

2018 ADArduino

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GYEONGGI SCIENCE HIGH SCHOOL

Arduino

Massimo Banzi:

How Arduino is open-sourcing imagination

TEDGlobal 2012 · 15:46 · Filmed Jun 2012

26 subtitle languages ?

View interactive transcript



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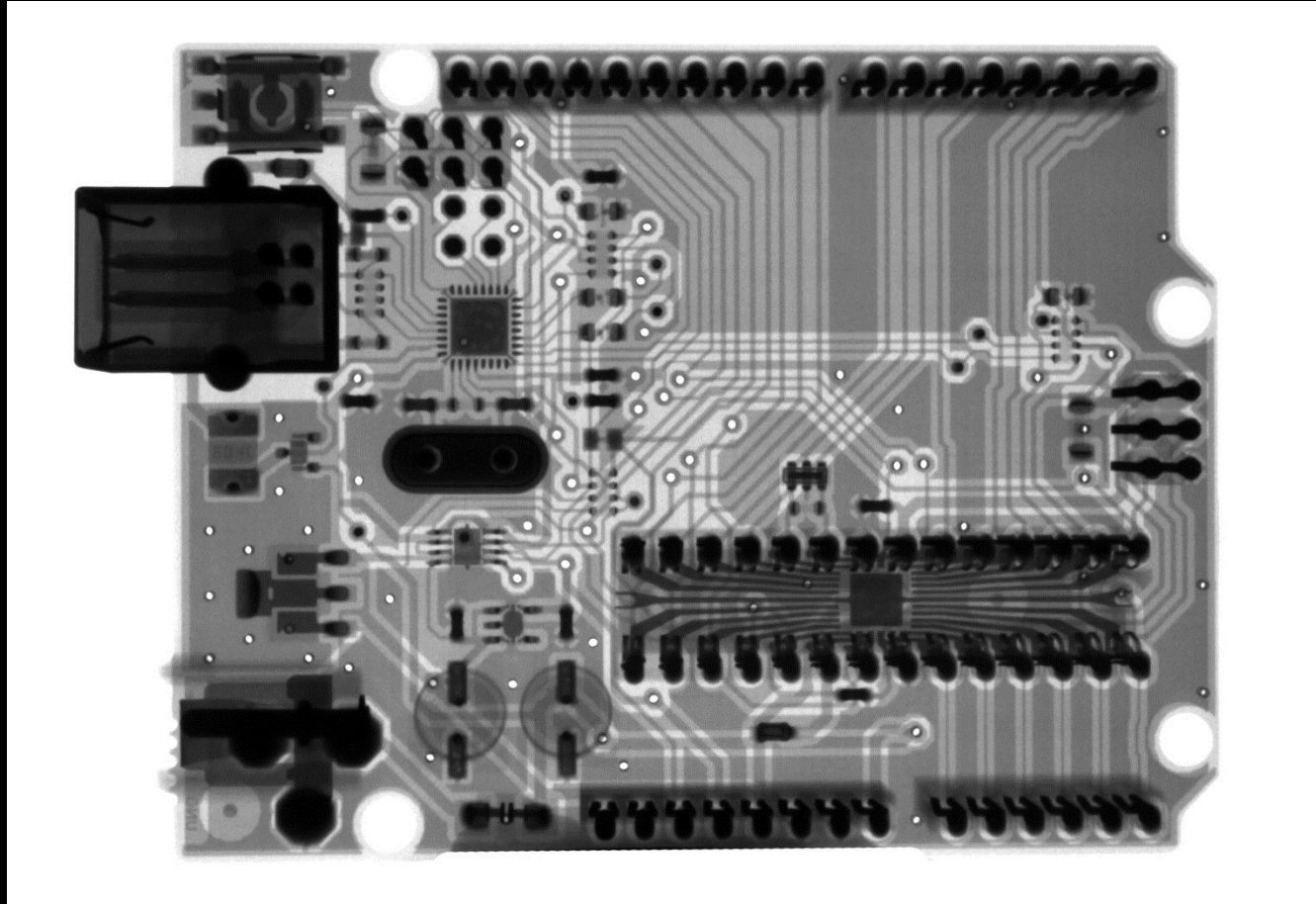
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- http://www.ted.com/talks/massimo_banzi_how_arduino_is_open_sourcing_imagination

Massimo Banzi

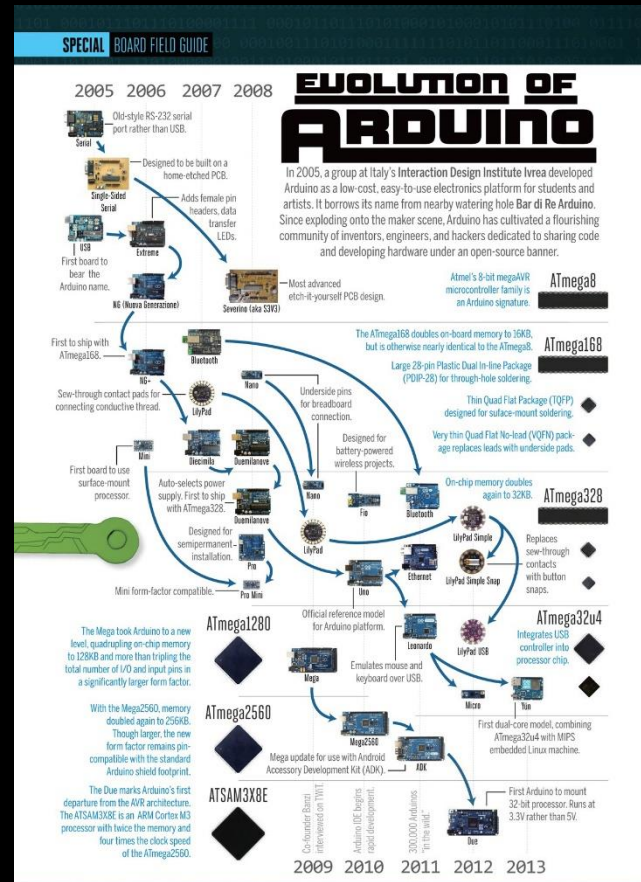
- Massimo Banzi helped invent the Arduino, a tiny, easy-to-use open-source microcontroller that's inspired thousands of people around the world to make the coolest things they can imagine — from toys to satellite gear. Because, as he says, "You don't need anyone's permission to make something great."

