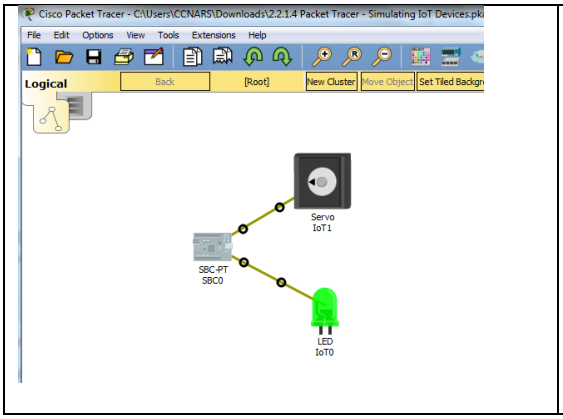
Politechnika Świętokrzyska w Kielcach Wydział Elektrotechniki, Automatyki i Informatyki	
Laboratorium Technologie IoT rozproszone sieci sensoryczne	Lab 2,3
Data wykonania: **20.11.2018r**	Autor: **Karol Zuba** **Marek Kopeć** Grupa: **3ID15A**

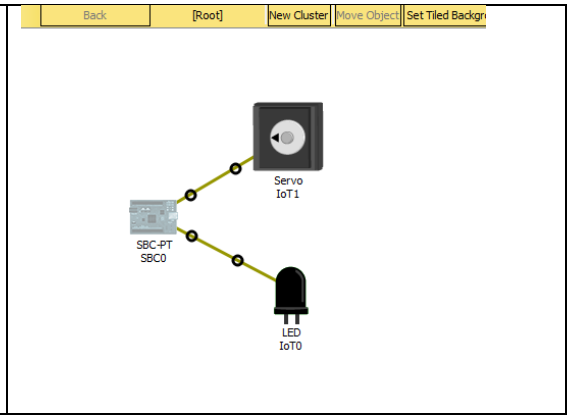
1. **Cel laboratorium**
   Zapoznanie z IoT przy stosowaniu symulacji na Packet Tracer oraz symulacje na stronie https://www.tinkercad.com/ i http://www.falstad.com/circuit/.

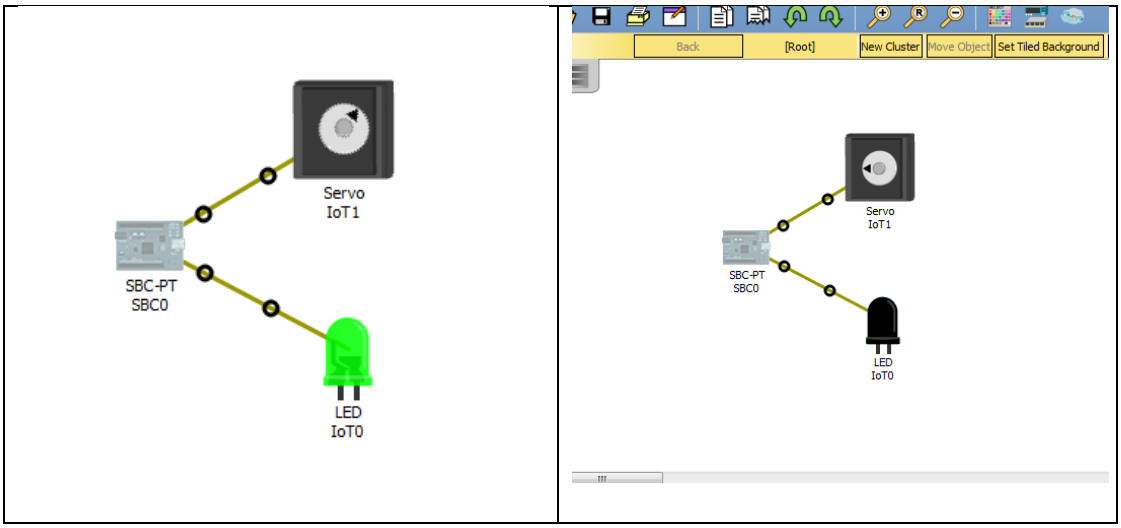
2. PT – packet tracer – Simulating IoT Devices
   Lab – Designing a Circuit from Start to Finish

