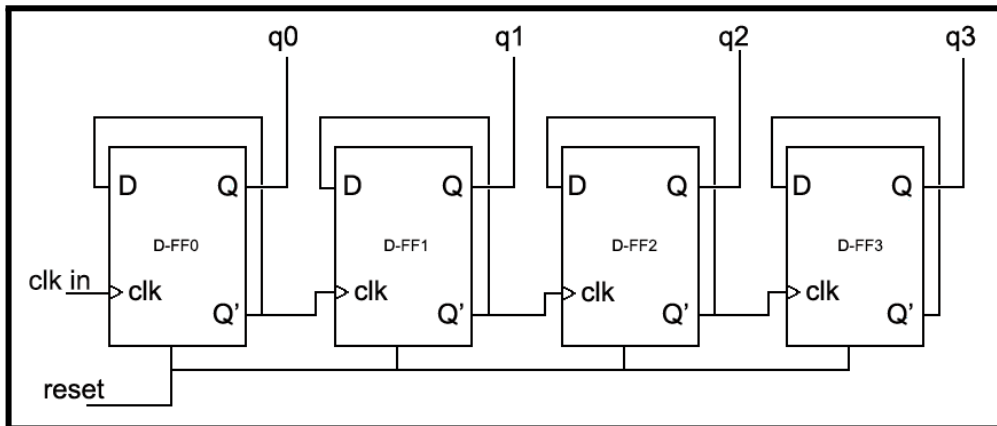
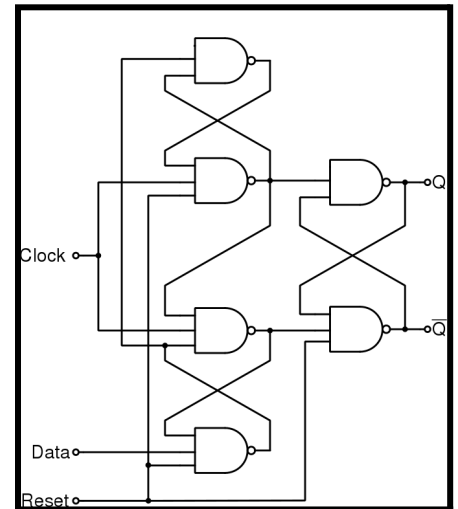


4 bit Counter

Asynchronous 4 bit Counter



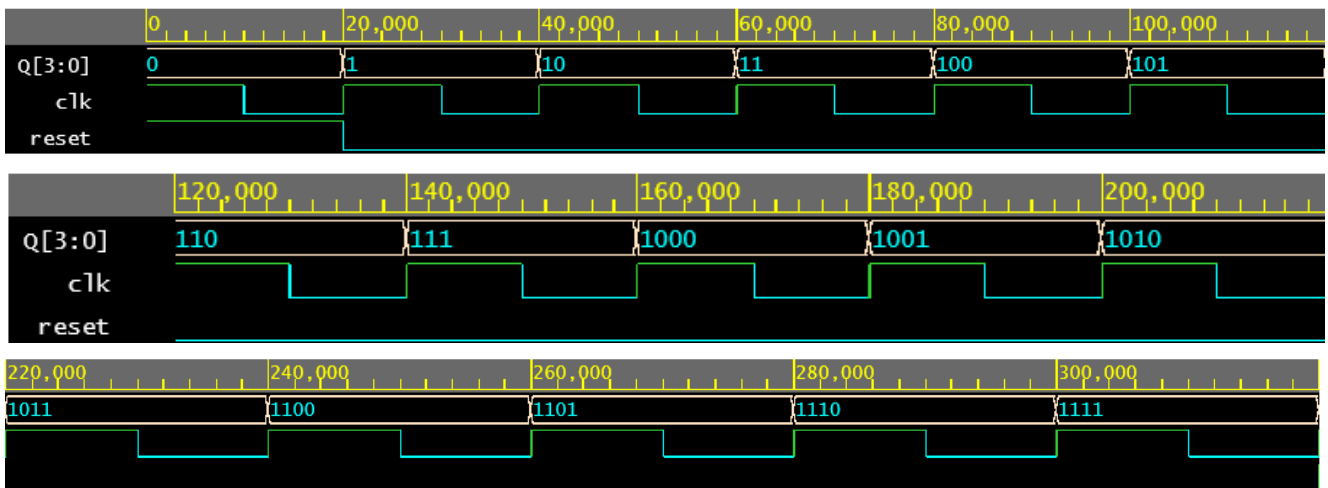
D flip-flop



Implementing a 4-bit asynchronous counter requires the interconnection of four D Flip-Flops. The clock input is connected to the first Flip-Flop. The remaining Flip-Flops receive their clock signal input from the Q' output of the previous Flip-Flop. In the counter the Flip-Flops are connected in toggle mode, so when the clock input is connected to the first flip flop D-FF0, then its output after one clock pulse will become 20ns. The q outputs of each D-FF represent the metre reading.

The simulation results are as follows

Count from 0 to 15 - Run Time: 320ns



Count from 0 to 6 with repetition - Run Time: 270ns

