

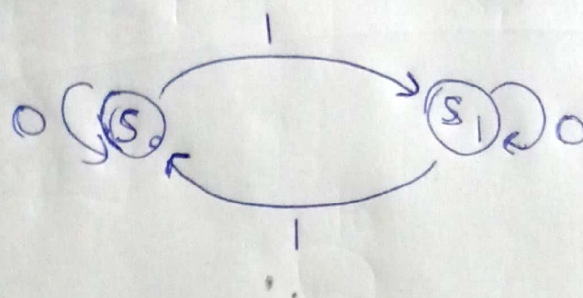
Excitation Table

$$S_0 = 0$$

$$S_1 = 1$$

PS (Previous State)	I/p (y)	NS (Next State)
0	0	0
0	1	1
1	0	1
1	1	0

State Diagram



Transition and Output Table

PS	NS	
	y	
0	0	1
	0	1
1	1	0

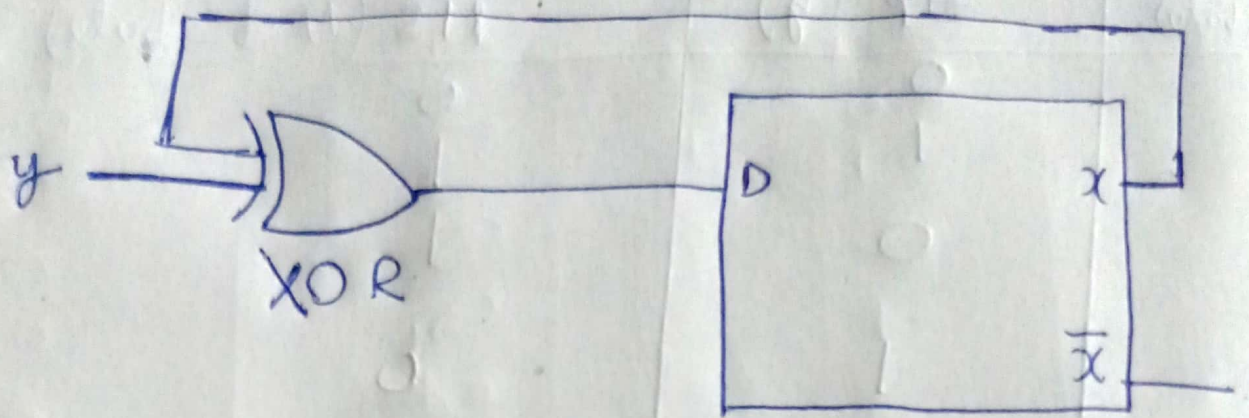
K-Map

① NS

y \ PS(x)	0	1
0	0	1
1	1	0

$$x_{NS} = \bar{y}x + y\bar{x}$$

[Circuitry on Logic Diagram]



$x \rightarrow$ State
 $y \rightarrow$ Input