   PT – Sensors and the PT Microcontroller
   Lab – The Digital Oscilloscope

PT – packet tracer – Simulating IoT Devices

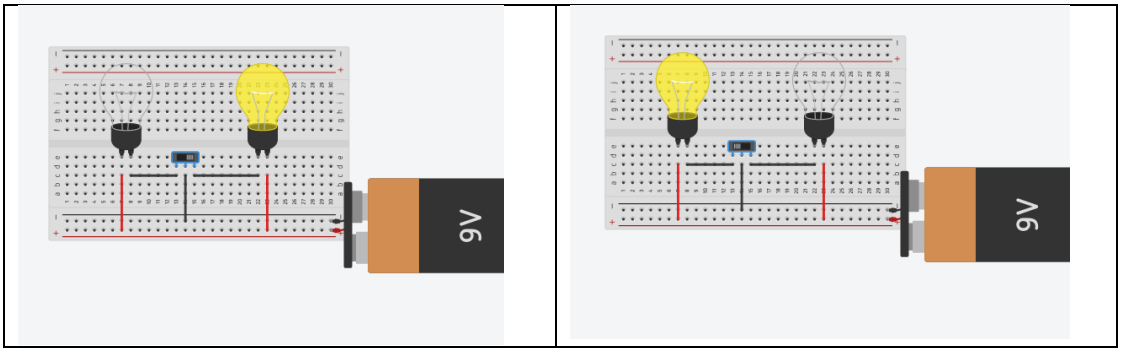






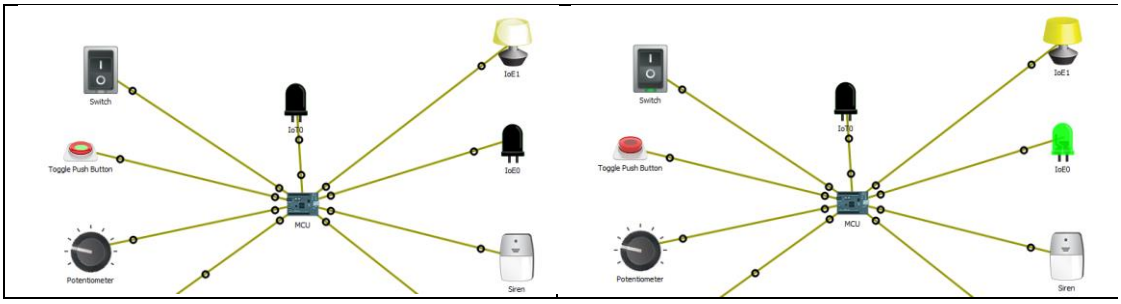
Reflection: What could be changed to make the servo turn in the opposite direction while the LED is blinking? Powinniśmy odwrócić wartości w funkcjach customWrite

Lab – Designing a Circuit from Start to Finish

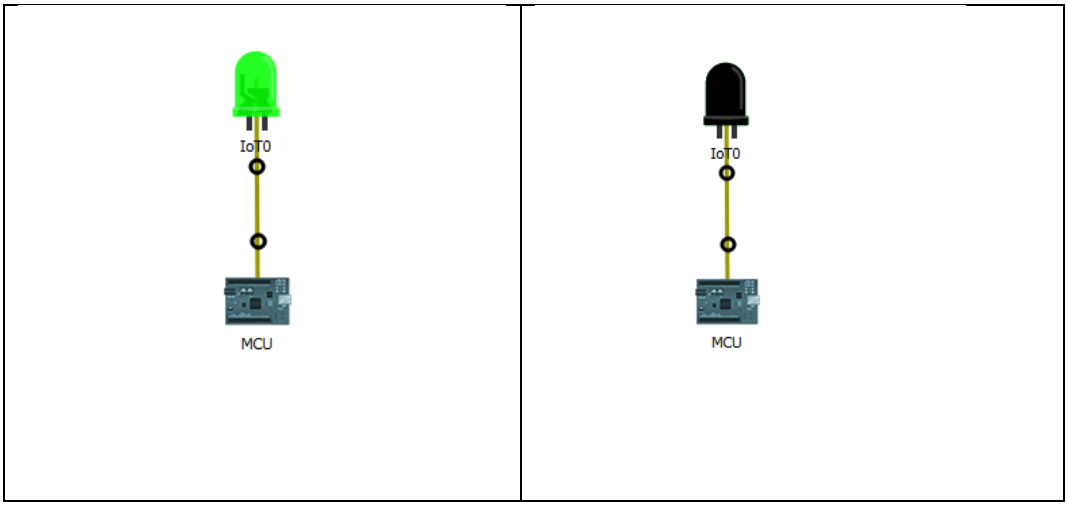


Reflection: What would happen if a potentiometer replaced the slide switch in the drawing?
Po zamianie na potencjometr prąd powinien płynnie przechodzić z jednej żarówki do drugiej wprost proporcjonalnie w miarę kręcenia nim.

