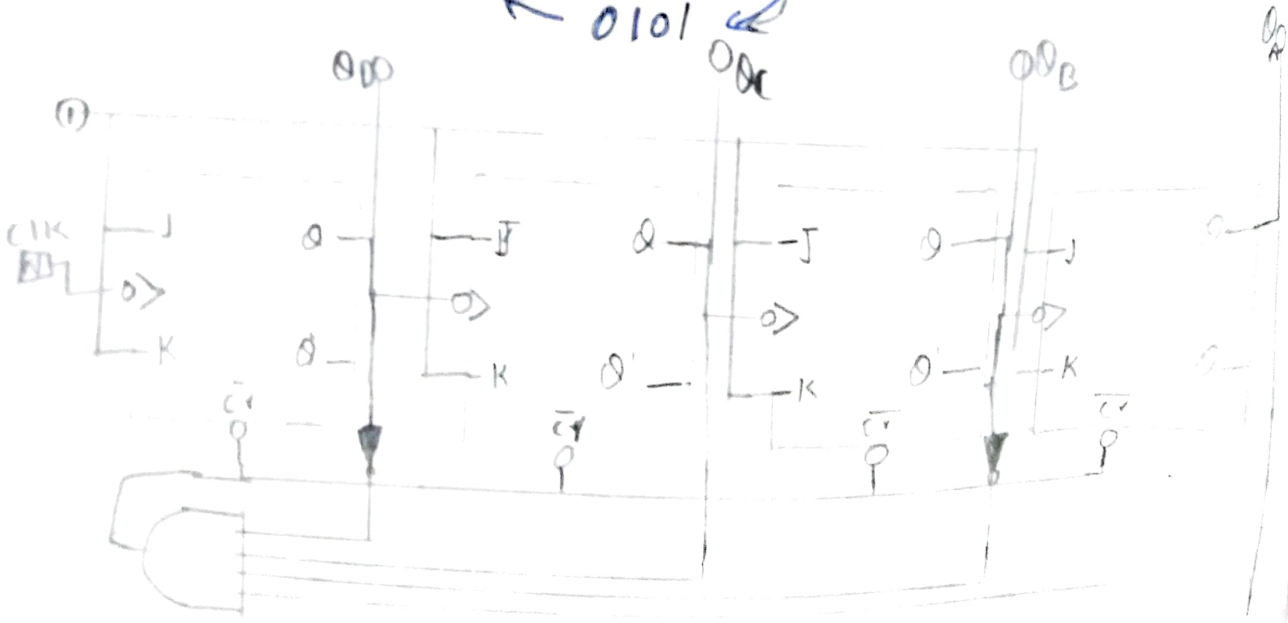
Date: 16/2/21

Aim: Design a decade asynchronous up counter

Apparatus:

1. J-K flip flop - IC7473 - IC7476
2. not gate - 2
3. AND gate - 1

State diagram:



Practical Procedure:

1) IC's are placed properly on bread board of the IC trainer kit.

2) Connection are made as per the designed circuit diagram.

3) power Supply to the board is turned on.

observation and conclusion:

Counter is a device which stores (and sometimes displays) the number of times a particular event or process has occurred, often in relationship to a clock signal. Counter are used in digital electronics for counting purpose, they can count specific event happening in the circuit.

Asynchronous counter we don't use universal clock, only first flip flop is driven by main clock and the clock input of rest of the following flip flop is driven by output of pervious flip flops.

MOD Counters are cascaded counter circuits which count to a set modulus value before resetting. The job of a counter is to count by advancing the contents of the counter by one count with each clock pulse.

Decade Counter means mod 10 counter so it countes from 0 to 9 and gets reset to 0.

