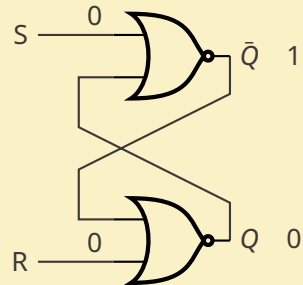


# Sistemas Digitales

## Sistemas Secuenciales

### Flip-Flop SR



#### Tabla de verdad

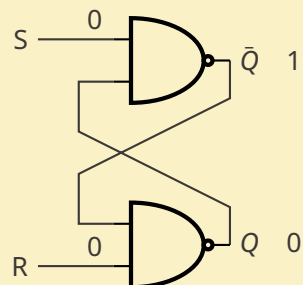
(nunca puede haber  $S \& R$ , the effects of  $S$  or  $R$  being true persist when returning to the initial state)

S	R	Q	$\bar{Q}$
0	0		
1	0	1	0
0	1	0	1
1	1	0	0

(initial state)

(ungodly, now a race condition)

#### Versión NAND



#### Tabla de verdad

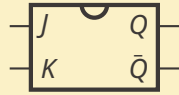
S	R	Q	$\bar{Q}$
0	0	1	1
1	0	1	0
0	1	0	1
1	1		

(now this ones illegal)

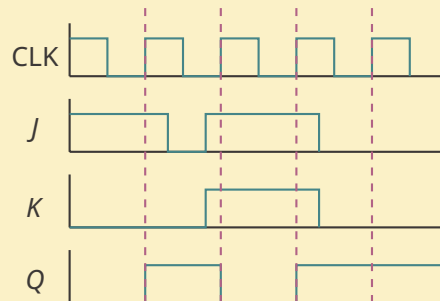
(now this ones then initial state)

## Flip-Flop JK

$J_t$	$K_t$	$Q_{t+1}$	
0	0	$Q_t$	(La salida se mantiene igual al siguiente ciclo)
0	1	0	
1	0	1	
1	1	$\bar{Q}_t$	(La salida se invierte al siguiente ciclo)

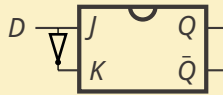


### Diagrama de tiempo



## Flip-Flop D

$D$	$Q_{t+1}$
0	0
1	1



## Flip-Flop T

$T$	$Q_{t+1}$
0	$Q$
1	$\bar{Q}$

