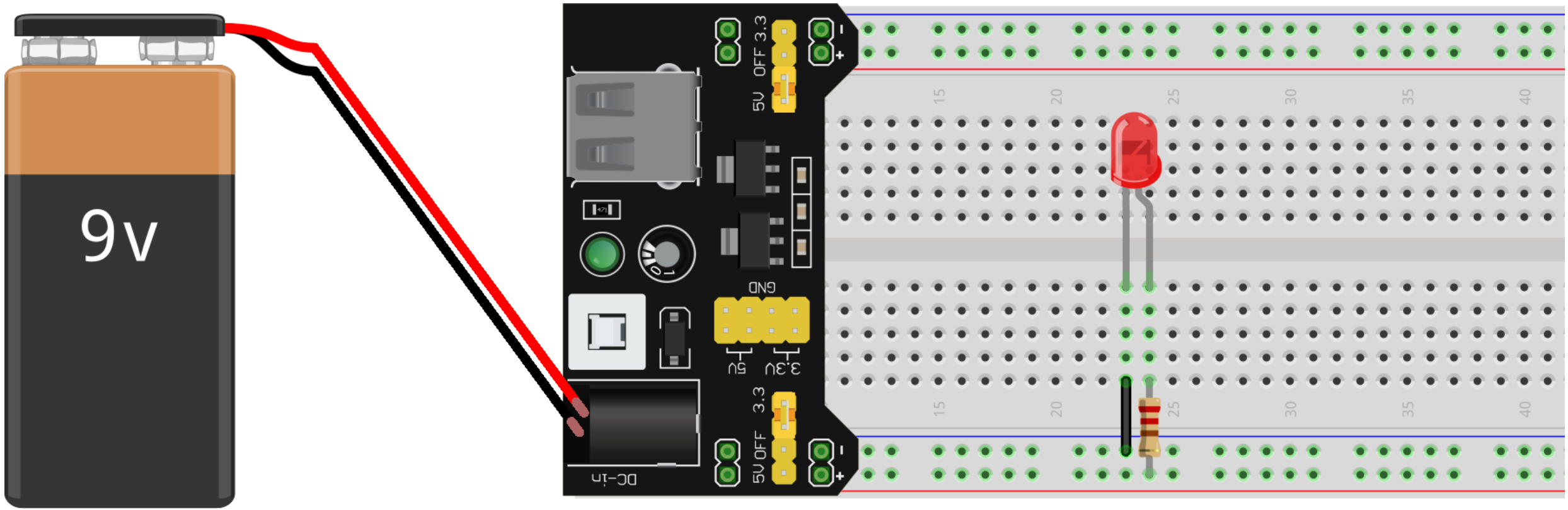
ARDUINO 1 EXTRA PROJECTS

San Juan EDC

EXTRA PROJECT 1 EXTERNAL POWER SUPPLY

- No code
- Build the Circuit
- Click the checkmark then the arrow


9v
5V OFF 3.3
GND
5V
3.3V
5V OFF 3.3
DC-in

