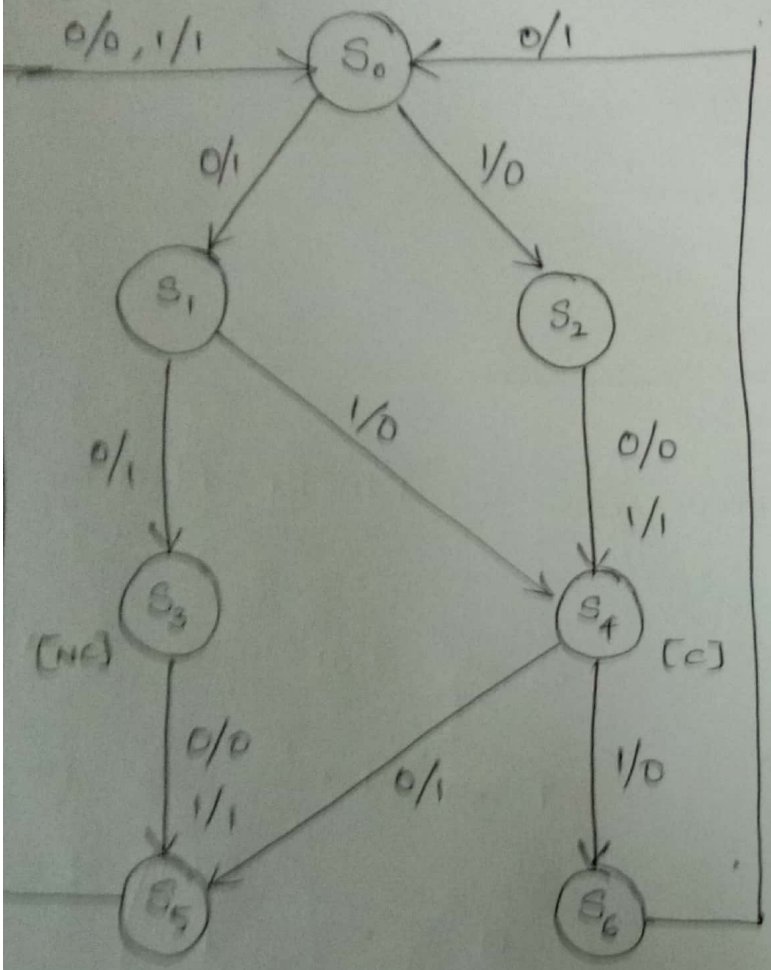
TUESDAY

BCD - Excess - 3.

ealy machine.



⇒ N → No. of states implies $\lceil \log_2 N \rceil$ No. of state variable.

⇒ 7 states → 3 state variables

$Q_1\ Q_2\ Q_3$

$S_0 \rightarrow 0\ 0\ 0$

$S_1 \rightarrow 0\ 0\ 1$

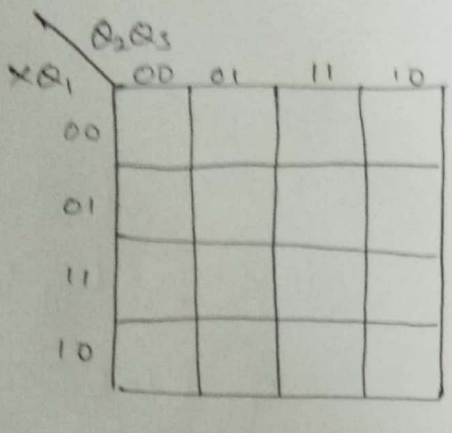
⋮

$S_6 \rightarrow 1\ 1\ 0$

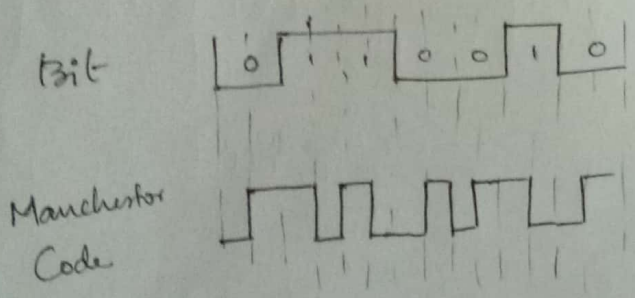
Present State	Next State		Output	
	x = 0	x = 1	x = 0	x = 1
$S_0 \rightarrow 000$	S_1 001	S_2 010	1	0
$S_1 \rightarrow 001$	S_3 011	S_4 100	1	0
$S_2 \rightarrow 010$	S_4 100	S_4 100	0	1
$S_3 \rightarrow 011$	S_5 101	S_5 101	0	1
$S_4 \rightarrow 100$	S_5 101	S_6 110	1	0
$S_5 \rightarrow 101$	S_6 000	S_6 000		

A → input. K-maps can be used to get the equations for each state variables and output.

(NEXT)

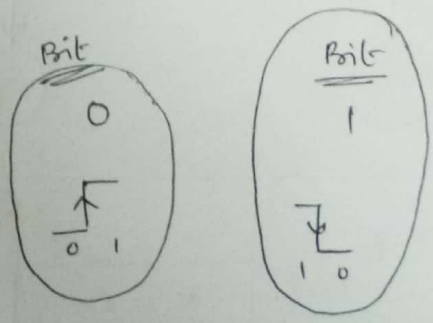


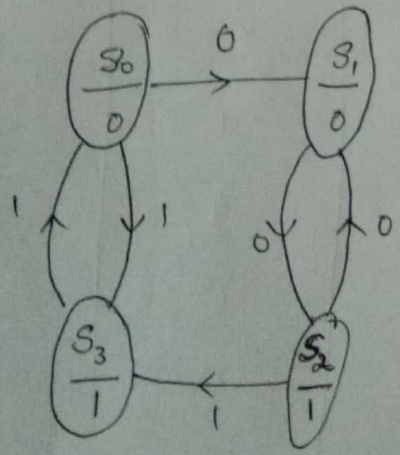
NRZ → Manchester code conversion — MOORE Machine



0 ⇒ "00" → 01

1 ⇒ "11" → 10





Present State	A B	Next State X = 0	Next State X = 1	O/P
		$A^+ B^+$	$A^+ B^+$	
S_0	0 0	S_1 0 1	S_3 1 1	0
S_1	0 1	S_2 1 0	— x x	0
S_2	1 0	S_1 0 1	S_3 1 1	1
S_3	1 1	— x x	S_0 0 0	1