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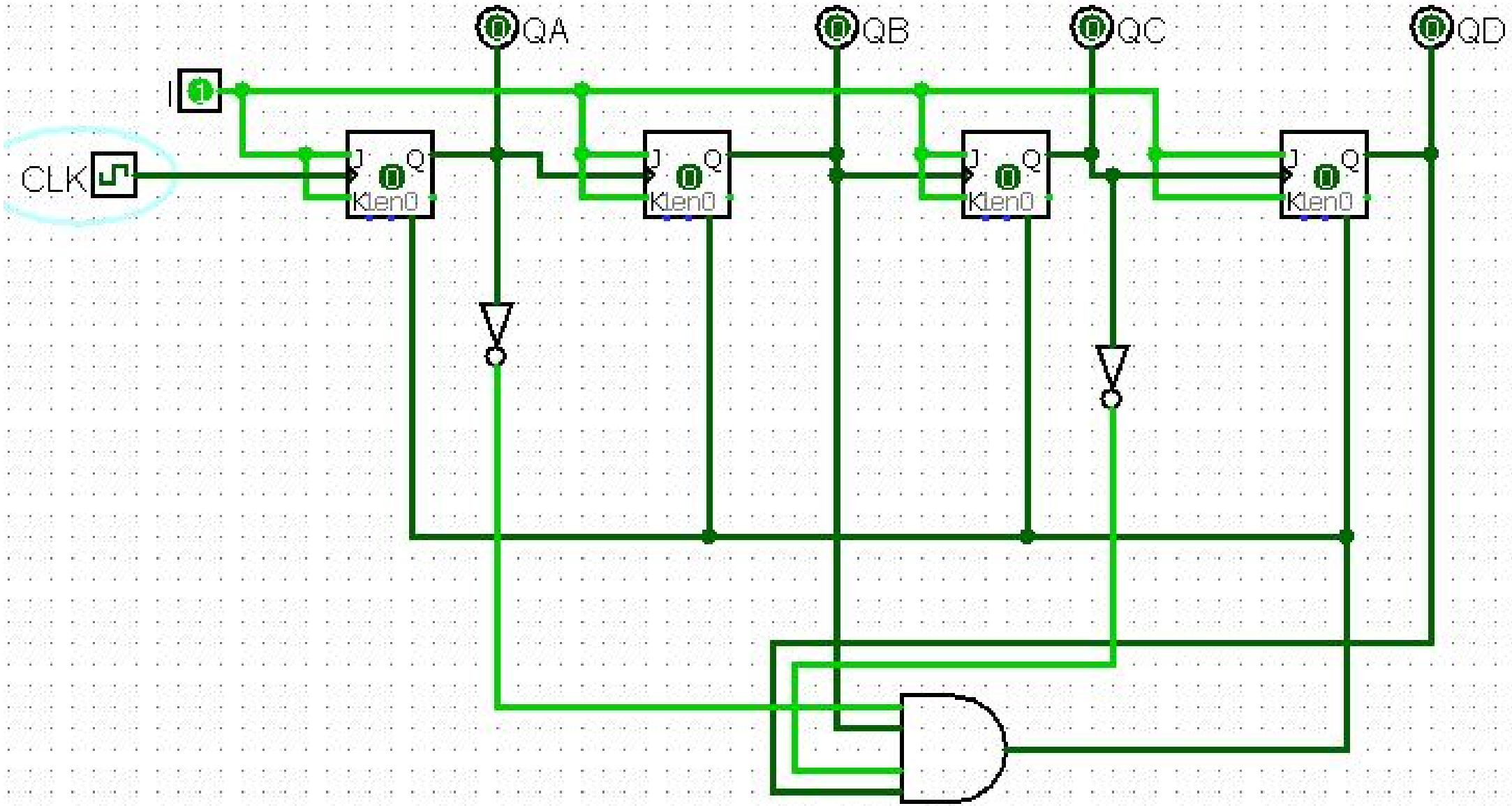
MOD 10 ASYNCHRONOUS COUNTER/ decade



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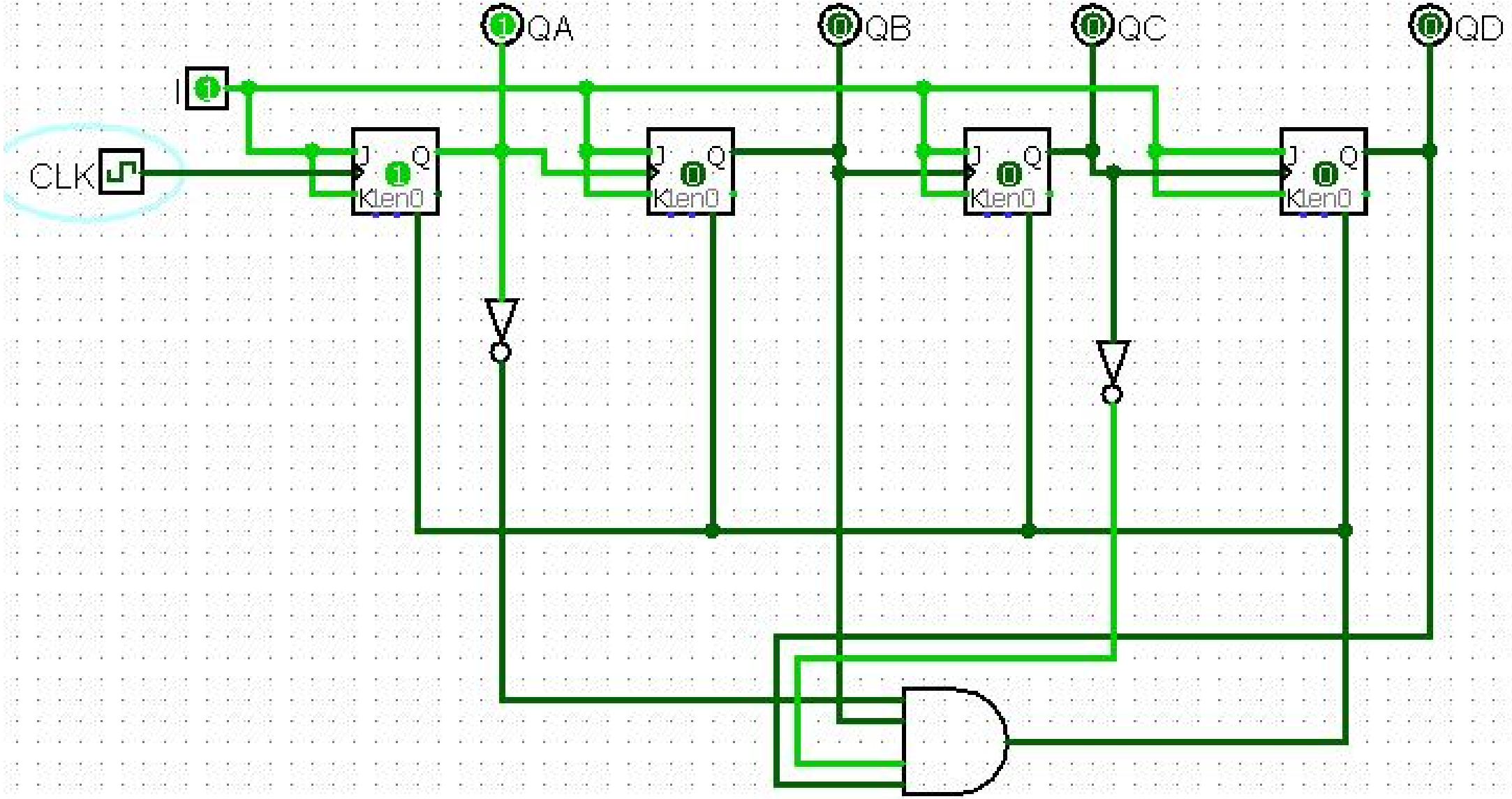

