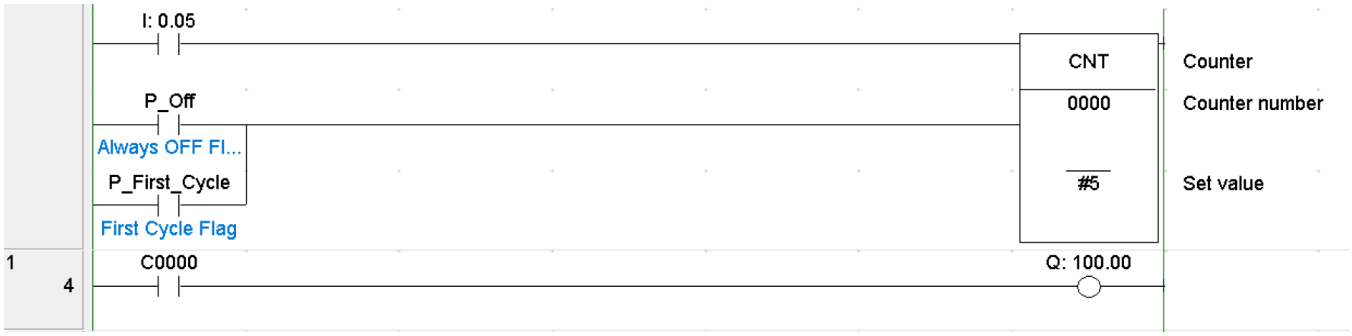
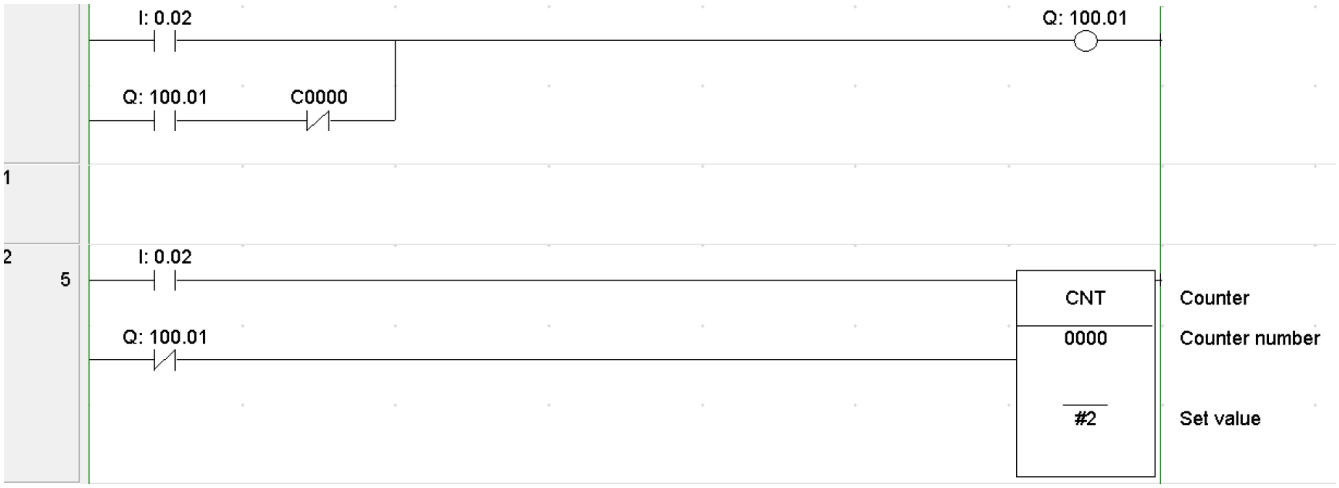
Create symbols *button_1*, *button_2*, *button_3*, *out_1*, *out_2, out_3*. Bind the created symbols to the available buttons and lamps.

Task 1. Counter. Build the following LD diagram. Check the results.