Xray of an Arduino



https://www.reddit.com/r/arduino/comments/99y9e1/xray_of_an_arduino_uno_cc0/

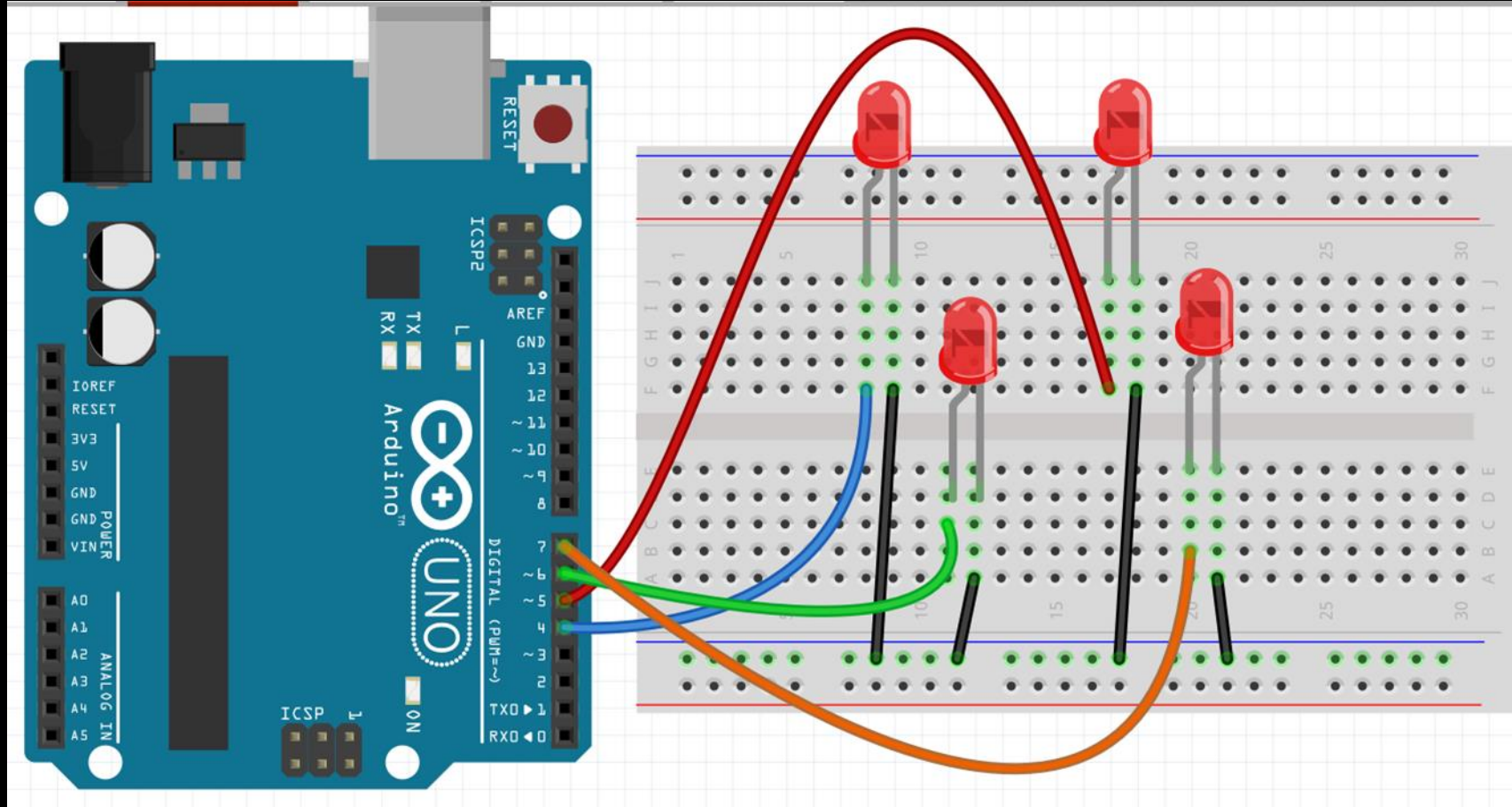
Evolution of Arduino



<https://blog.arduino.cc/2013/11/02/evolution-of-arduino-the-family-tree/>

Let's Start

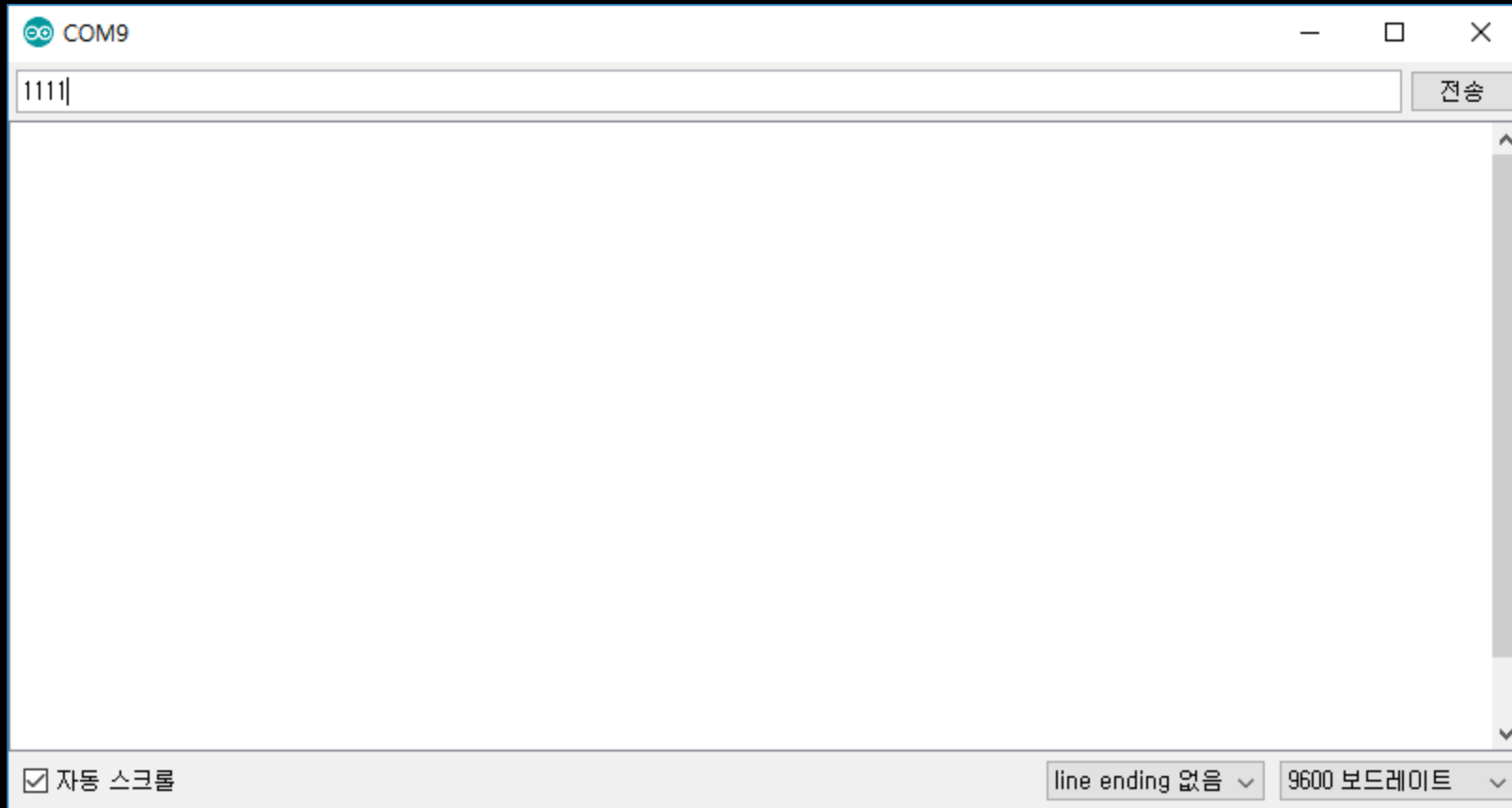
Serial LED Blink – Hard Ware



Serial LED Blink - Software

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter1/gs_1_SerialLEDBlink

Serial LED Blink –Serial Monitor



LED Control Using Processing

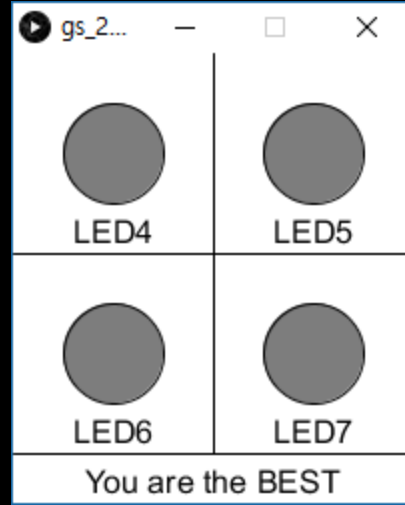
- First upload this code to Arduino
- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter1/gs_2_LED_control_arduino

LED Control Using Processing

- Type this code to Processing
- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter1/gs_2_LED_control_processing

LED Control Using Processing

- Your are the BEST



Reverse : Arduino send to Processing

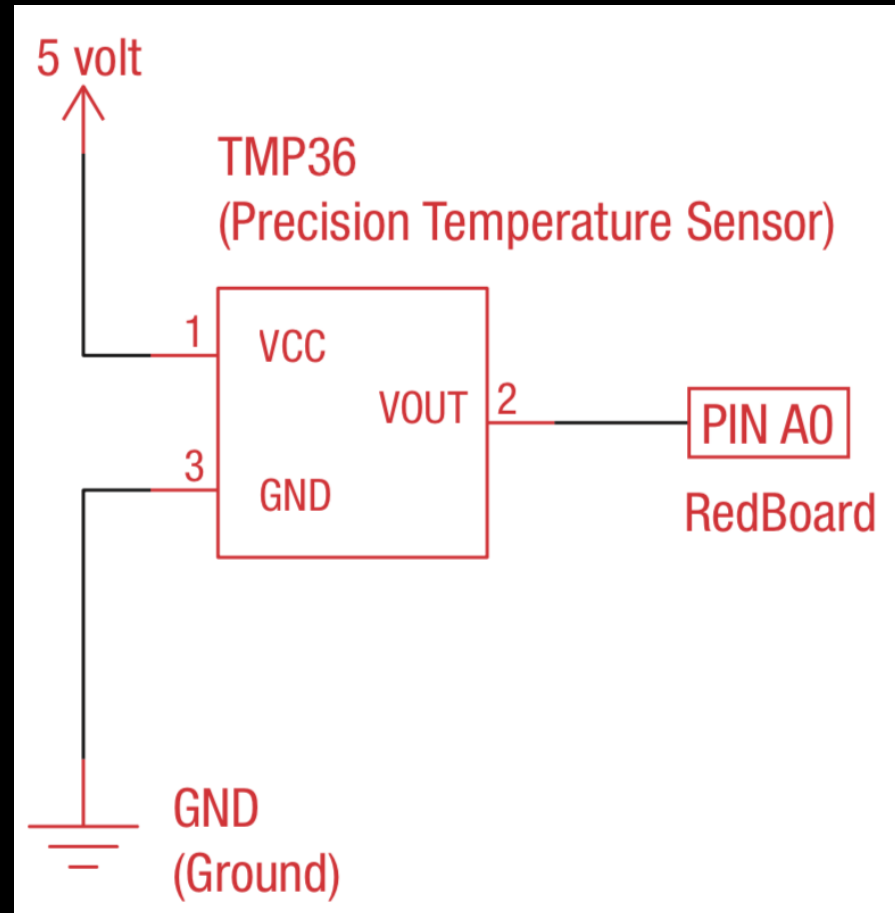
- Arduino Code
- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter1/gs_3_LED_control_arduino

Reverse : Arduino send to Processing

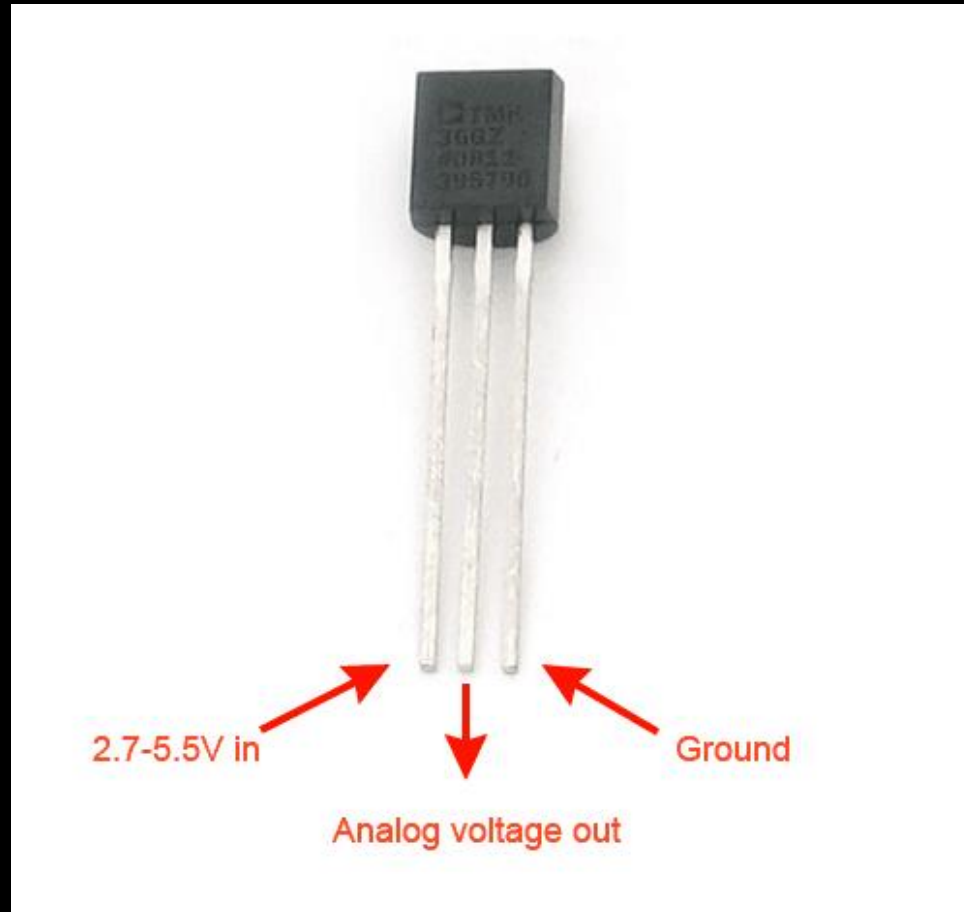
- Processing Code
- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter1/gs_3_LED_control_processing