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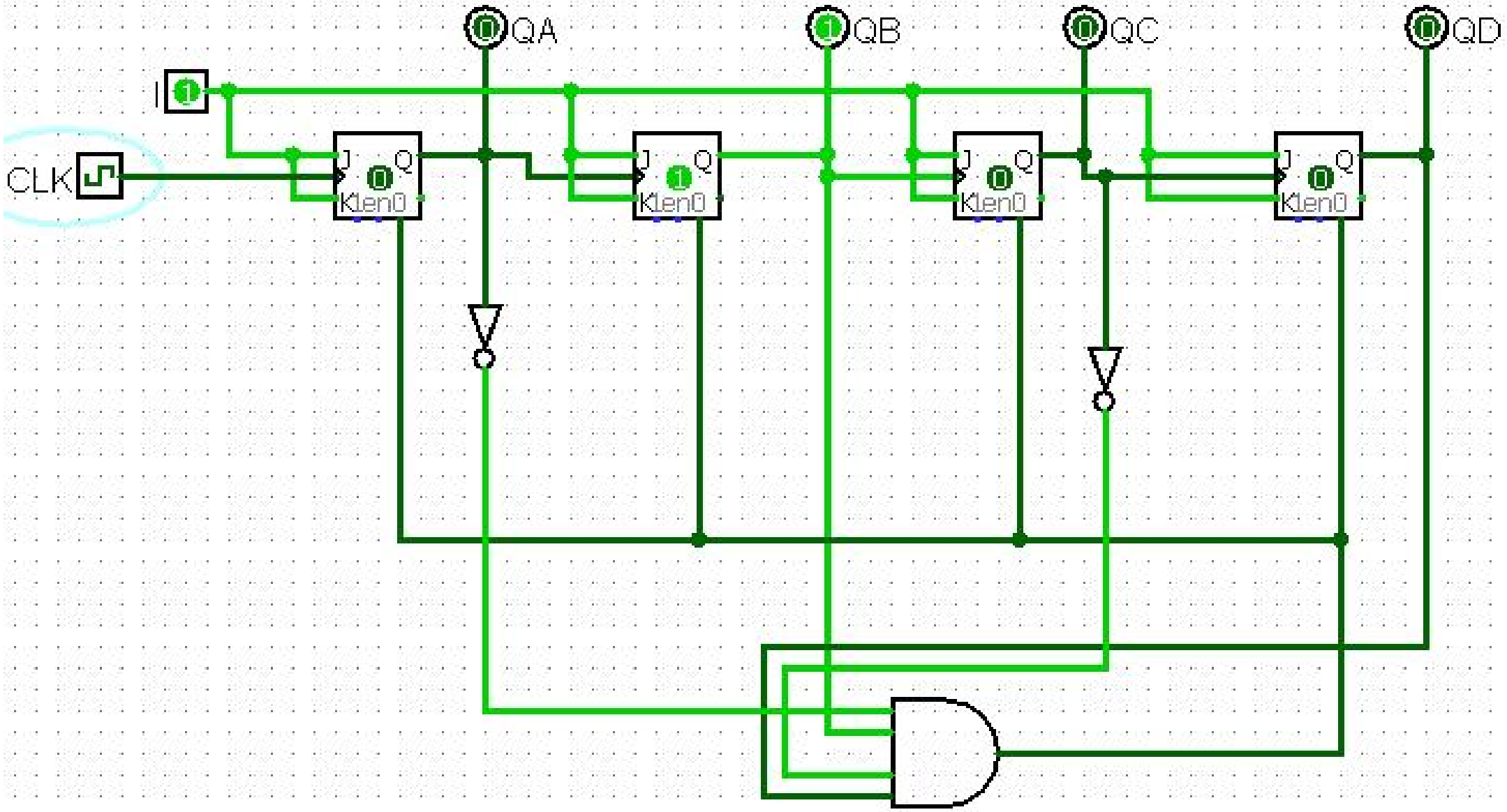

