

	Estado actual			Estado siguiente			Entradas a os					
	Q ₂	Q ₁	Q ₀	Q ₂	Q ₁	Q ₀	J ₂	K ₂	J ₁	K ₁	J ₀	K ₀
2	0	0	0	X	X	X	X	X	X	X	X	X
3	0	0	1	X	X	X	X	X	X	X	X	X
4	0	1	0	1	0	1	0	X	X	0	1	X
5	1	1	0	1	0	0	X	0	X	1	X	1
6	1	1	0	1	1	0	X	1	X	0	X	X
7	1	1	1	X	X	X	X	X	X	X	X	X

tabla exacta de J-K

Q _t	Q _{t+1}	J	K
0	0	0	X
0	1	1	X
1	0	X	1
1	1	X	0

* J₂

Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	1	
Q ₂ 1	X	X	X	X

J₂ = Q₀

* K₂

Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	X	X
Q ₂ 1			X	1

K₂ = Q₁

* J₁

Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	X	X
Q ₂ 1		1	X	X

J₁ = Q₀

* K₁

Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	1	0
Q ₂ 1	X	X	X	0

K₁ = Q₀

* J₀

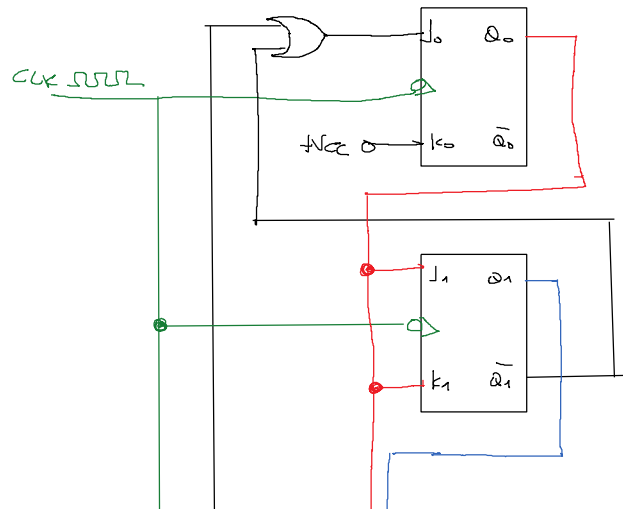
Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	X	1
Q ₂ 1	1	X	X	0

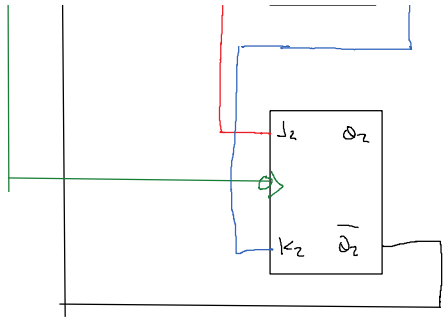
J₀ = Q₁ + Q₂

* K₀

Q ₁ Q ₀	00	01	11	10
Q ₂ 0	X	X	X	X
Q ₂ 1	X	1	1	X

K₀ = 1





EJERCICIO

Diseñar un contador para la secuencia 1,3,5,7,9,1,3,5,... (síncrono)

Bits: 4 b.

	Estado actual				Estado siguiente				Entrada a los Bistables.							
	Q ₃	Q ₂	Q ₁	Q ₀	Q ₃	Q ₂	Q ₁	Q ₀	J ₃	K ₃	J ₂	K ₂	J ₁	K ₁	J ₀	K ₀
1	0	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X
	0	0	0	1	X	0	1	1	0	X	0	X	1	X	X	0
3	0	0	1	0	X	X	X	X	X	X	X	X	X	X	X	X
	0	0	1	1	0	1	0	1	0	X	1	X	X	1	X	0
5	0	1	0	0	X	X	X	X	X	X	X	X	X	X	X	X
	0	1	0	1	0	1	1	1	0	X	0	X	1	X	X	0
7	0	1	1	0	X	X	X	X	X	X	X	X	X	X	X	X
	0	1	1	1	1	0	0	1	1	X	1	X	X	1	X	0
9	1	0	0	0	X	X	X	X	X	X	X	X	X	X	X	X
	1	0	0	1	0	0	0	1	X	1	0	X	0	X	X	0
	1	0	1	0	X	X	X	X	X	X	X	X	X	X	X	X
	1	0	1	1	X	X	X	X	X	X	X	X	X	X	X	X
	1	1	0	0	X	X	X	X	X	X	X	X	X	X	X	X
	1	1	0	1	X	X	X	X	X	X	X	X	X	X	X	X
	1	1	1	0	X	X	X	X	X	X	X	X	X	X	X	X
	1	1	1	1	X	X	X	X	X	X	X	X	X	X	X	X

Tabla excitación J-K

Q _t	Q _{t+1}	J	K
0	0	0	X
0	1	1	X
1	0	X	1
1	1	X	0

J₀ = 1

K₀ = 0

J₃

Q ₃ Q ₂ \ Q ₁ Q ₀	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	0	0
10	0	0	0	0

K₃

Q ₃ Q ₂ \ Q ₁ Q ₀	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	0	0
10	0	0	0	0

J₂

Q ₃ Q ₂ \ Q ₁ Q ₀	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	0	0
10	0	0	0	0

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00				
01				
11				
10				

$$J_3 = Q_2 + Q_1$$

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00				
01				
11				
10				

$$K_3 = 1$$

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00	x	0	1	x
01	x	x	x	x
11	x	x	x	x
10	x	0	x	x

$$J_2 = Q_1$$

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00	x	x	x	x
01	x	0	1	x
11	x	x	x	x
10	x	x	x	x

$$K_2 = Q_1$$

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00	x	1	x	x
01	x	1	x	x
11	x	x	x	x
10	x	0	x	x

$$J_1 = \overline{Q_3}$$

$Q_3 Q_2$ \ $Q_1 Q_0$	00	01	11	10
00				
01				
11				
10				

$$K_1 = 1$$

