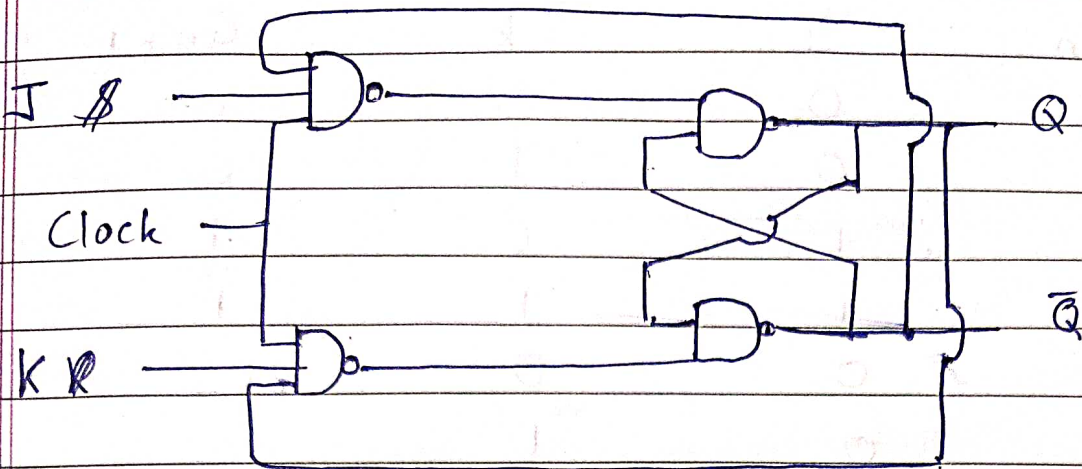


J.k flip flop



Clk = 0 Memory.

Clk = 1 J = 1, k = 0, Q = 1, $\bar{Q} = 0$

Clk = 1 J = 0, k = 1, Q = 0, $\bar{Q} = 1$

In Jk and SR only last step vary when
J = k = 1

Clk	J	K	Q	\bar{Q}	
X	0	0	1	0	} Memory.
X	0	0	0	1	
1	0	1	1	0	} Reset Q = 0
X	0	1	0	1	
1	1	0	0	1	} Set Q = 1
X	1	0	1	0	
1	1	1	0	1	} toggle.
1	1	1	1	0	

Characteristic table & eqⁿ

Q _n	J	k	Q _{n+1}
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	0

		Jk			
		00	01	11	10
Q _n	0			1	1
	1	1			1

$$Q_{n+1} = \overline{Q}_n \cdot J + Q_n \overline{k}$$

Excitation table

Q _n	Q _{n+1}	J	k
0	0	0	X
0	1	1	X
1	0	X	1
1	1	X	0