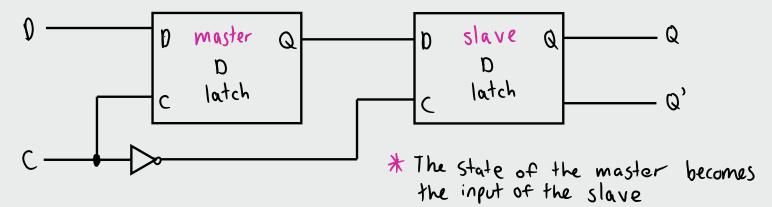


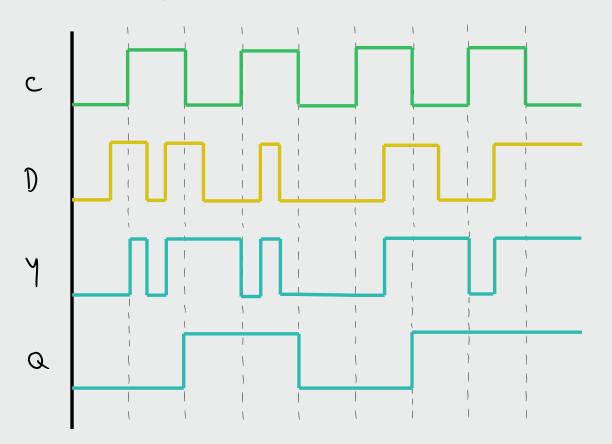
flip flop A Each f/f must change state instantly at the same time, flip flop B Otherwise we might end up at the wrong state

We can use a <u>master-slave</u> approach to make sure that changes propagate instantly.





When D and C are 1 the state of the master becomes 1. The only way to change the value of the circuit (master) is for C to change from 1 to 0 (negative edge)



Y: output of the master f/f Q: output of the slave f/f

Behavior of Y: When Clock is 1, Y is a copy of the input D When clock is 0, Y doesn't change

Behavior of Q: When clock is O, Q is a copy of Y When clock is 1, Q doesn't change

	low 0 ->	spec:f 1 k 2 1	licati by a l by a	'on (0				pcked pflops		quential D ^o	circuit for the
	3-> 0 by a 1 JK Excitation Table						_				
				$\begin{array}{c c} 0 & 0 \\ 1 & 1 \\ 0 & \lambda \end{array}$		I K 0 X 1 X K 1 K 0				JA A	0 00 01 11 10 0 00 01 11 10
<u>(</u> 21	•	In put X	Next State H Q(tti) A B		f/f in pu JA KA					K _A	0 $1 \times \times$
A 0 0	B 0 0	0 1	0	0 1	0 0	X X	0 1	××		JB /	$0 \times \times$
0 0 1	1 (0		1 0 1	0	1 0 X	× × 0	× × ×	I O X		A	
1 1 1	0 	0	 0	 0	X X X	0 0 1	ו א א	× 0 1	n	A	3× 00 01 11 10 0
Kmaps											

 $J_A = G \times$, $K_A = G \times$

