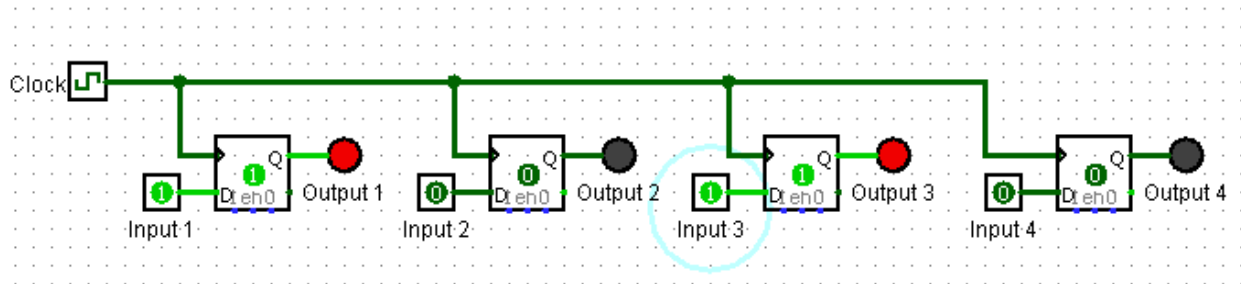


4. Wire 4-bit big endian register with D Flip Flop



6. Test schedule

Ox	Input Binary	Output Binary
0	0000	0000
1	0001	0001
2	0010	0010
3	0011	0011
5	0100	0100
A	1010	1010
B	1011	1011
C	1100	1100
D	1101	1101
E	1110	1110
F	1111	1111

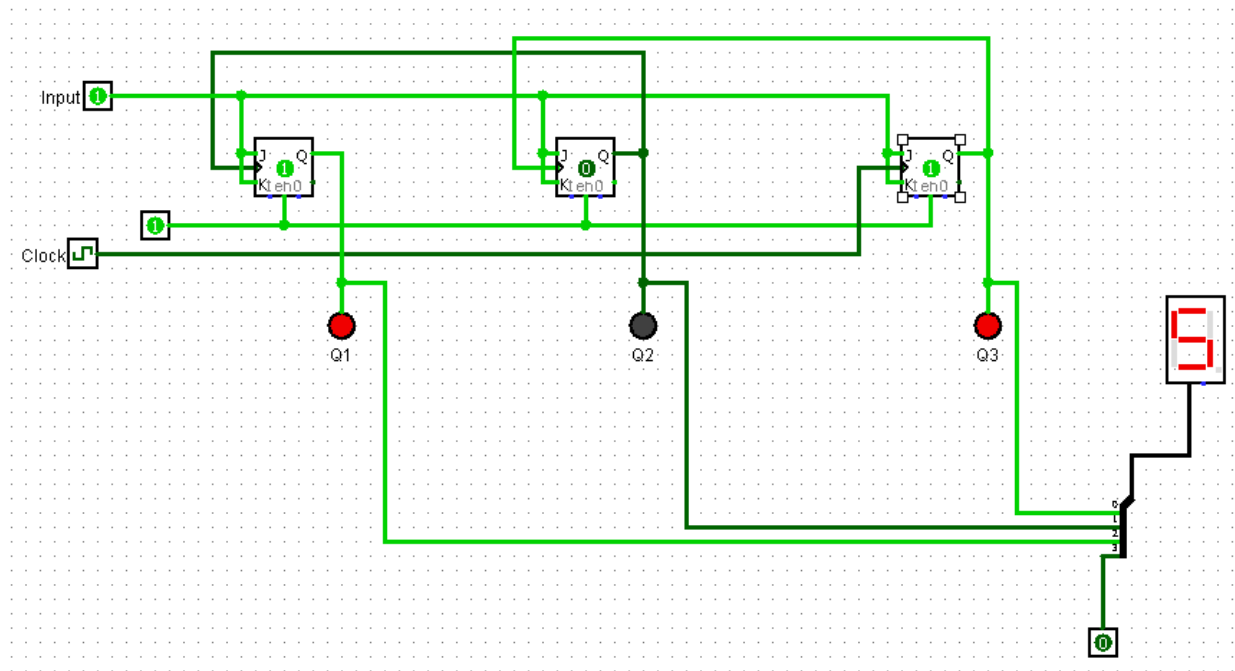
7.1

Hardware counters play a role in showing the information for counting tasks by showing the decimal number which is counted.

