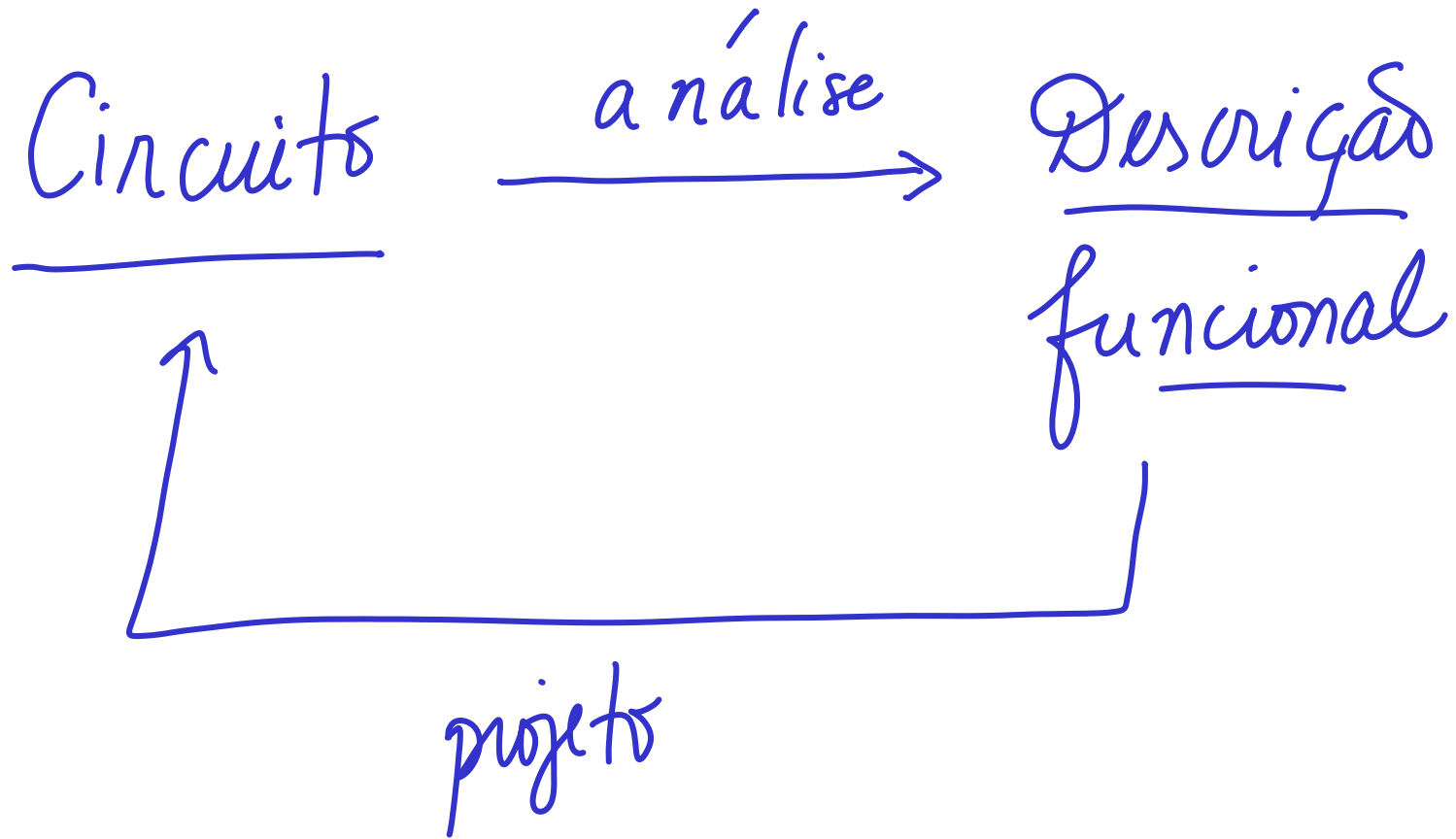
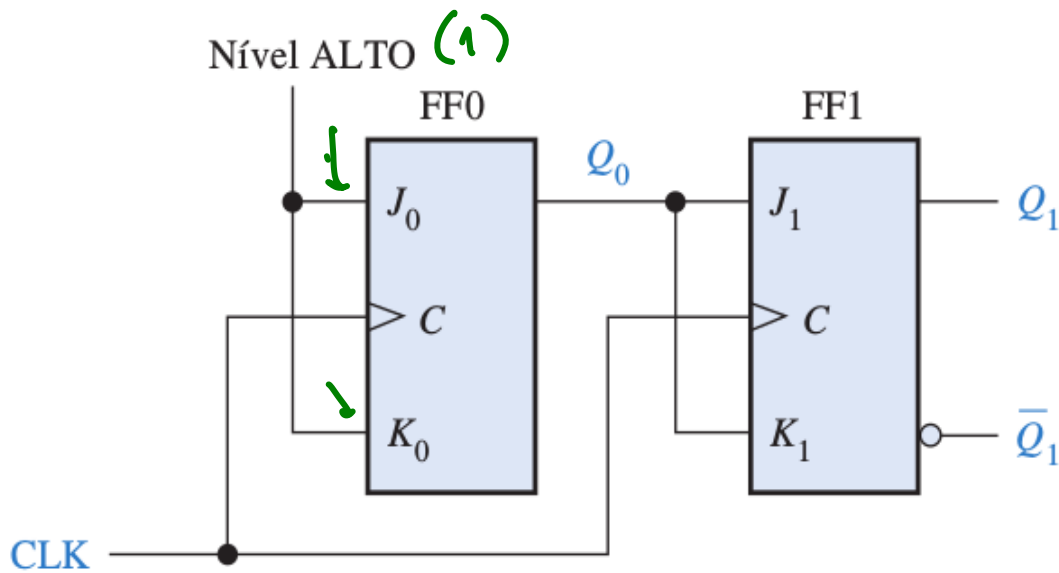


