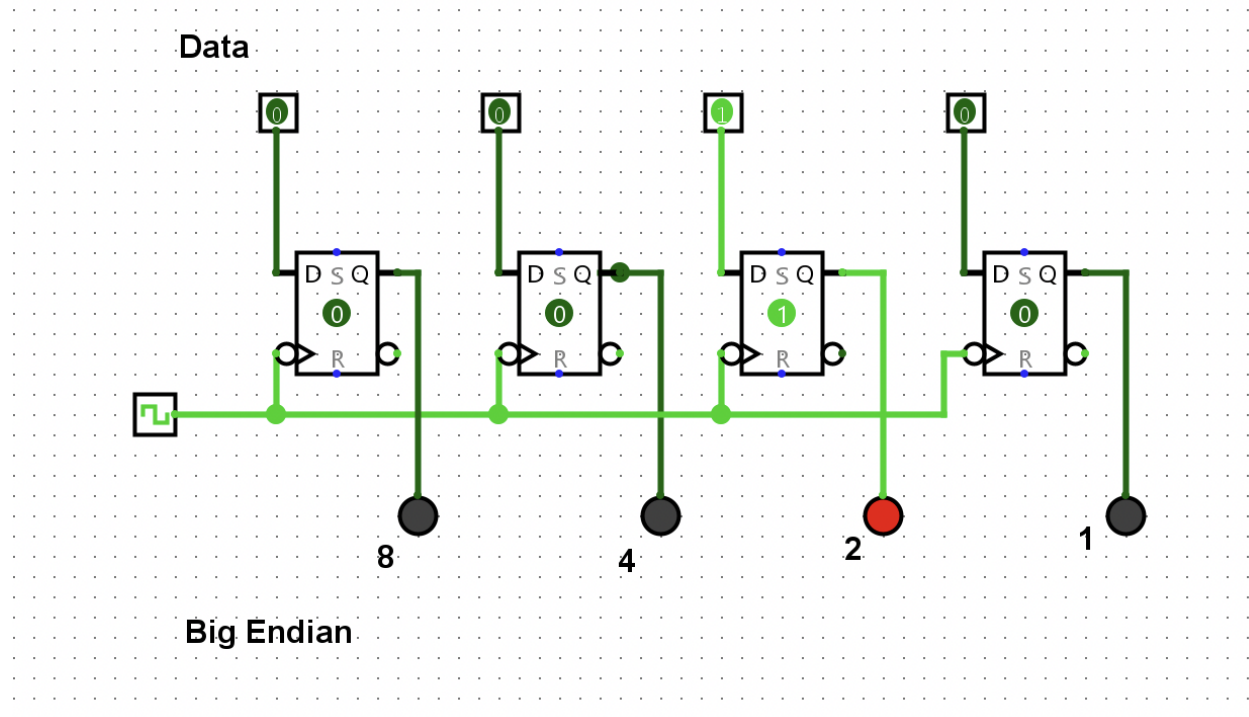


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COS10004 - Computer Systems – Lab 3 Submission

Screenshot of the 4-bit endian register



*Figure 1. 4-bit endian register
Screen captured from my Mac on September 29th, 2022*

Test Schedule

Ox	Input Binary	Output Binary
0	0000	0000
1	0001	0001
2	0010	0010
3	0011	0011
5	0101	0101
A	1010	1010
B	1011	1011
C	1100	1100
D	1101	1101
E	1110	1110
F	1111	1111

