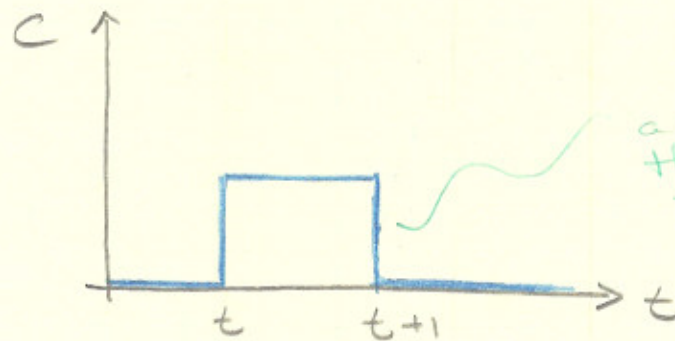
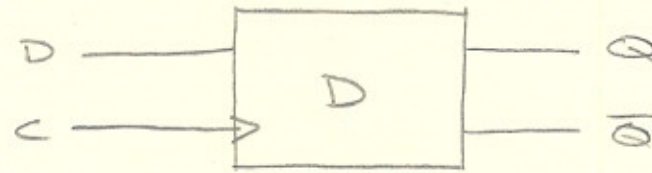
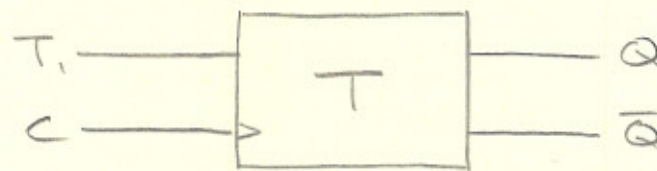
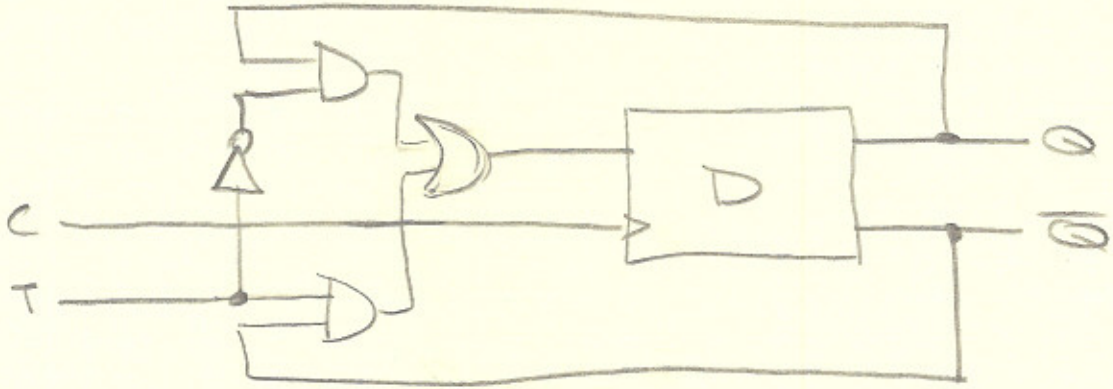


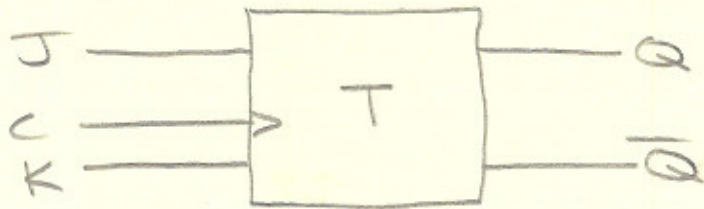
Flip FlopT Flip Flops

| T | $Q_{t+1}$        |
|---|------------------|
| 0 | $Q_t$            |
| 1 | $\overline{Q_t}$ |