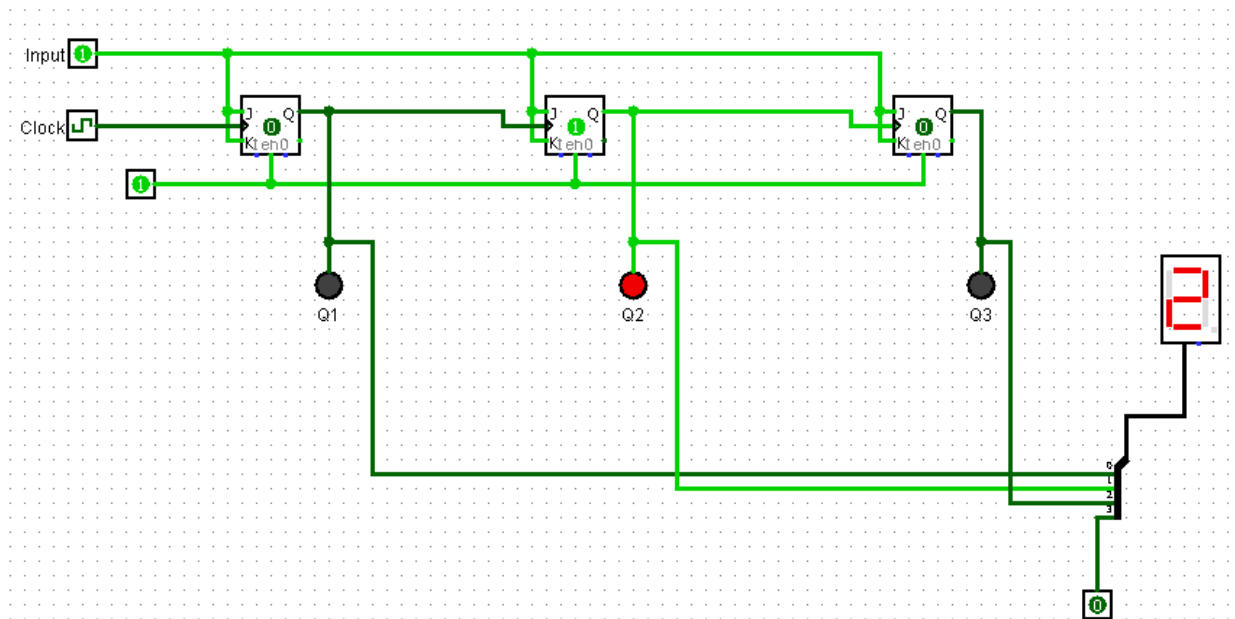
7.2

A ripple counter is an asynchronous counter where the first flip-flop output acts as a clock pulse for the second flip-flop. A clock pulse is applied to the first flip-flop, and the output of the flip-flop becomes the clock for the second flip-flop, and the sequence continues in that order.