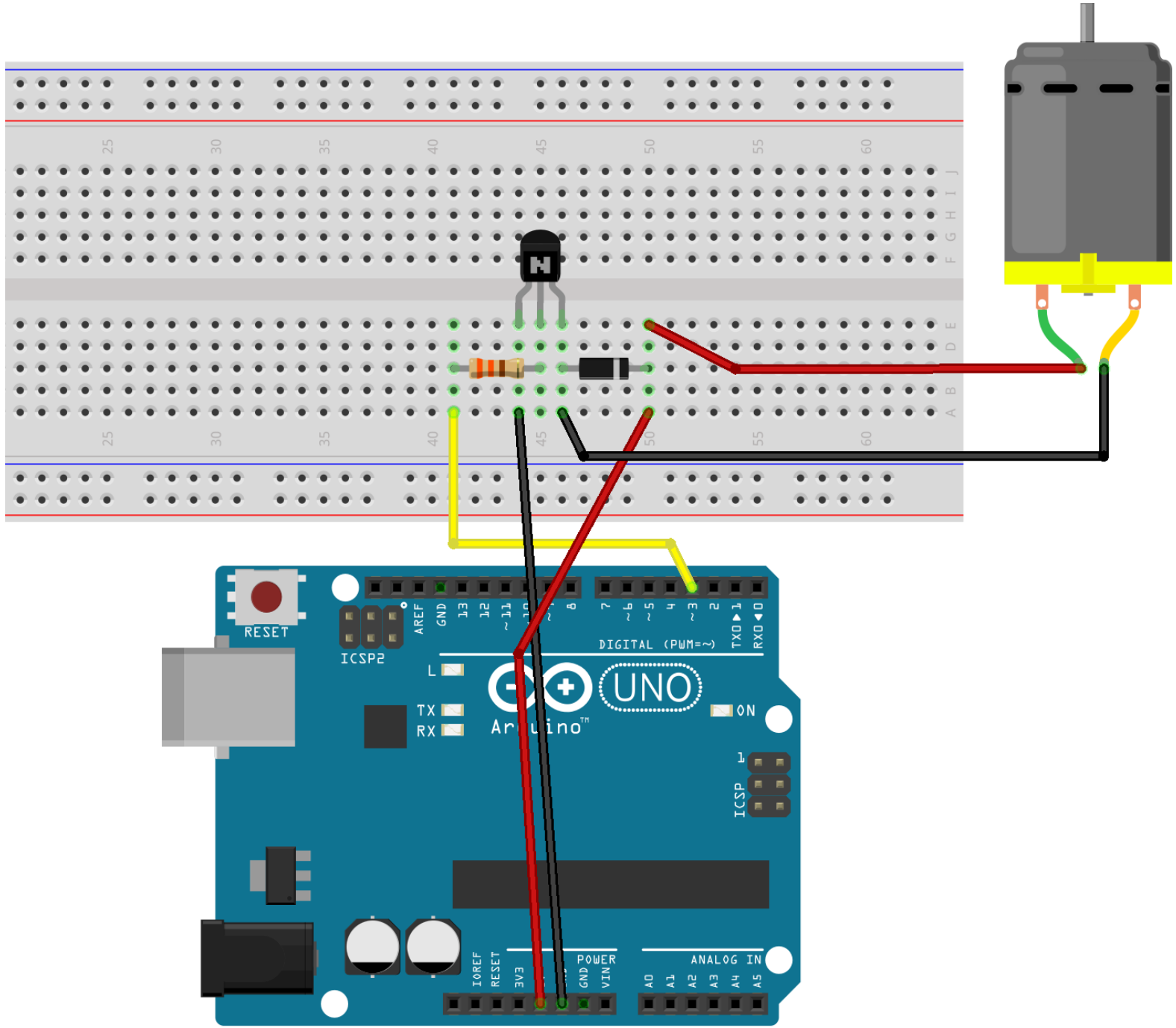
EXTRA PROJECT 2.0 3-6V MOTOR

- Open the folder called extra2.0
- Open the code
- Build the Circuit
- Click the checkmark then the arrow

- Project from
  - https://learn.adafruit.com/adafruit-arduino-lesson-13-dc-motors?view=all

