

ASSIGNMENT #03

(QUESTION #01)

Contact bounce is a common problem that occurs when a switch or button is pressed, causing the contacts to rapidly open & close multiple times before settling into a stable state. This can cause issues in electronic circuits especially when the switch is used to trigger an event.

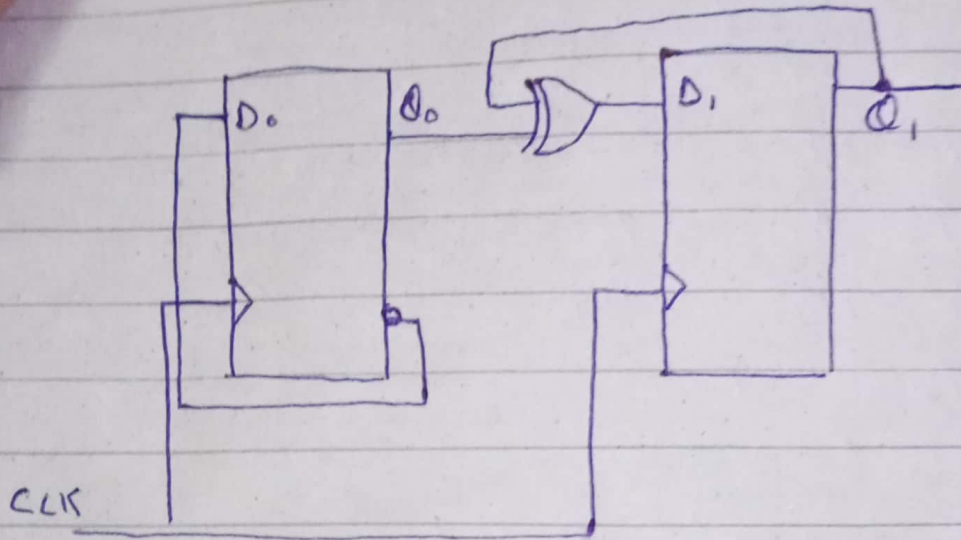
REMEDY:

One remedy for contact bounce is the use of a debounce circuit which can eliminate or reduce the effect of bouncing contacts. It works by delaying the response to the switch or button until the contacts have stabilized.

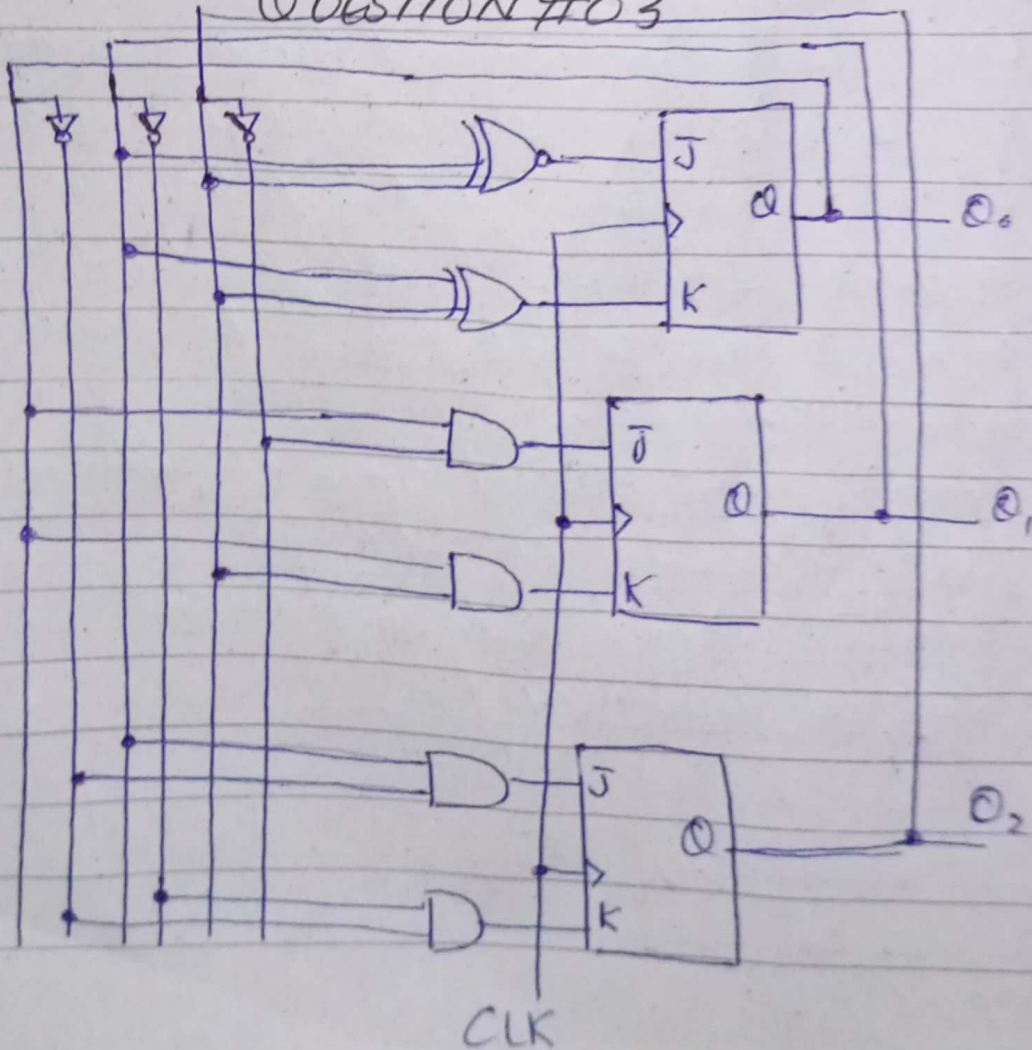
Following are several types of debounce circuit

- RC debounce circuit
- Schmitt Trigger Debounce circuit
- Software Debouncing

QUESTION # 02



QUESTION #03



QUESTION #04

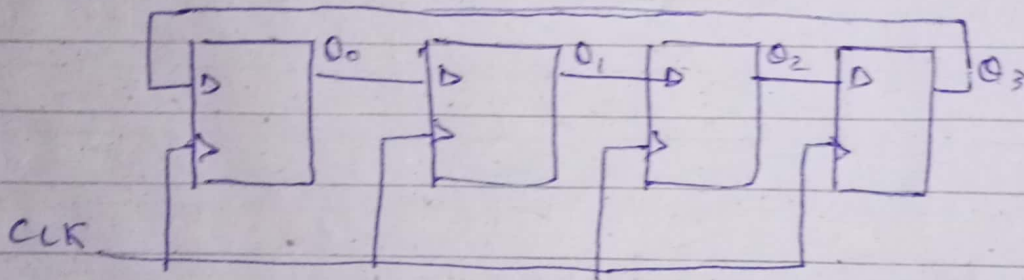
For mod 10 counter we need 4 flip flop bcz

$$2^n \geq M$$

$n = \text{no of flip/flops}$

$M = \text{Mod}$

$$2^4 \geq 10$$



Mod 10 Johnson Counter.