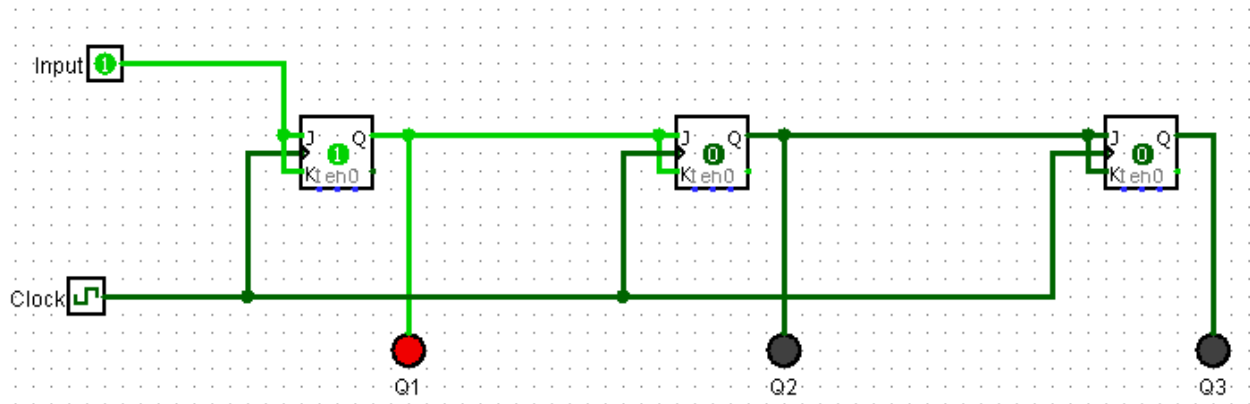
9. Big-endian 3-bit ripple counter of JK Flip Flop (Count from 000 to 111)



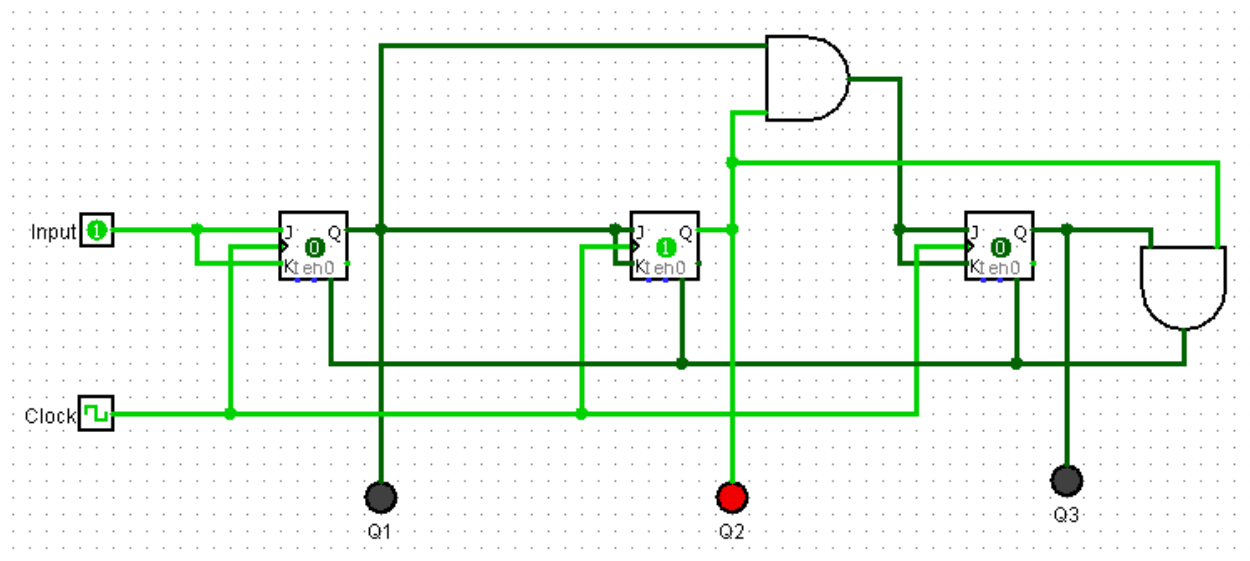
12. Big-endian 3-bit ripple counter of JK Flip Flop (Count from 111 to 000)



14. Modify step 9 (count from 0 to 111) using common clock



16. Modify Step 14 (count from 0 to 5)



17.2

It is important to handling the illegal state to ensure that the counter will be able to run smoothly without any problem.

18.Display MOD 6 with HEX Digit Display