Question 7

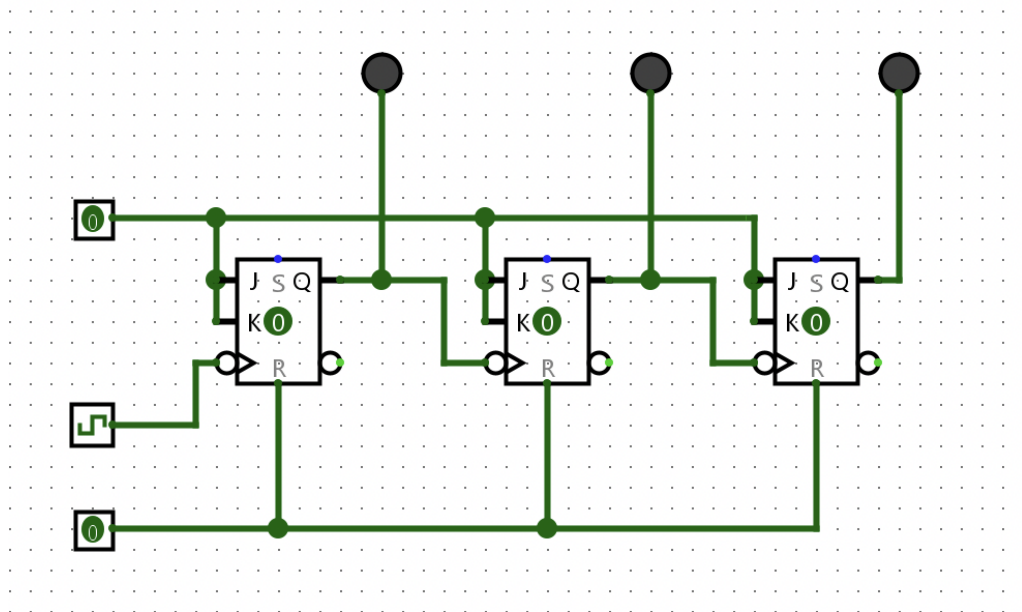
Question 7.1

The counter is a circuit that counts the number of a specific event occurring in the processor.

Question 7.2

An asynchronous counter known as a ripple counter sends ripples of the clock pulses over the circuit. Only the first flip-flop in the circuit is connected to the clock, and it controls the clock input for subsequent flip-flops.

Screenshot of big-endian 3-bit ripple counting-up counter



*Figure 2. A big-endian 3-bit ripple counter
Screen captured from my Mac on September29th, 2022*

Screenshot of big-endian 3-bit ripple counting-down counter

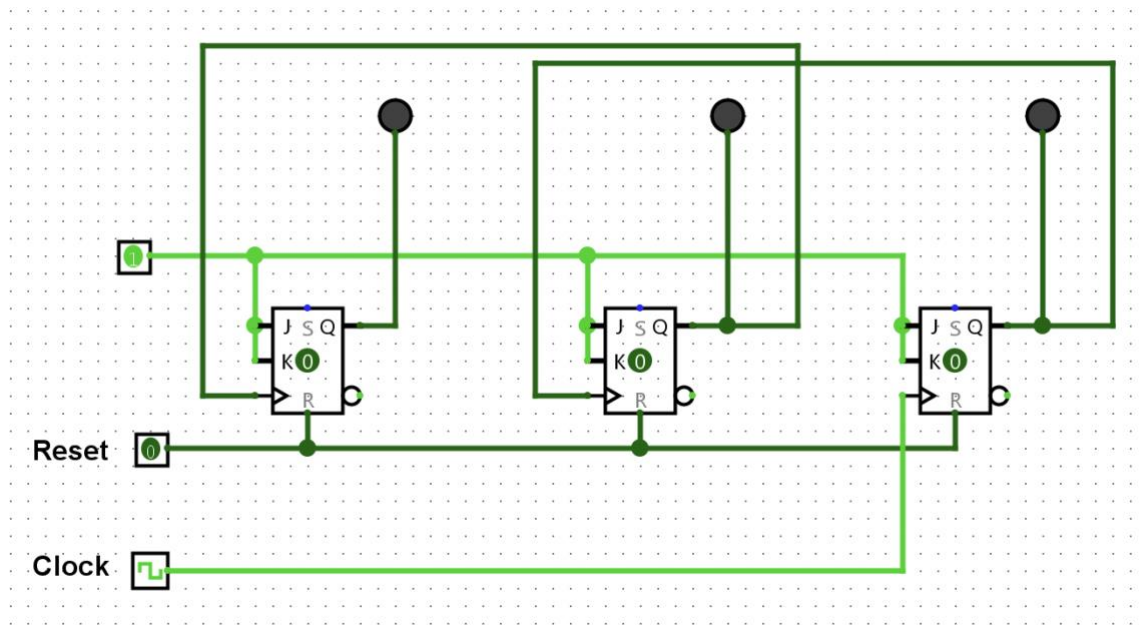


Figure 3. A big-endian 3-bit ripple counter
Screen captured from my Mac on September 29th, 2022