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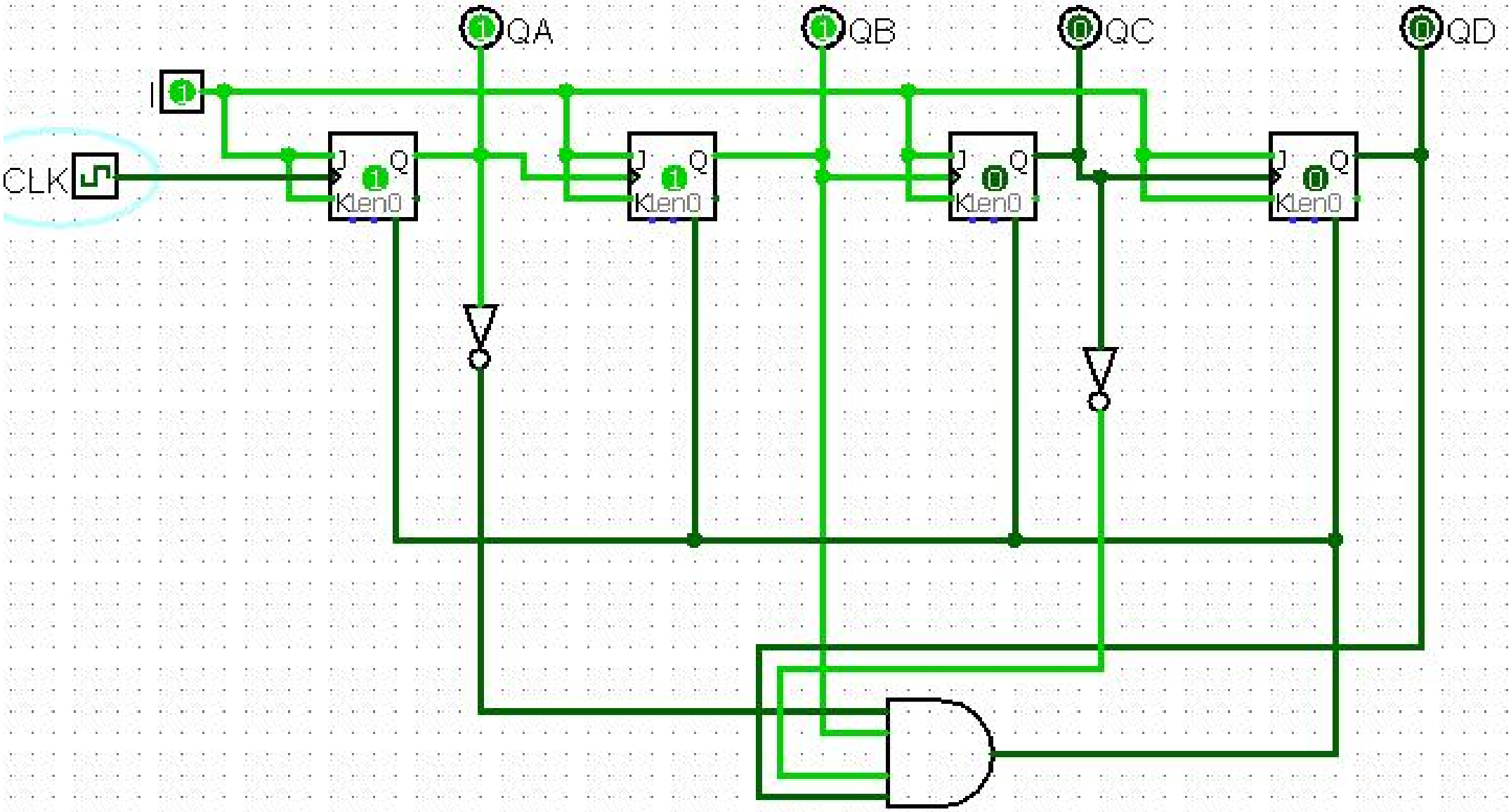