Temperature

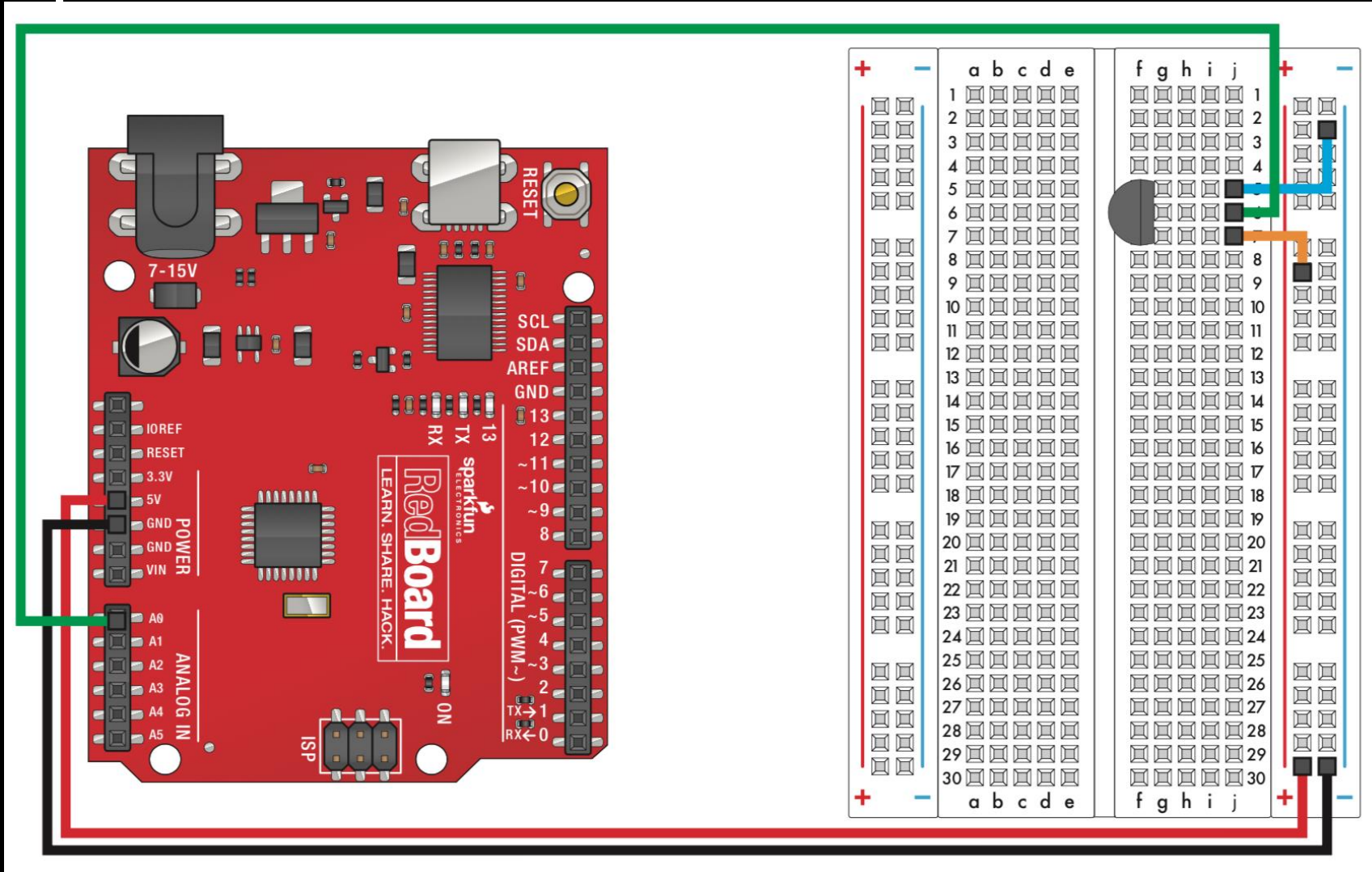
Temperature



Temperature



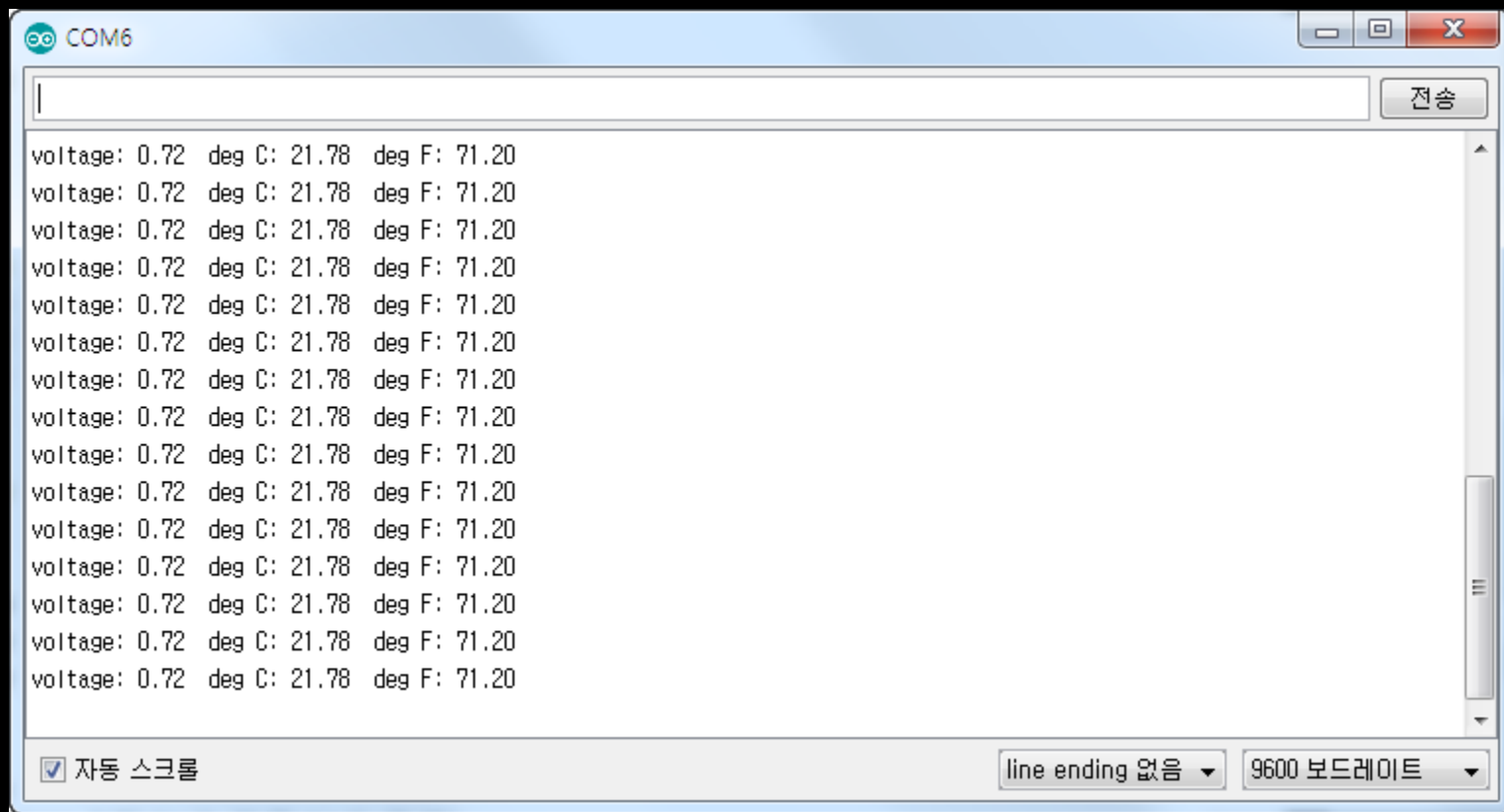
Temperature - HW



Temperature - SW

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter2/gs_1_TMP36_arduino

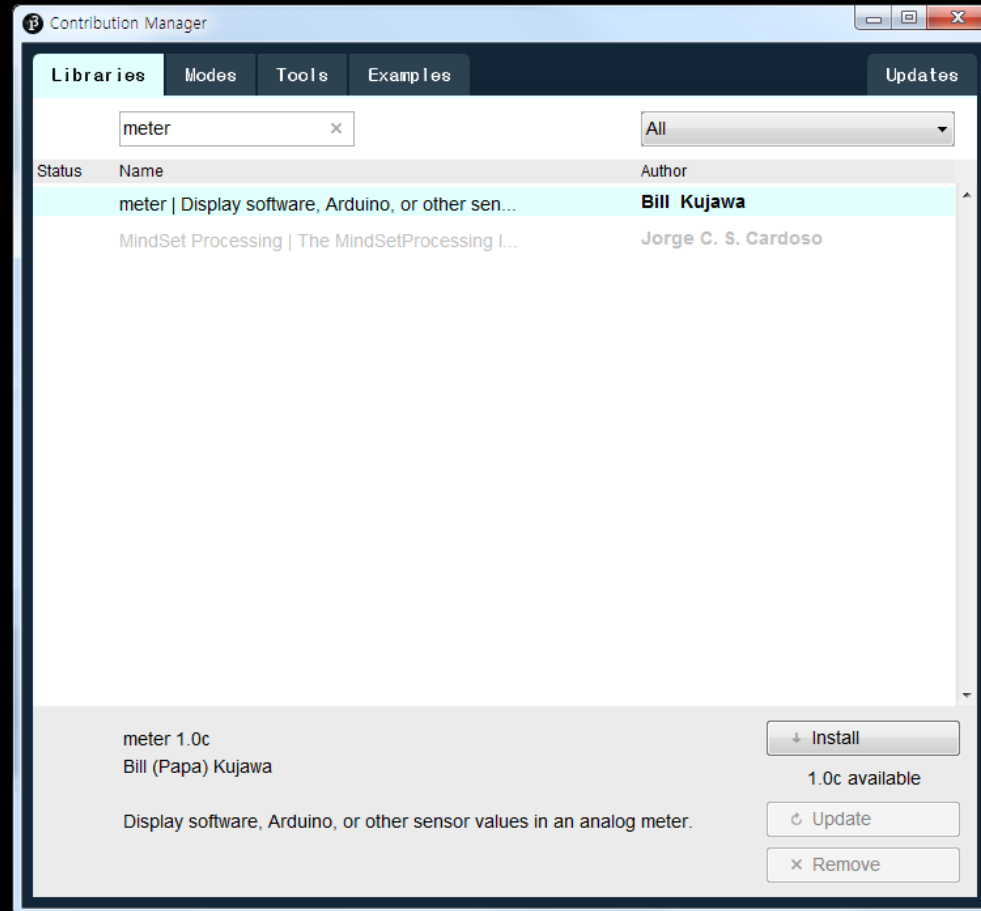
Temperature



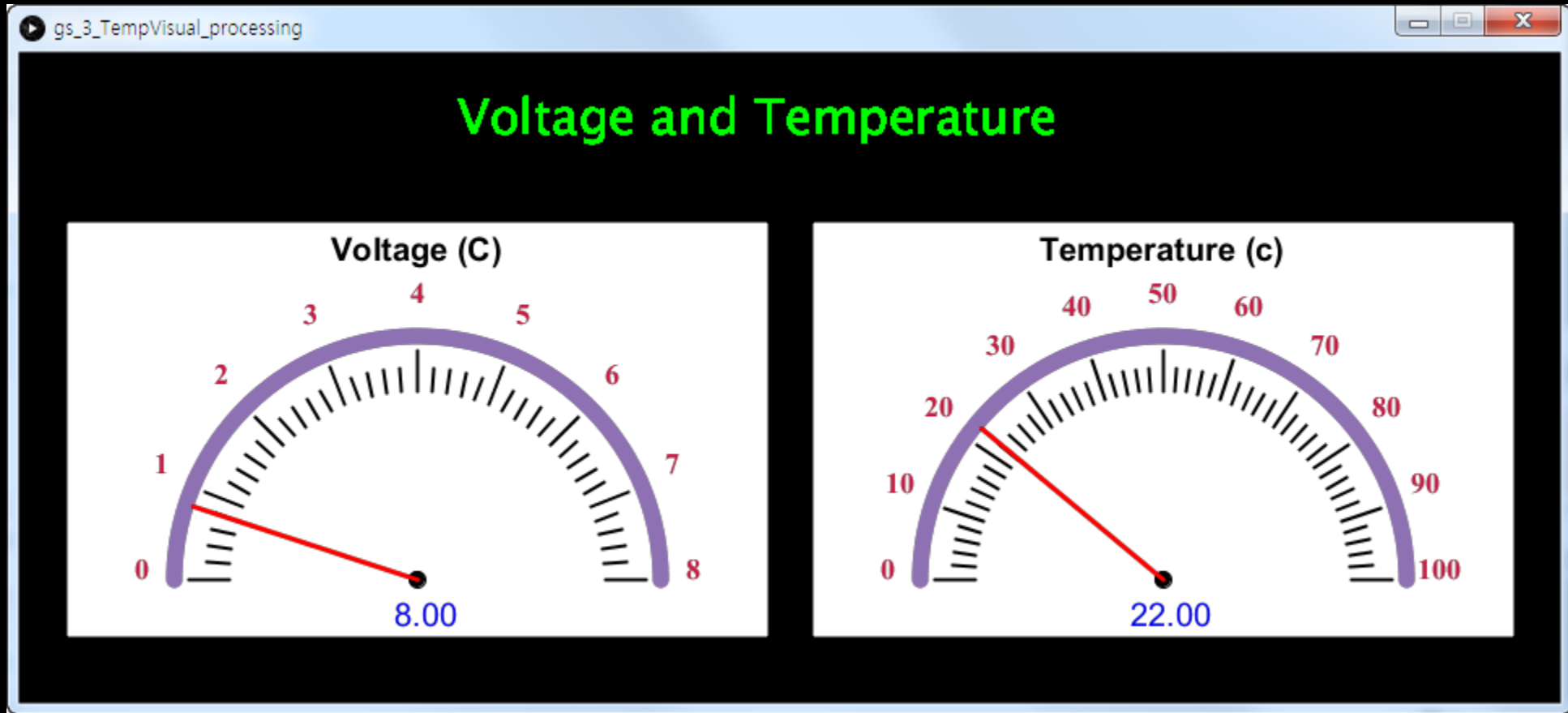
Temperature – CSV with Processing