Screenshot of common counting-up counter

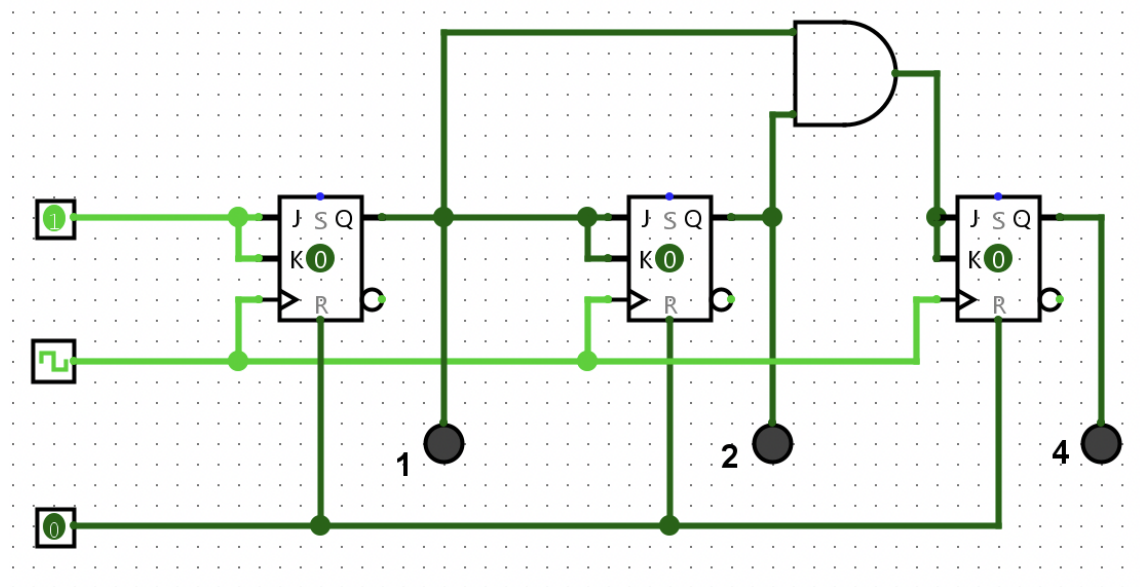


Figure 4. Common counting up clock
Screen captured from my Mac on September 29th, 2022

Screenshot of HEX Digit Display

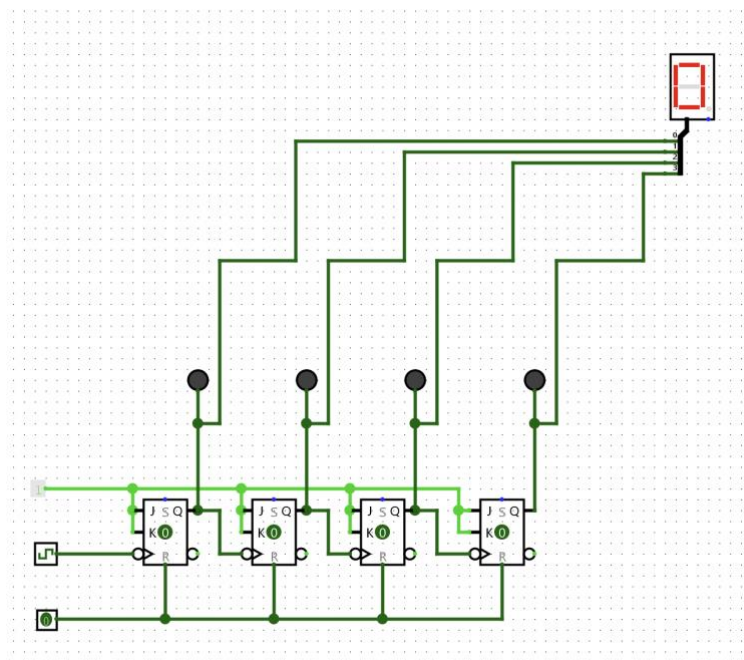


Figure 5. Common HEX Digit Display
Screen captured from my Mac on September 29th, 2022