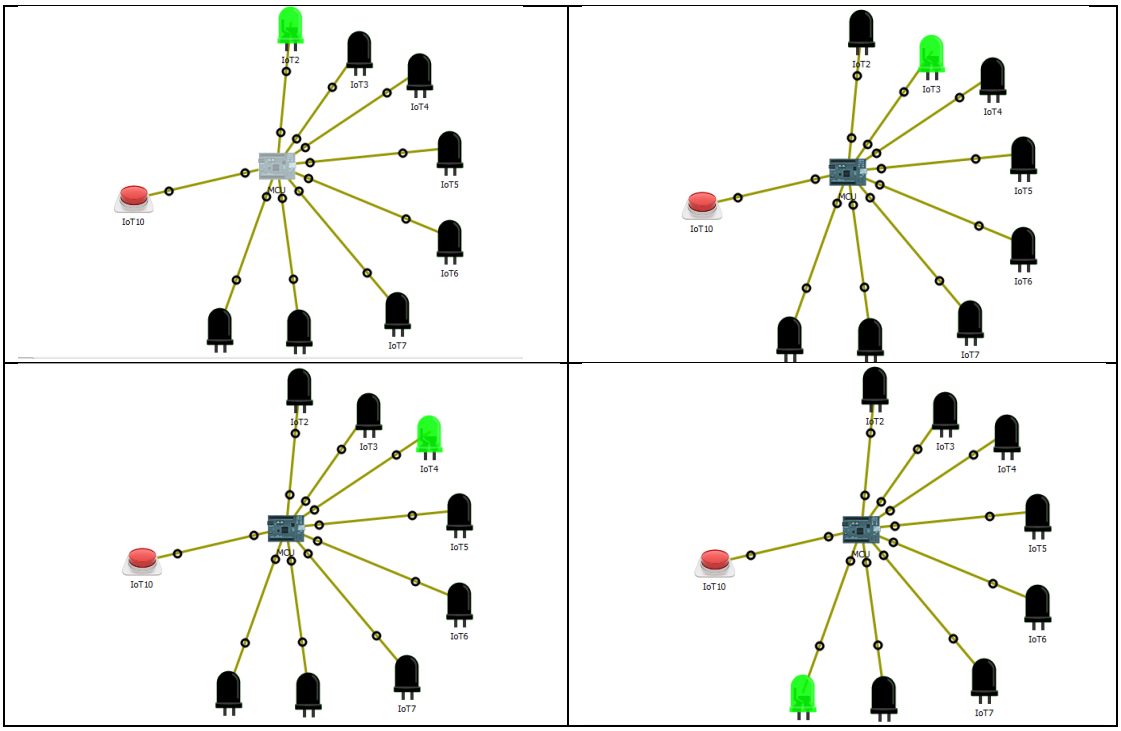
PT – Sensors and the PT Microcontroller



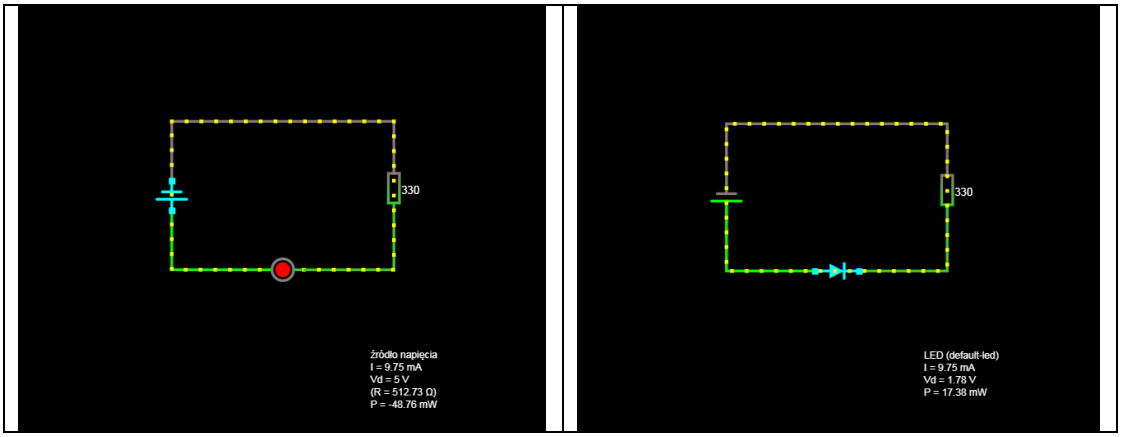
Reflection:
Challenge 1: Port SparkFun Starter's Kit circuit 1, "Blinking an LED" into Packet Tracer 7.1, using the PT MCU as the microcontroller.