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter2/gs_2_DataSaveCSV_processing

Temperature – Visualization Processing.



Temperature – Visualization Processing.



Temperature – Visualization Processing.

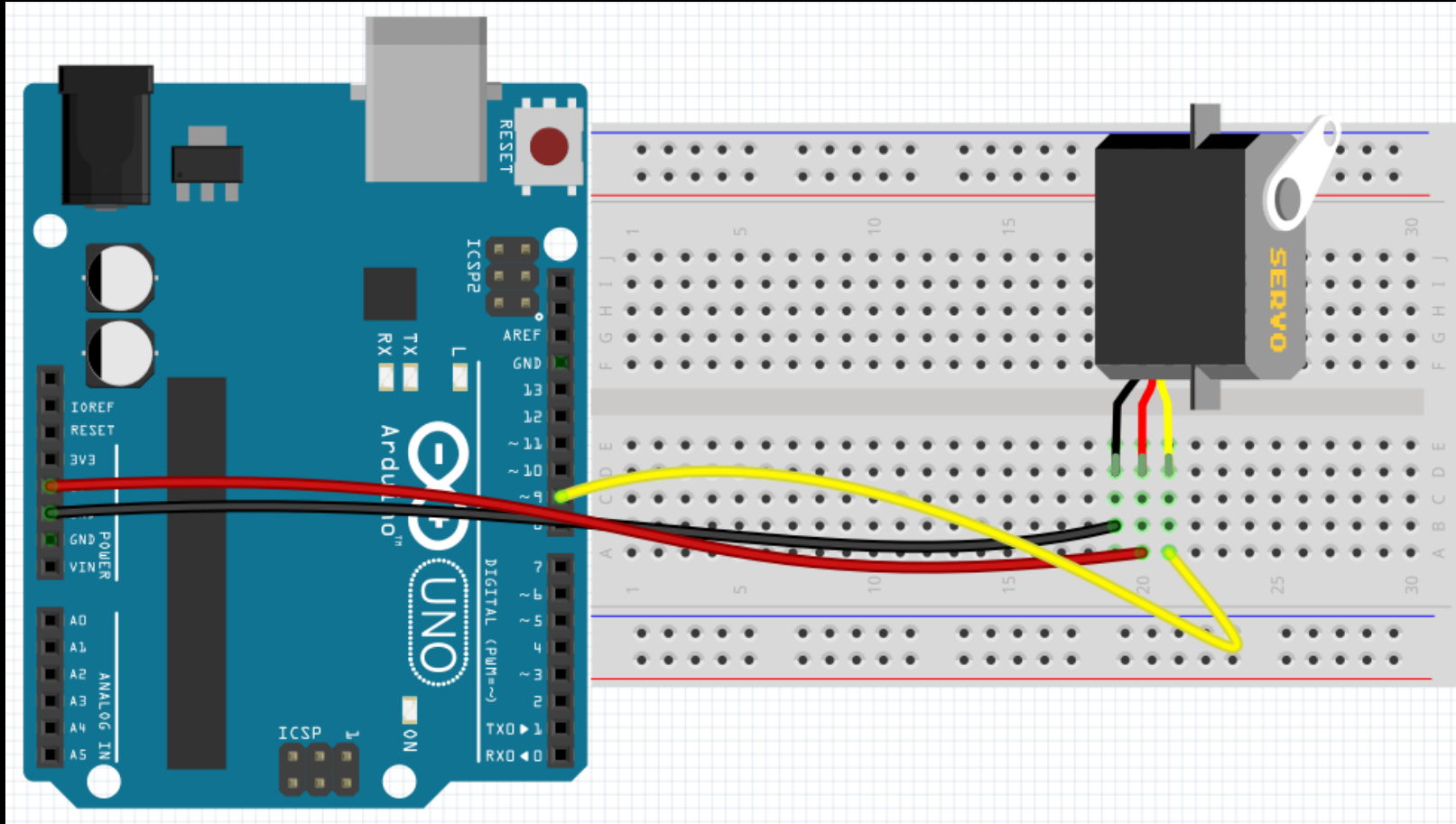
- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter2/gs_3_TempVisual_processing