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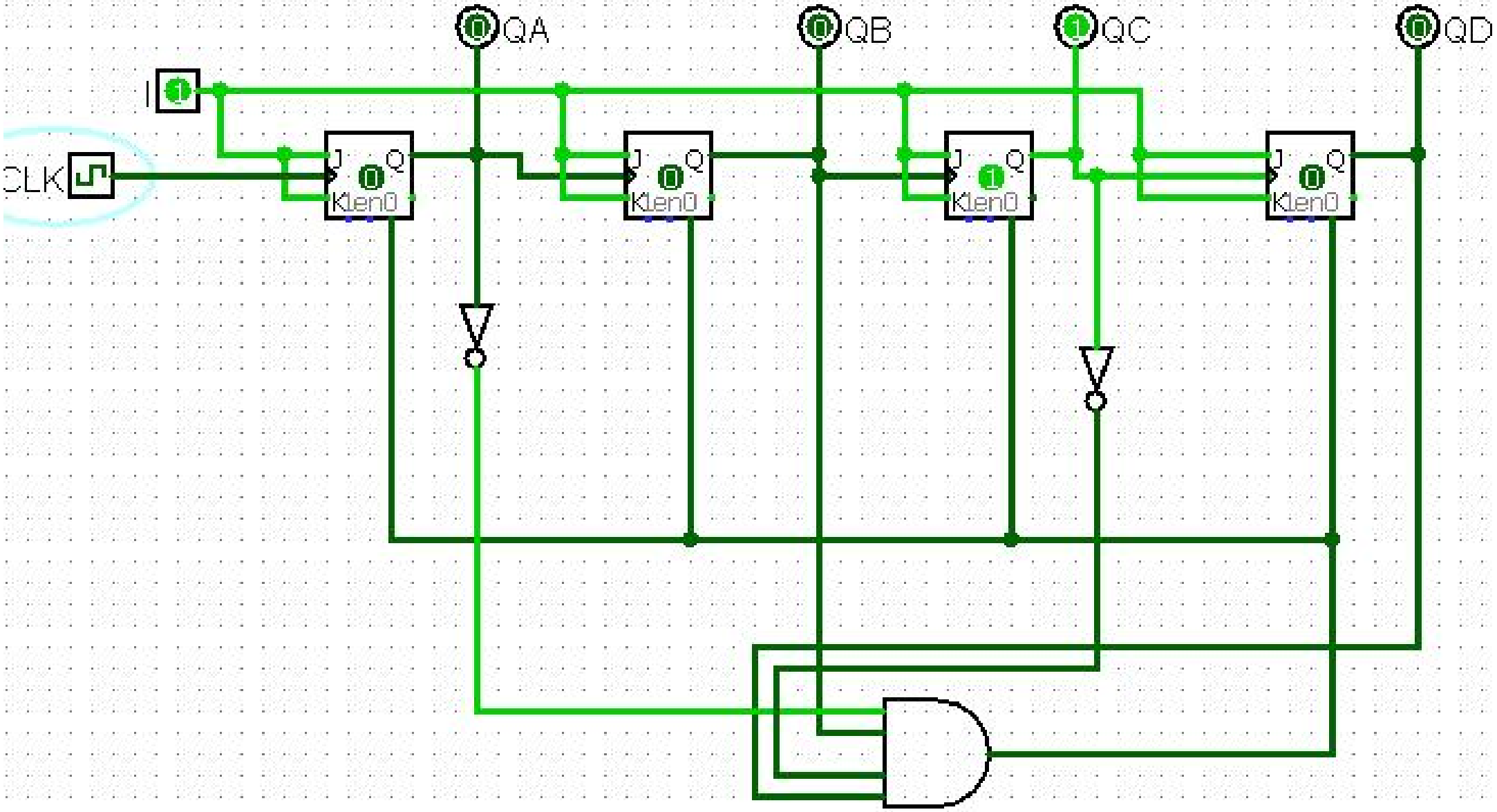