MAC 0329

13.07.2021





$$Q_0^* = \bar{Q}_0$$

$$Q_1^* = J_1 \bar{Q}_1 + \bar{K}_1 Q_1$$

$$= Q_0 \bar{Q}_1 + \bar{Q}_0 Q_1$$

$$= Q_0 \oplus Q_1$$

1. Equação das entradas dos FFs

$$J_0 = K_0 = 1$$

$$J_1 = K_1 = Q_0$$

2. Equação do próximo estado

$$JK \Rightarrow \underline{Q^* = J\bar{Q} + \bar{K}Q}$$

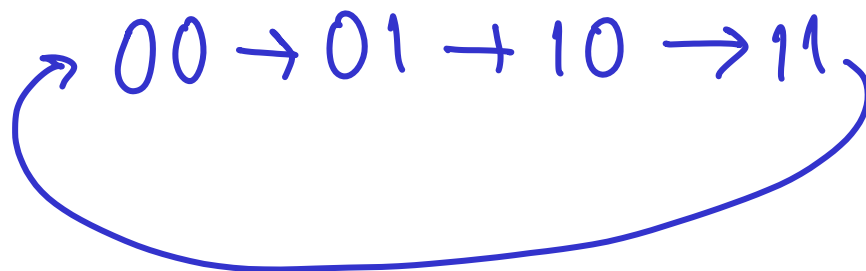
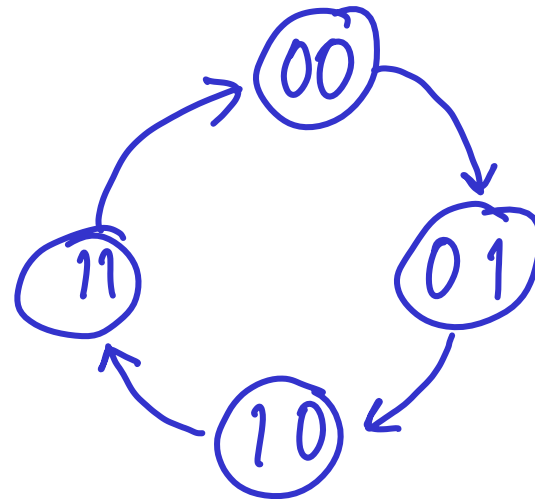
3. Tabela de Transição de estados

Q_1, Q_0	Q_1^*, Q_0^*
0 0	0 1
0 1	1 0
1 0	1 1
1 1	0 0

3. Tabela de Transição de estados

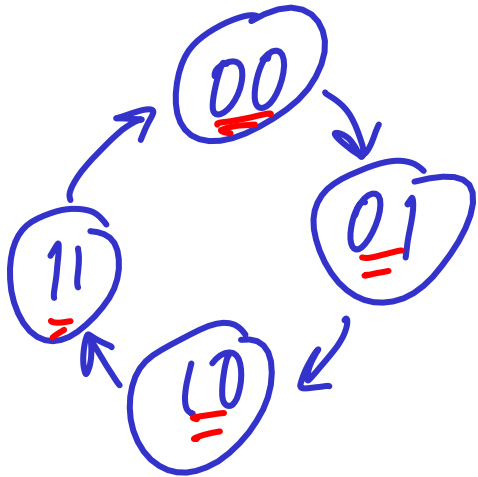
$Q_1 Q_0$	$Q_1^* Q_0^*$
0 0	0 1
0 1	1 0
1 0	1 1
1 1	0 0

4. Diagrama de transição de estados



Projeto de circuitos (caminho inverso)