Attempt

-

Servo

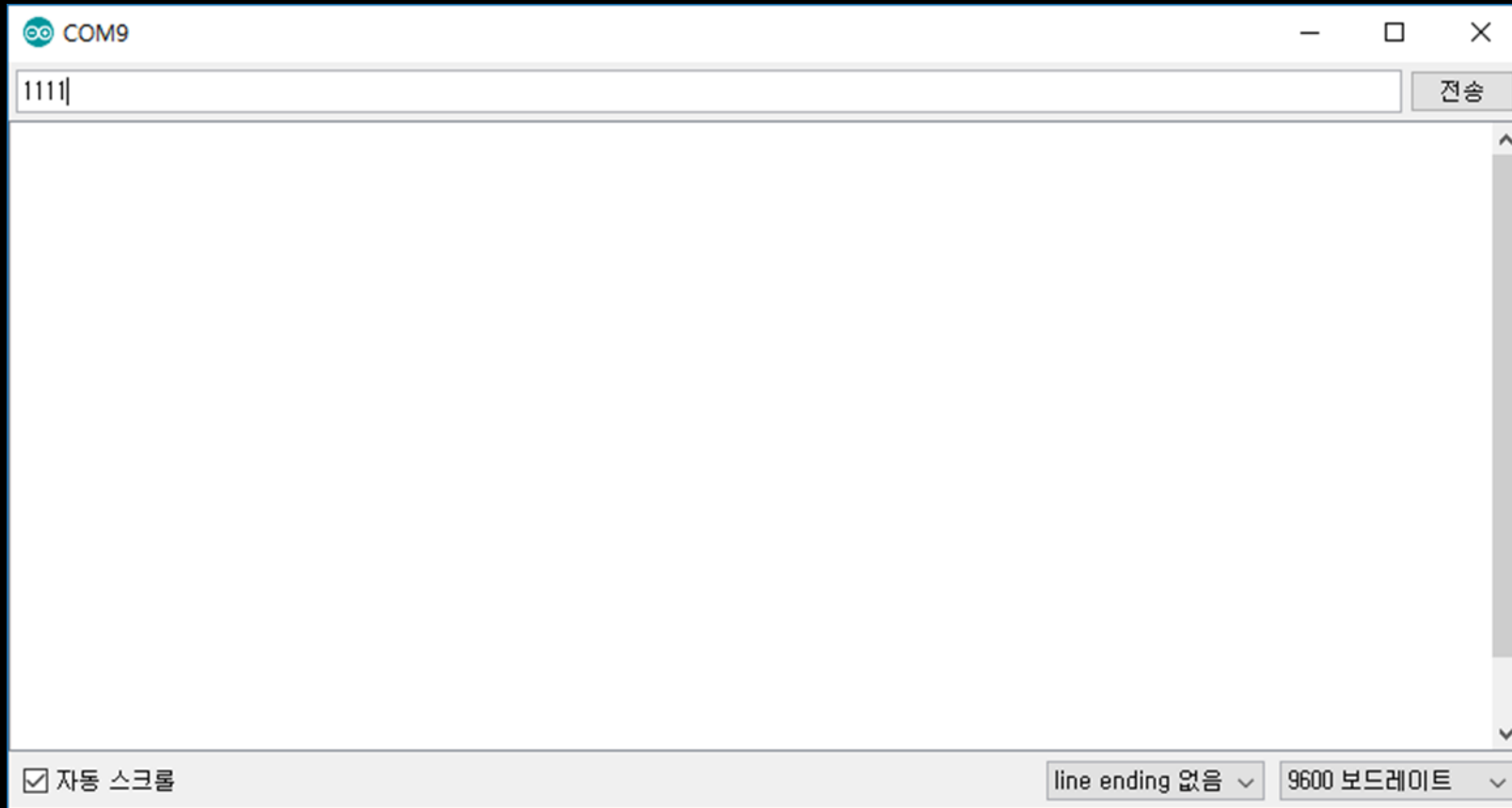
Servo Test - Simple



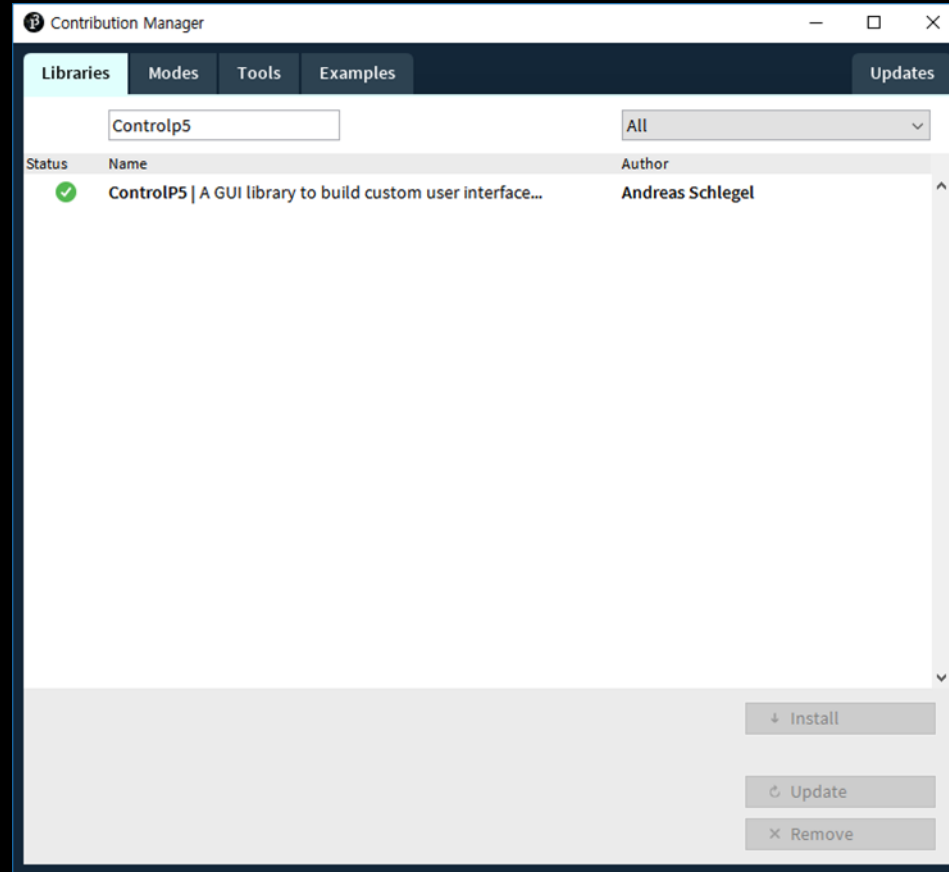
Servo Serial using Serial Monitor

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter3/gs_2_ServoSerial_arduino