MATERIALS

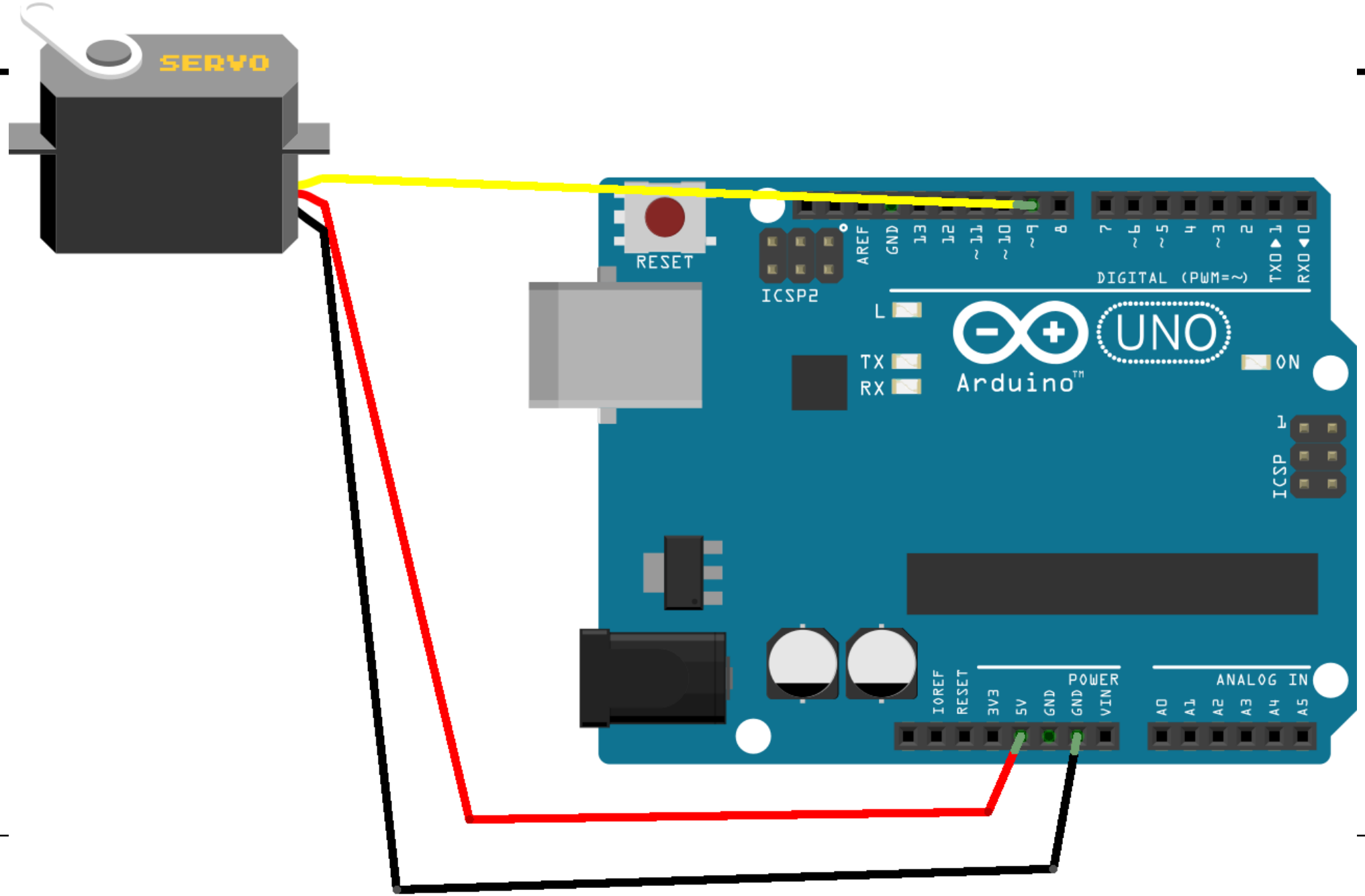
- 330 Ohm resistor
- 3 Jumper cables
- Diode Rectifier
- NPN Transistor


RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
UNO
ON
ICSP
POWER
ANALOG IN
IOREF
RESET
3V3
5V
GND
GND
VIN
A0
A1
A2
A3
A4
A5