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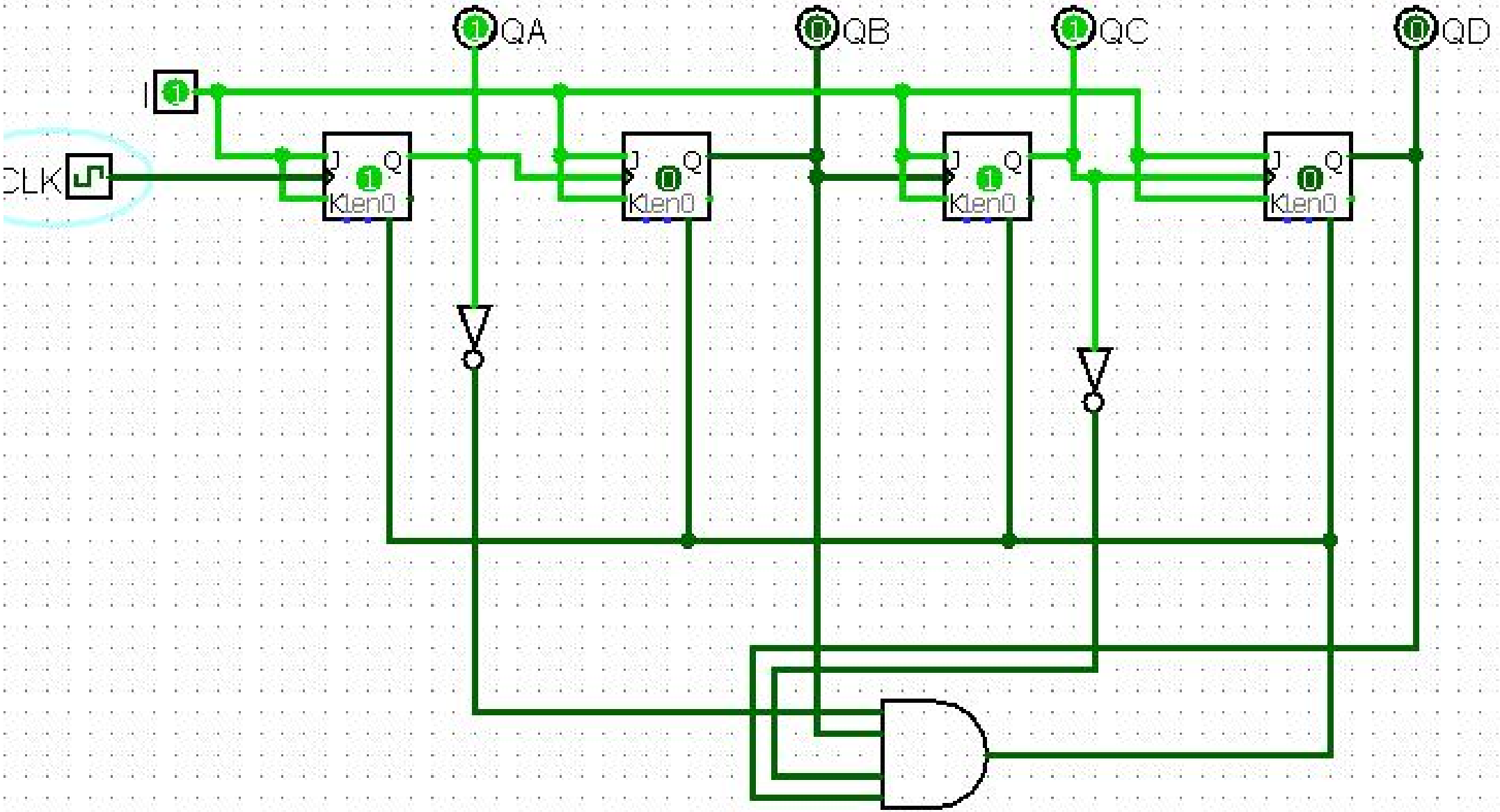

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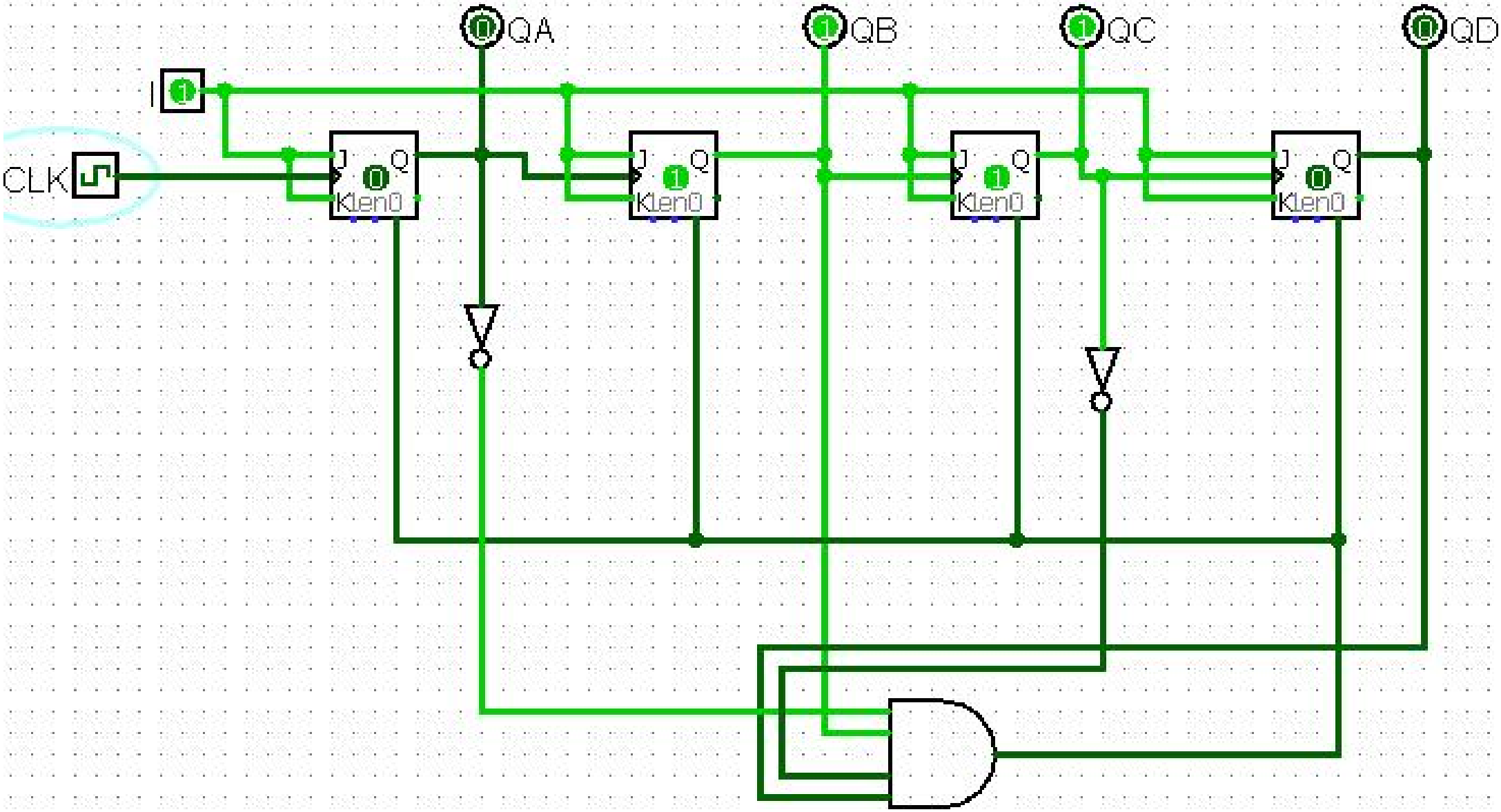