Send Value to Arduino



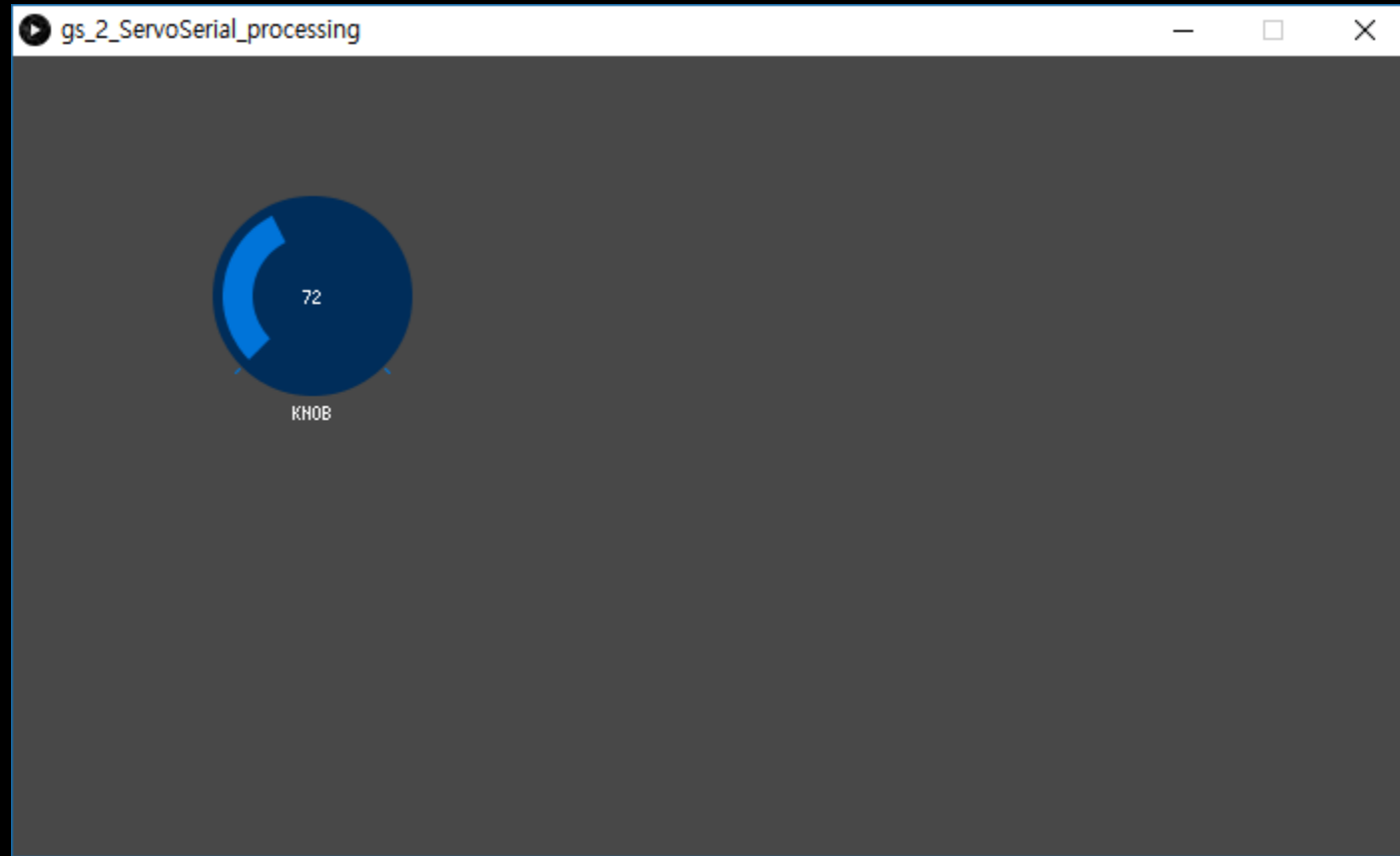
Servo with Processing



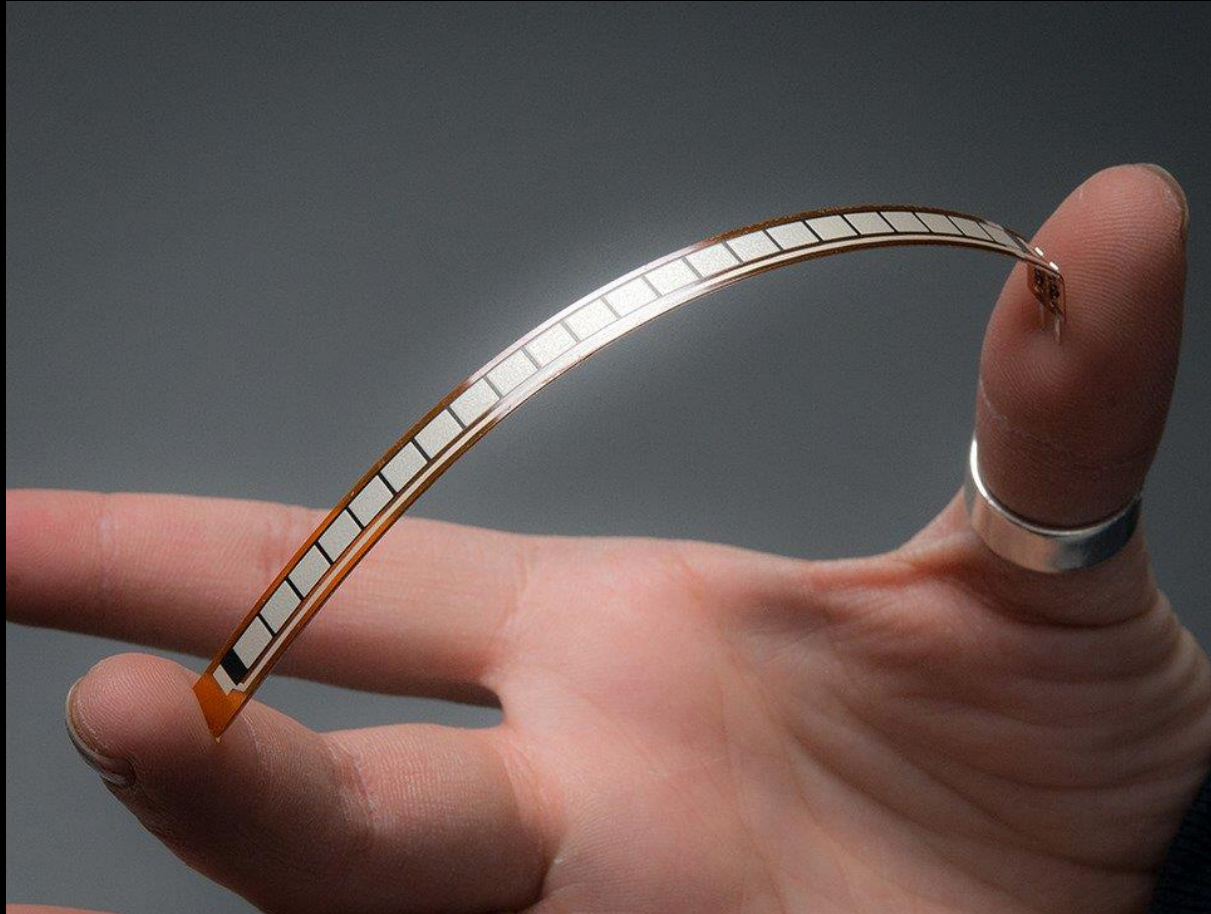
Servo Processing code

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter3/gs_2_ServoSerial_processing