1)



$$\rightarrow Q_0^* = F_0(Q_1, Q_0)$$

$$\rightarrow Q_1^* = F_1(Q_1, Q_0)$$

2)

Q_1, Q_0	Q_1^*, Q_0
00	01
01	10
10	11
11	00

Q_1, Q_0	Q_1^*
00	0
01	1
10	1
11	0

$$J_1 = ?$$

$$K_1 = ?$$



$Q_1 Q_0$	Q_1^*
00	0
01	1
10	1
11	0

$J_1 = ?$

$K_1 = ?$

$Q \rightarrow Q^*$	J	K
0 → 0	0	x
0 → 1	1	x
1 → 0	x	1
1 → 1	x	0

00 or 01

J_1

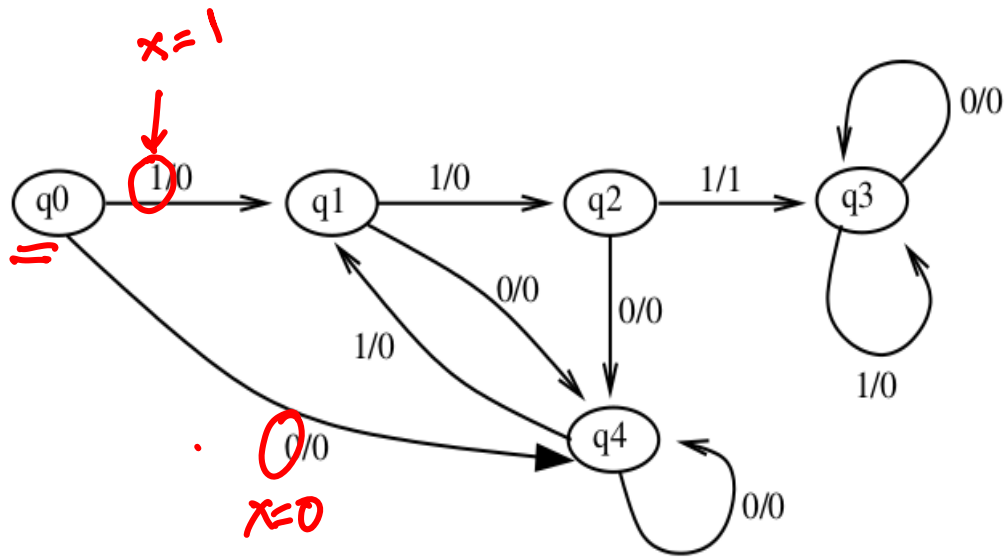
K_1

$J_1 = Q_0$

$K_1 = Q_0$

$Q_1 \backslash Q_0$	0	1
0	0	1
1	x	x

$Q_1 \backslash Q_0$	0	1
0	x	x
1	0	1

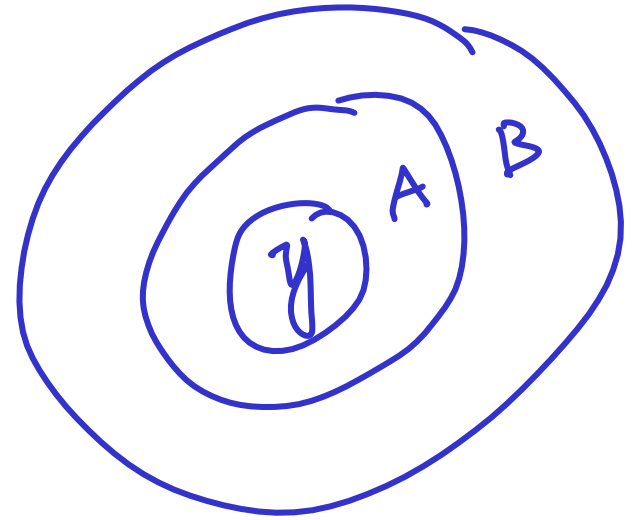


Estado atual	Próx. estado/saída	
	$x = 0$	$x = 1$
q_0	$q_4/0$	$q_1/0$
q_1	$q_4/0$	$q_2/0$
q_2	$q_4/0$	$q_3/1$
q_3	$q_3/0$	$q_3/0$
q_4	$q_4/0$	$q_1/0$

Red annotations: Red circles around the cells $(q_0, q_4/0)$, $(q_0, q_1/0)$, and $(q_4, q_4/0)$, $(q_4, q_1/0)$. A red arrow points to the top right corner.

$$xy = x(x+y)$$

$$xy = x + xy = x$$



$$A = B$$

↓

$$A + \cancel{y} = B + \cancel{y}$$

$$A = B$$

↓ ↗ +

$$\underline{\underline{A \cdot y}} = \underline{\underline{B \cdot y}}$$

↑ ↑