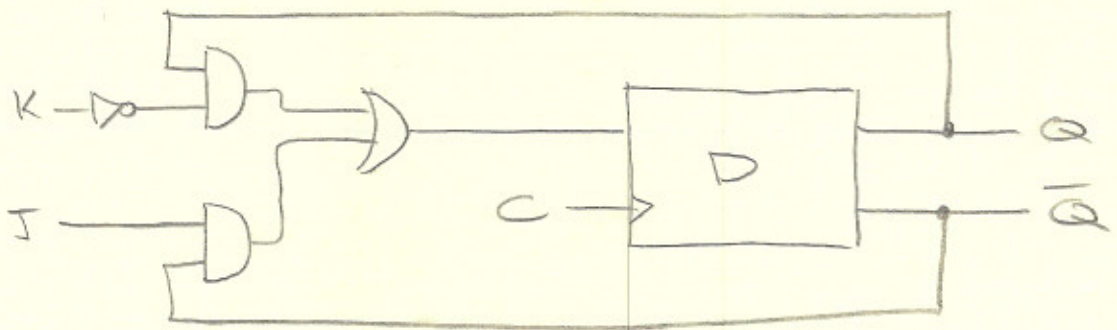
If we have  $Q = 0$  and then apply a zero to  $T$ , when the negative clock pulse edge the  $Q$  become 1.



### JK Flip Flop



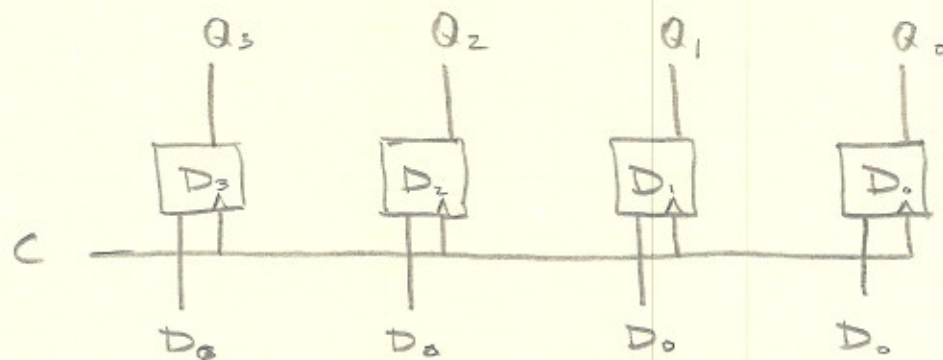
| J | K | $Q_{t+1}$        |
|---|---|------------------|
| 0 | 0 | $Q_t$            |
| 0 | 1 | 0                |
| 1 | 0 | 1                |
| 1 | 1 | $\overline{Q_t}$ |



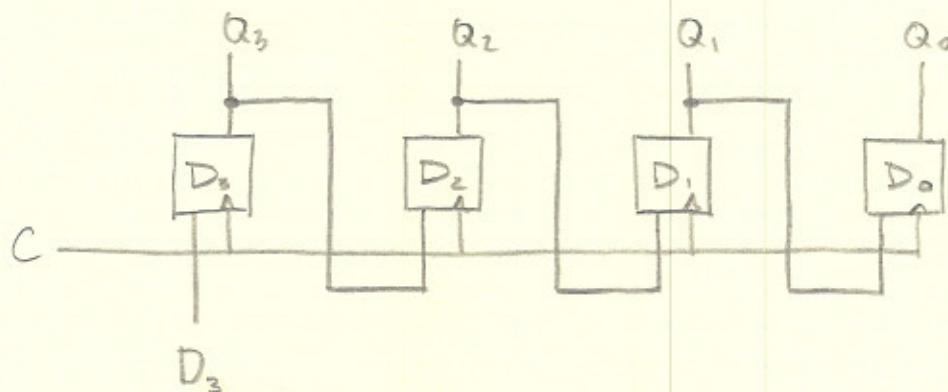
## Registers

flip flops can be considered a one bit reg.  
reg can be considered many flip flops.

## Parallel Register



## Series Register



## Parallel Series Register