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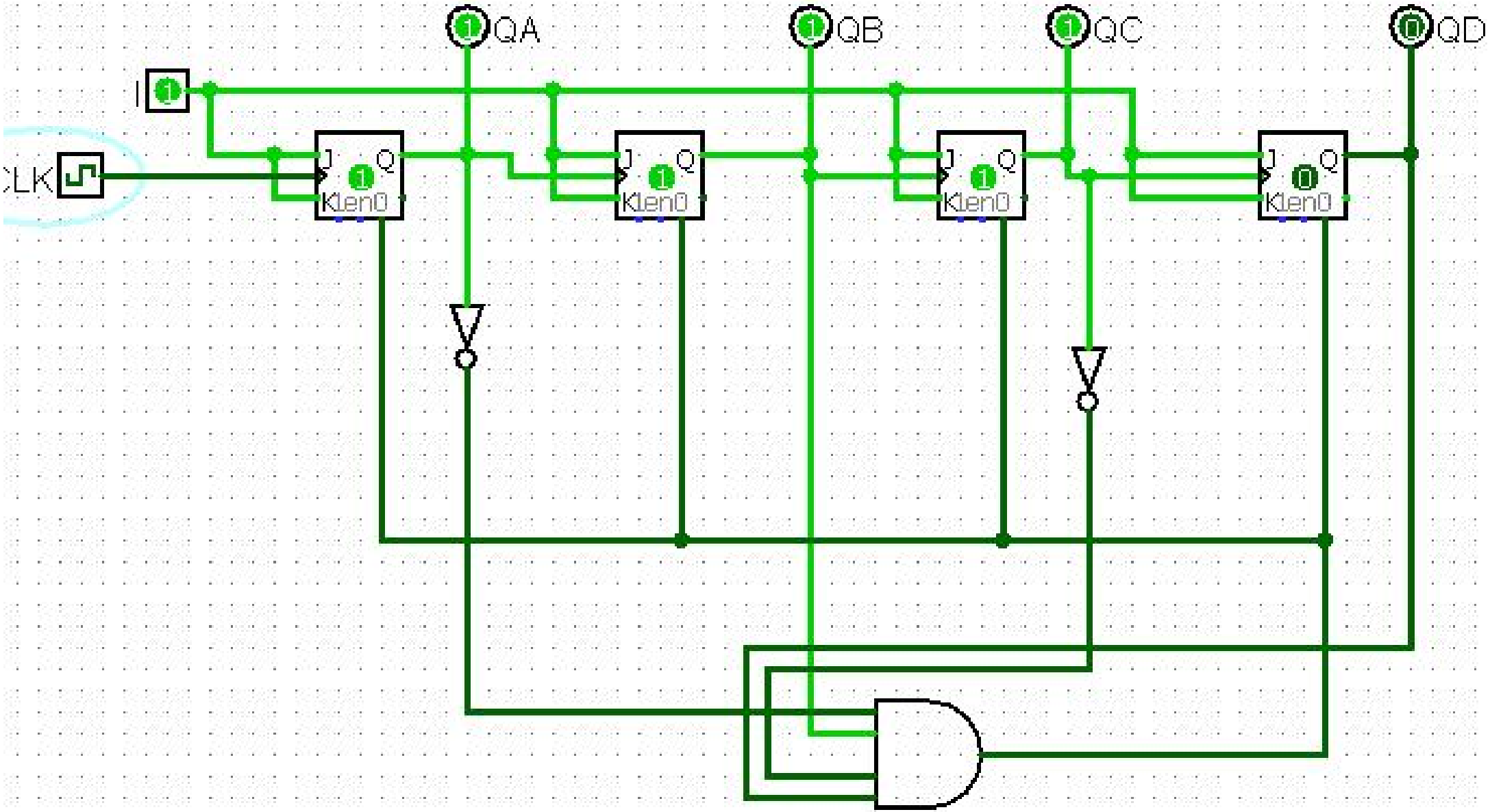