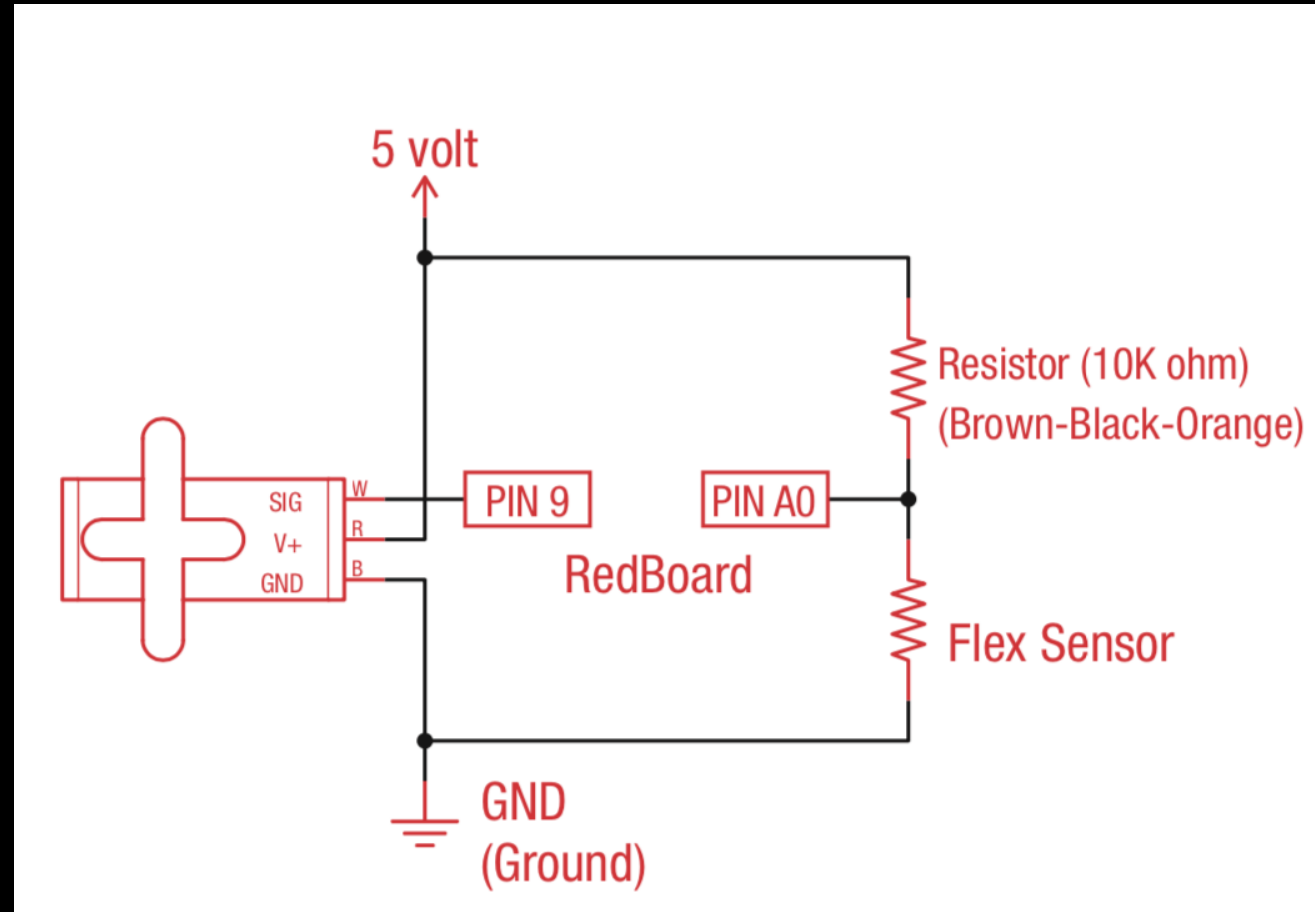
ServoSerial Processing - Cool



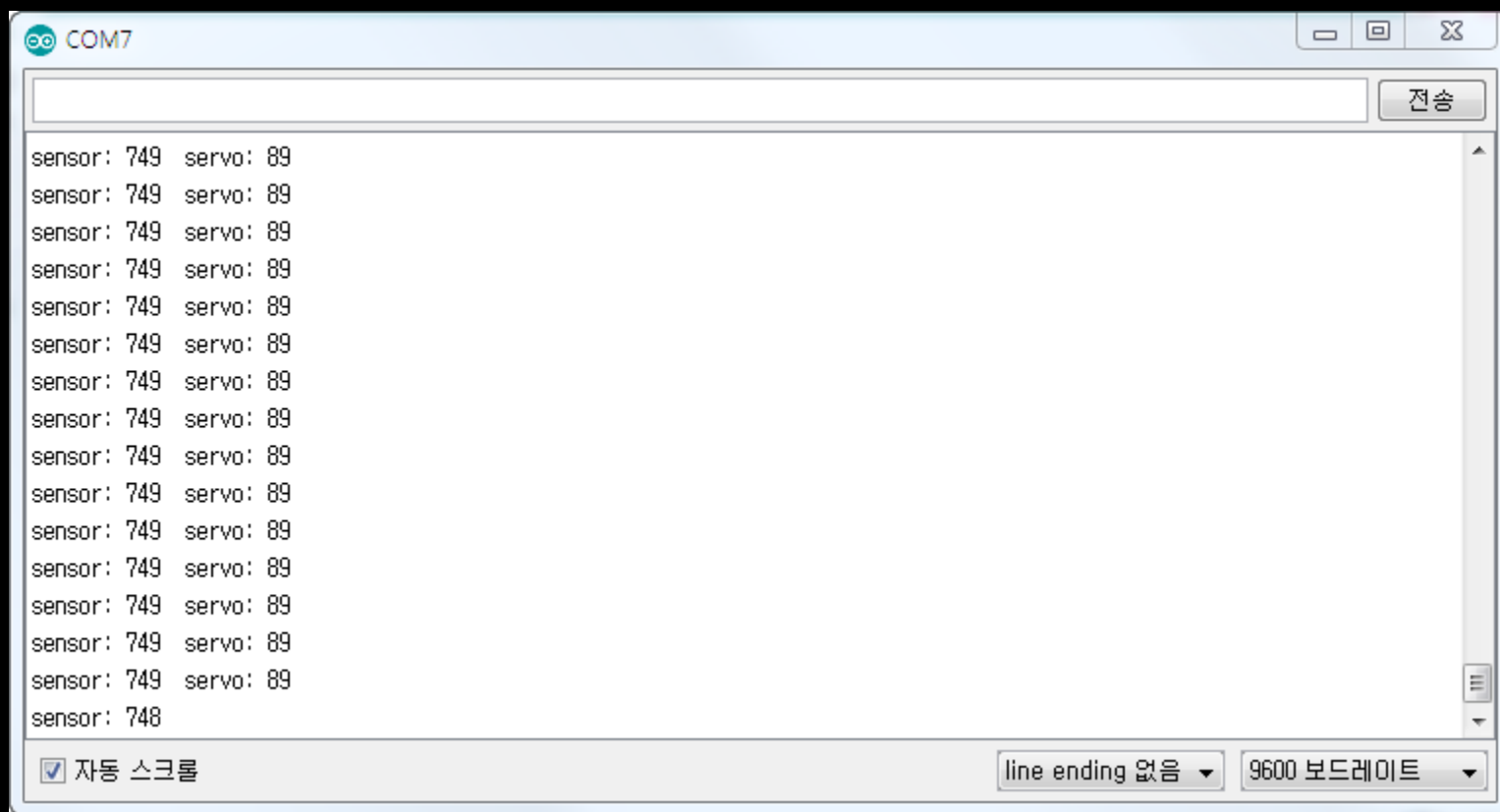
Servo with Flex Sensor



Using 10K Ohm



Servo with Flex Sensor

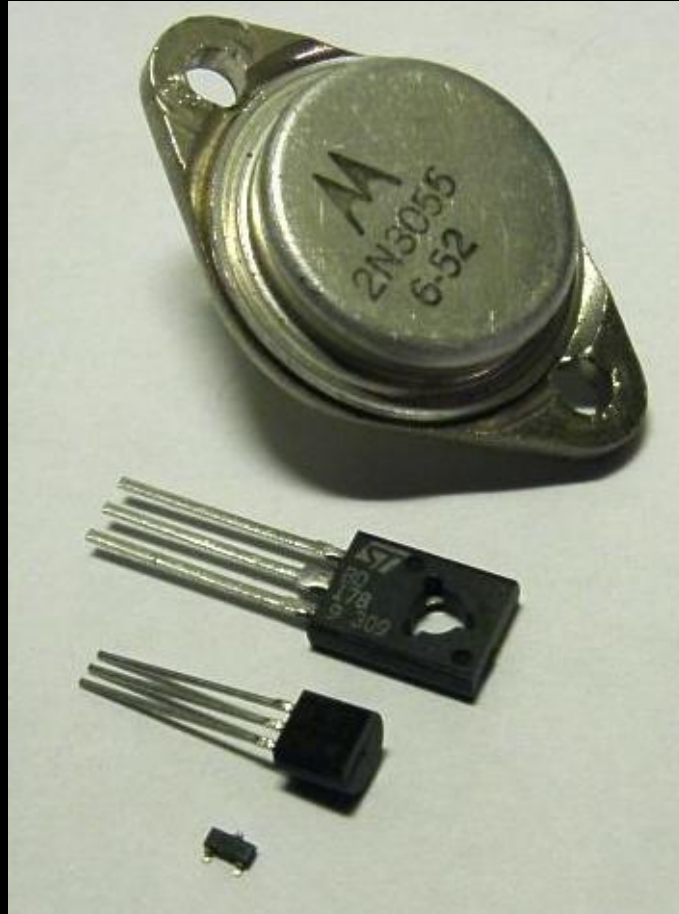


Servo with Flex Sensor

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter3/gs_5_ServoFlex

Transistor

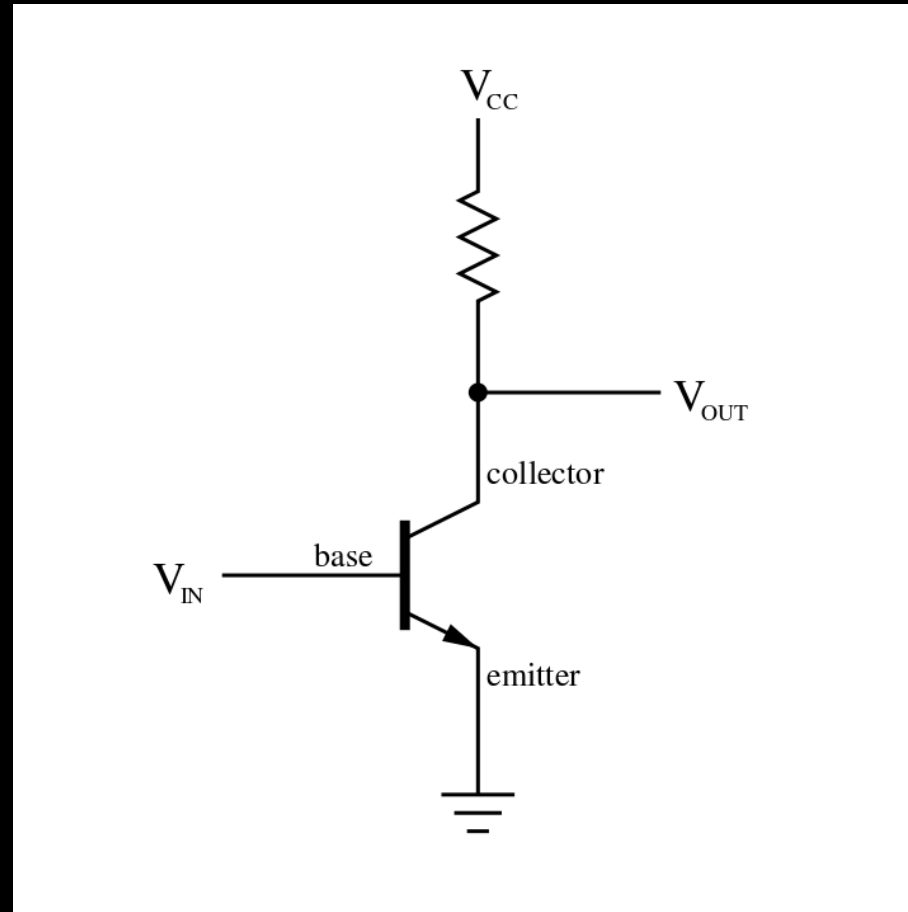
Transistor



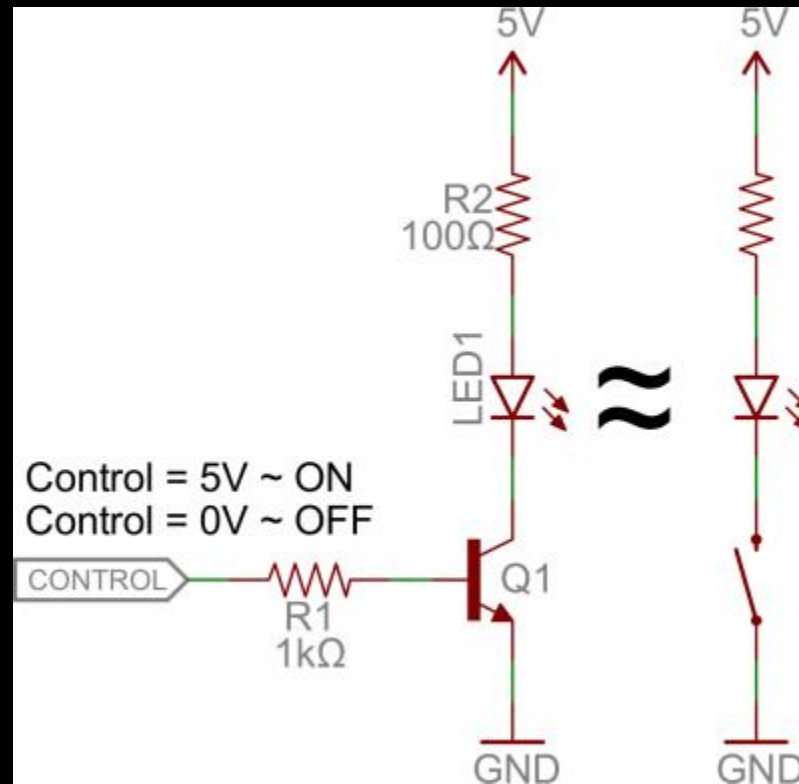
Transistor



