
	0	1
A (00)	D/1	B/0
B (01)	D/1	C/0
C (10)	D/1	A/0
D (11)	B/1	C/0

(a) Construct a state diagram for the state table shown.

represent Z



(b) What is the Boolean logic equation for the output variable z?

$Z = \overline{X}$