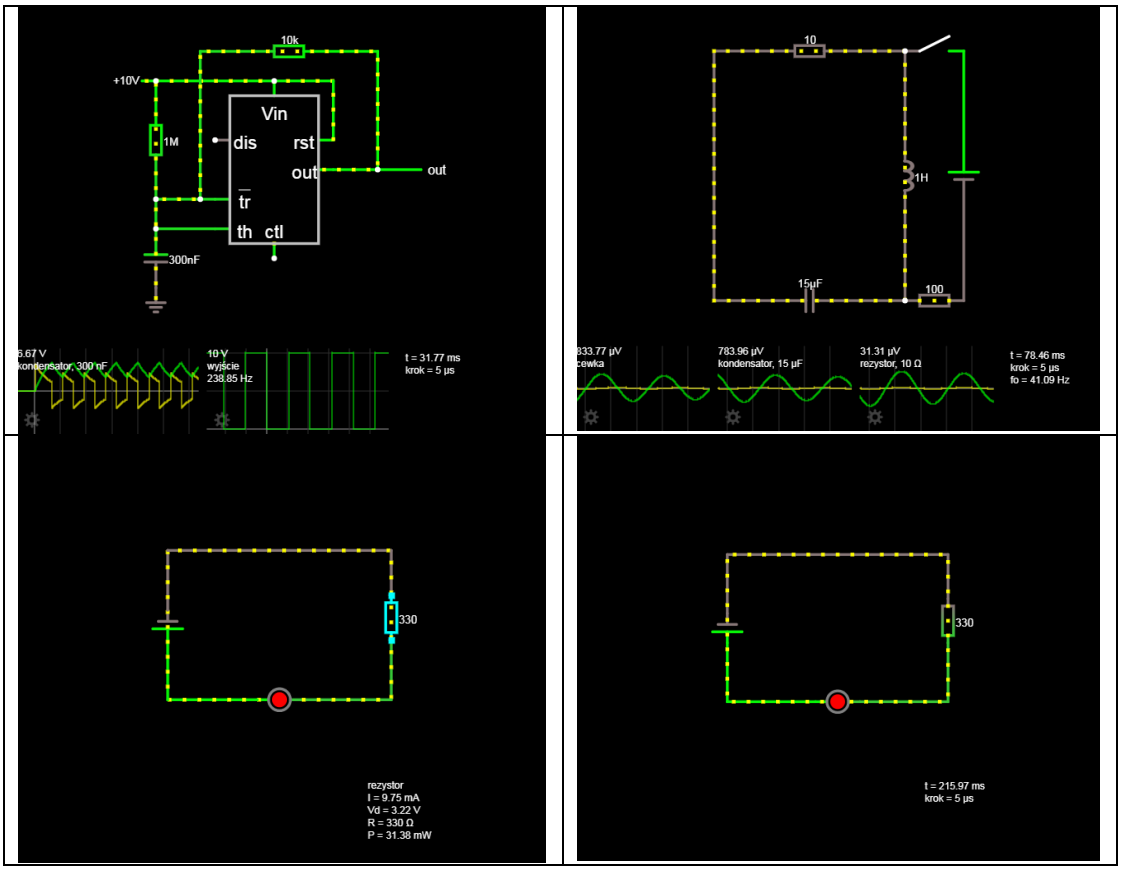


Challenge 2: Using the concepts presented on SparkFun Starter's Kit circuit 1 Blinking and LED, circuit 4 Multiple LEDs and circuit 5 Push Button, use Packet Tracer 7.1 or newer to create a circuit that illuminates one of eight LEDs in sequence, every time the push button is pressed.



Lab – The Digital Oscilloscope





What’s the voltage on the LED? 1.78V
What’s the voltage on the resistor? 3.22V
What voltage of the battery? 5V