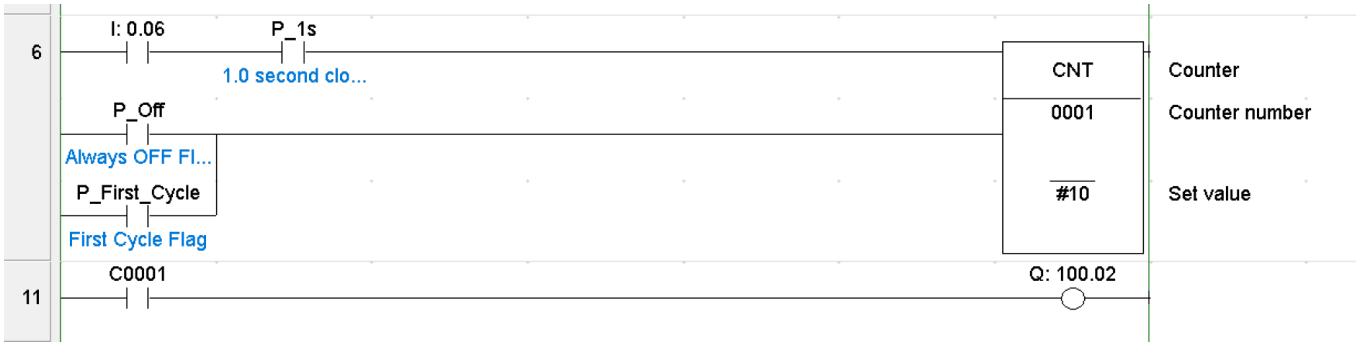
Counter function syntax: ***CNT 0 #5***



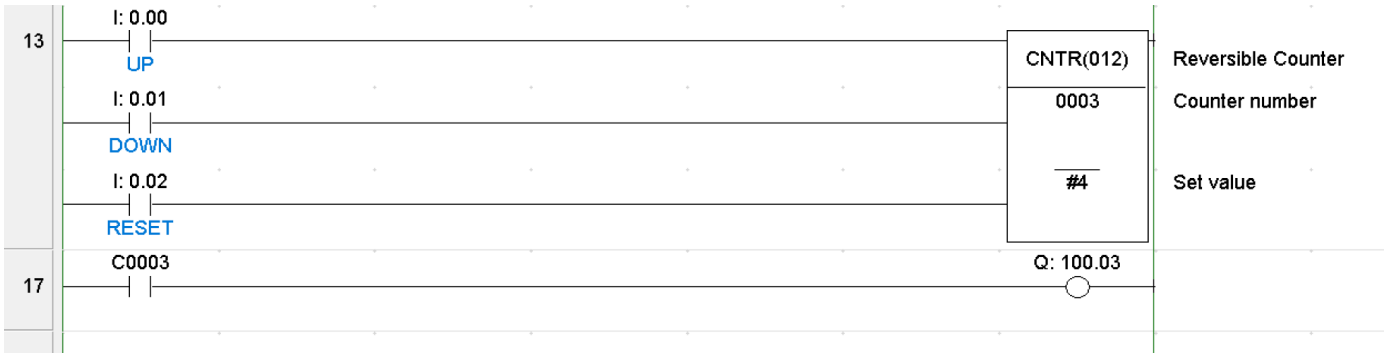
Task 2. Set-Reset using a counter.



Task 3. Counters as timers.



Task 4. Reversible Counter.



Task 5. Create a solution to check if a user pressed a button 5 times during the 12 seconds. The necessary indicators should be included.

Task 6. Prepare a solution that meets the following parameters:

1. Start condition - *button_2 & (button_3* pressed 3 times).
2. 3[s]after start condition occurrence 2Hz 50% PWM signal should be generated on *out_1*.
3. *out_2* should blink when the PWM signal is present.
4. *Button_1* stops the system.

Task 7. Create a solution that produces 2s-blinks indicating that 10 parts have been put into the box. Every 10-piece pack should be confirmed with a blink.

Task 8. Ask the teacher about the final task.

For those interested:

1. CX-Programmer Introduction Guide: www.fa.omron.com.cn/data_pdf/mnu/r132-e1-05_cx-programmer.pdf?id=1605

2. CP1L Programming Manual: assets.omron.eu/downloads/manual/en/v1/w451_cp1_cpu_unit_programming_manual_en.pdf