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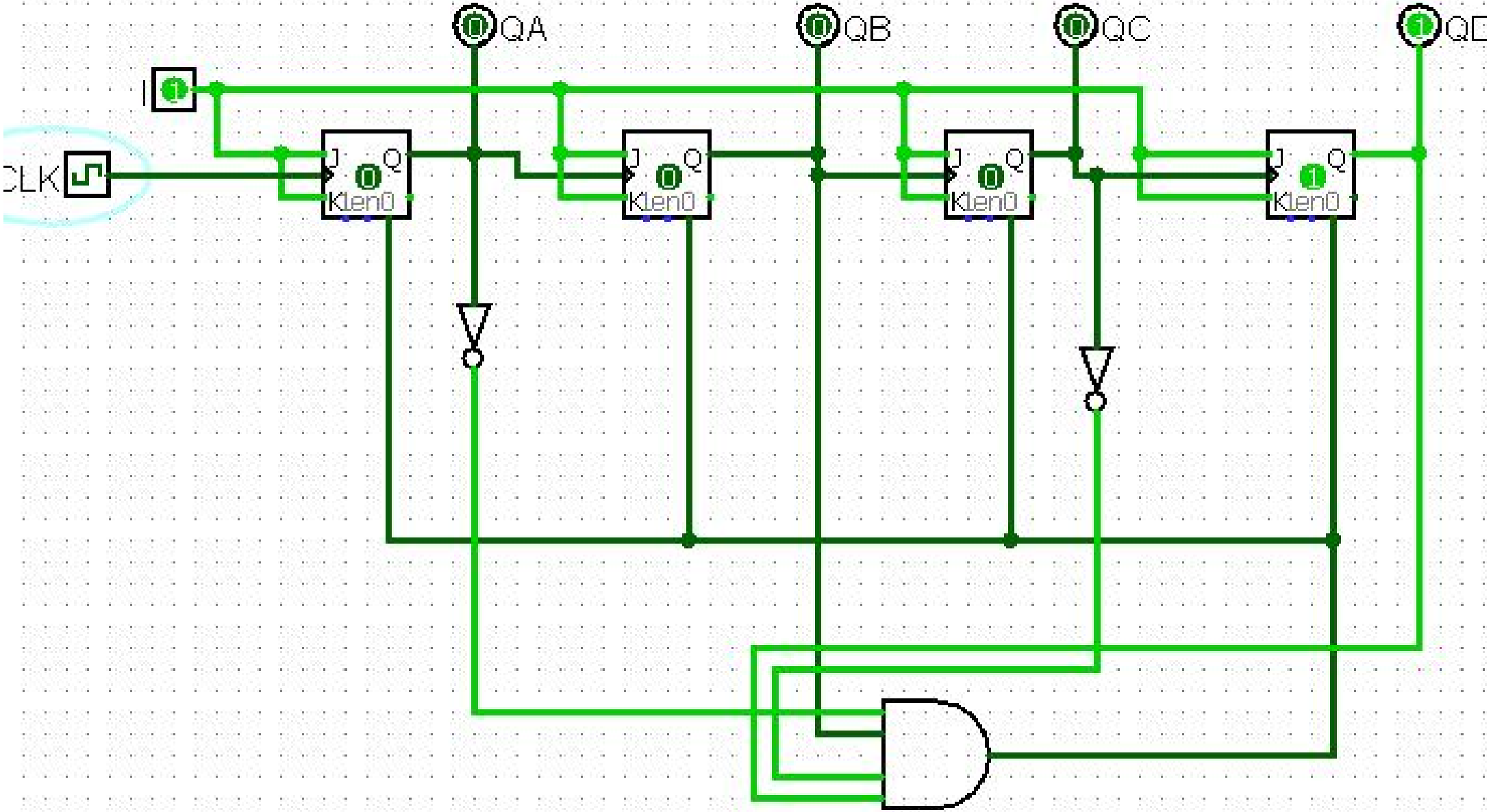

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