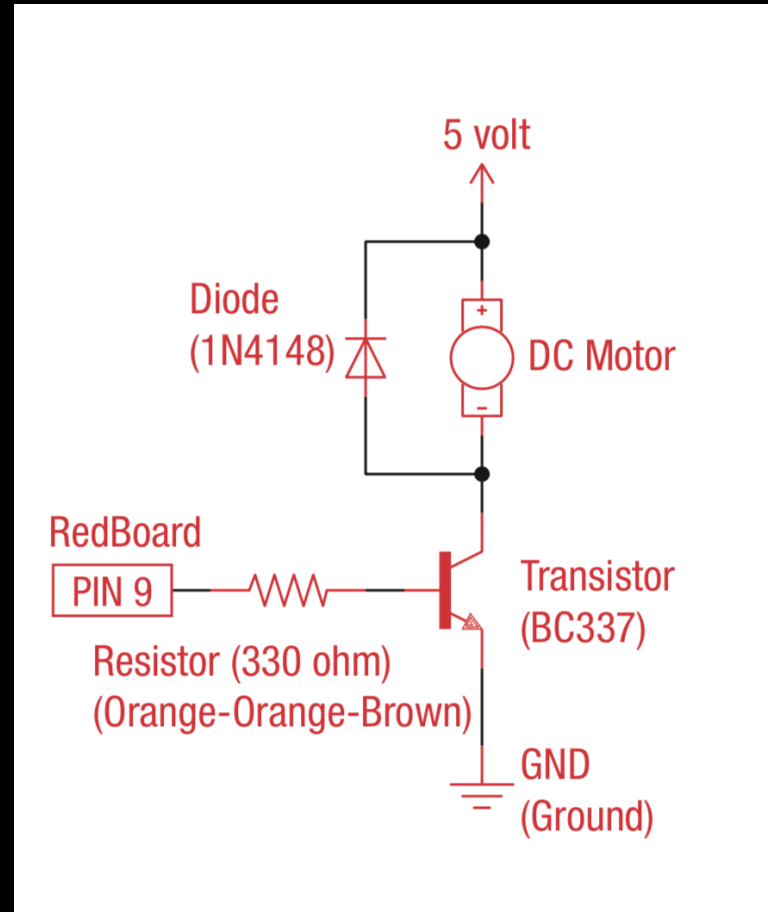
Transistor



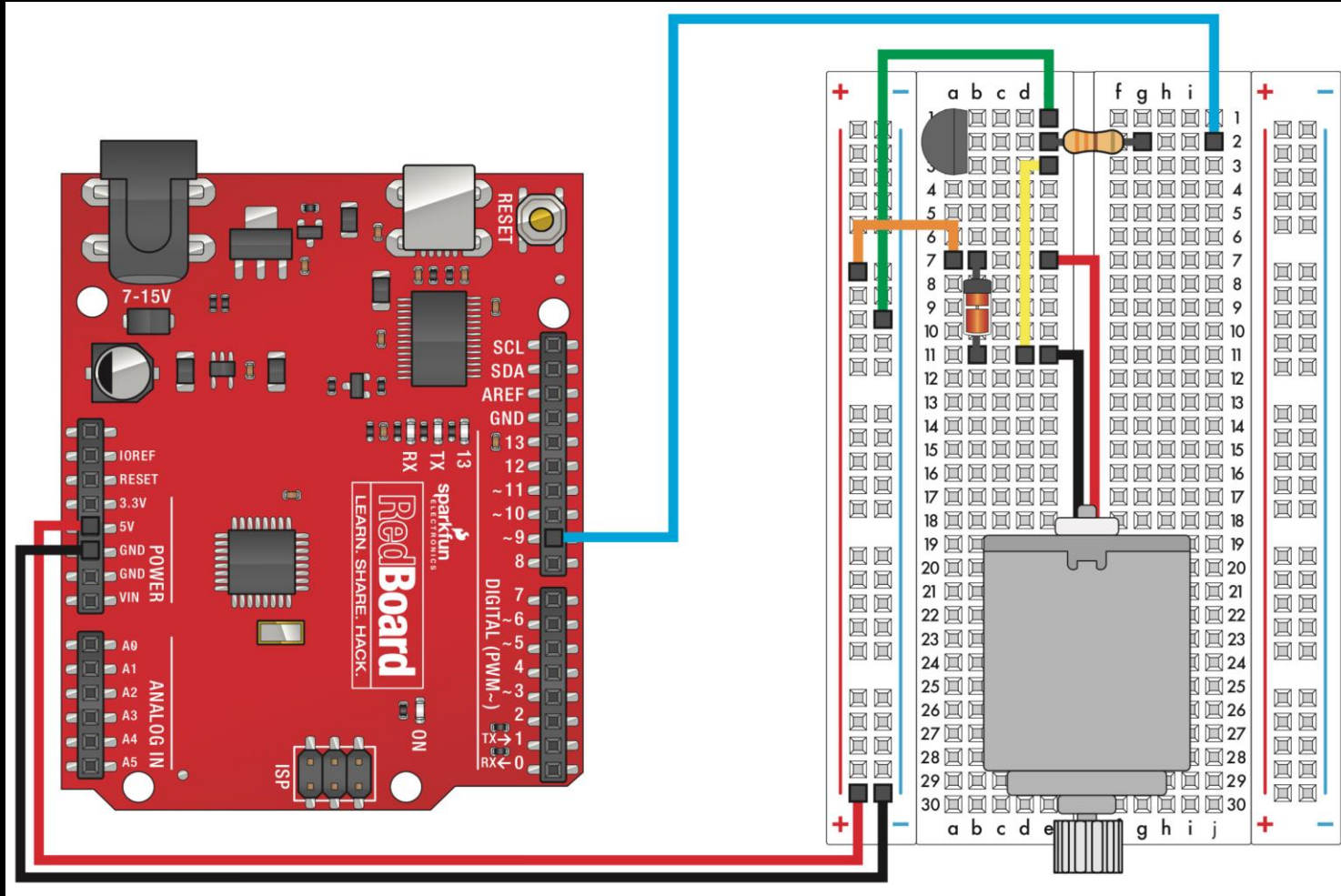
Transistor



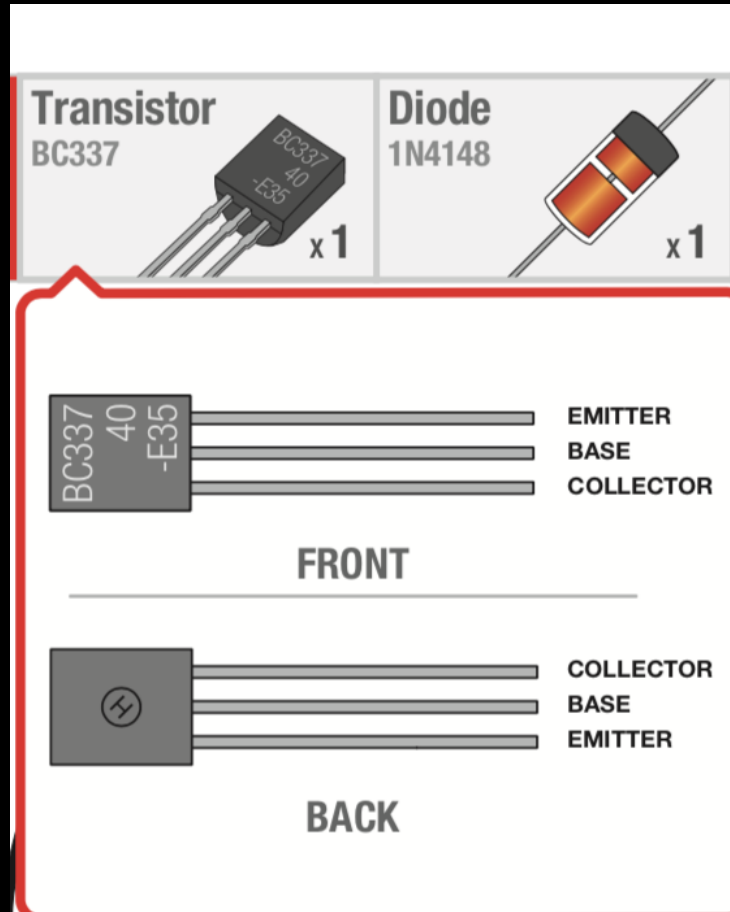
Transistor



Go!

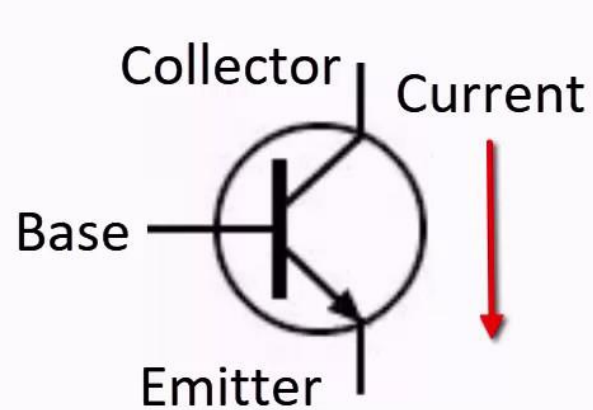


Transistor

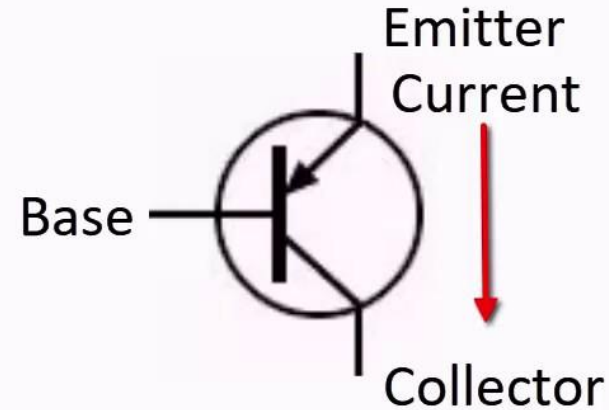


Transistor

PNP-Based Circuit



NPN Transistor



PNP Transistor

Coding

- https://github.com/suakii/2018GSAdArduino/tree/master/Chapter4/gs_1_Transistor_Motor

Transistor