EXTRA PROJECT 3.0

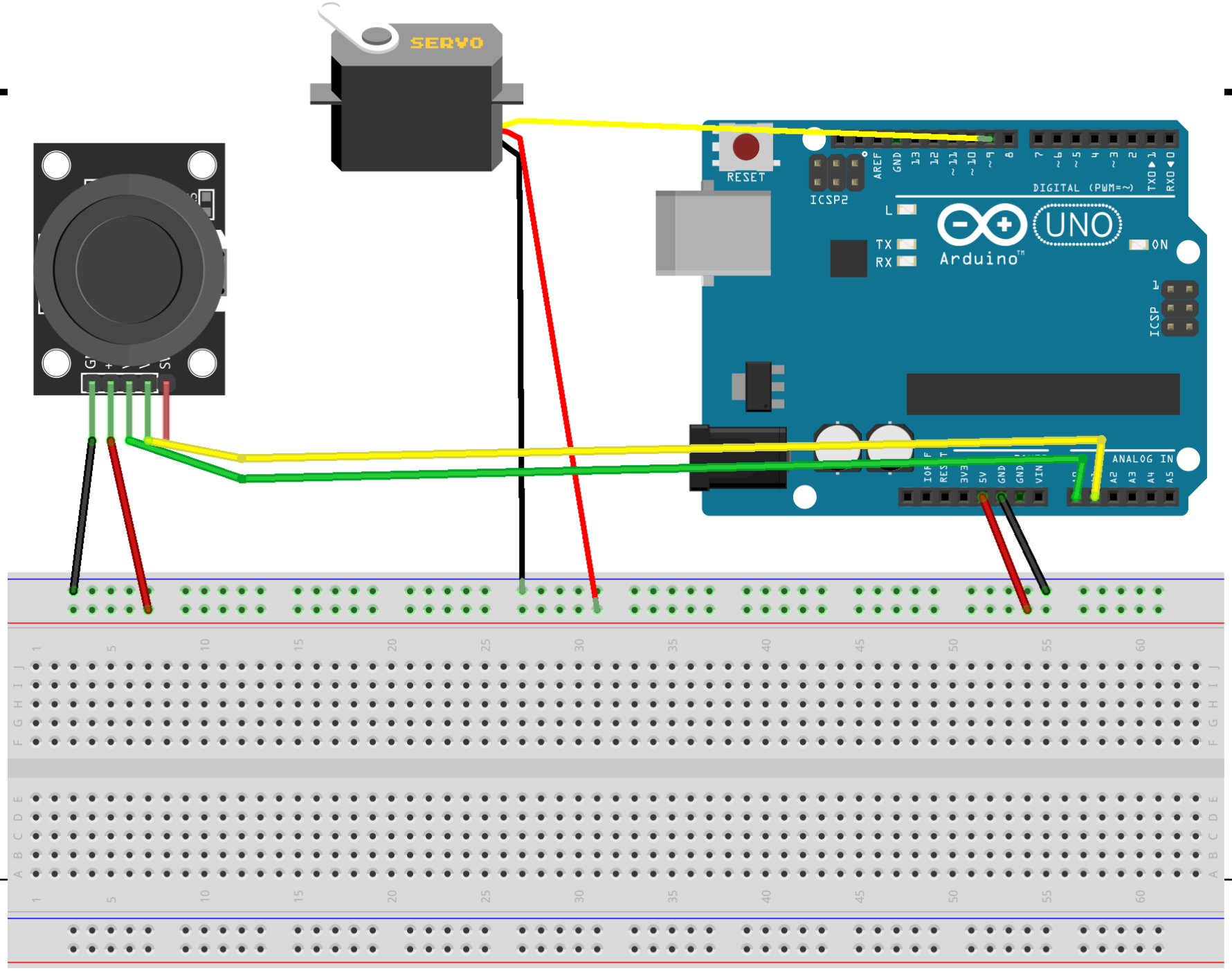
- Open the folder called extra3.0
- Open the code
- Build the Circuit
- Click the checkmark then the arrow

- Project from
  - https://docs.arduino.cc/tutorials/generic/basic-servo-control/


SERVO
RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
Arduino™
UNO
ON
ICSP
IOREF
RESET
3V3
5V
GND
GND
VIN
POWER
A0
A1
A2
A3
A4
A5
ANALOG IN

EXTRA PROJECT 4.0

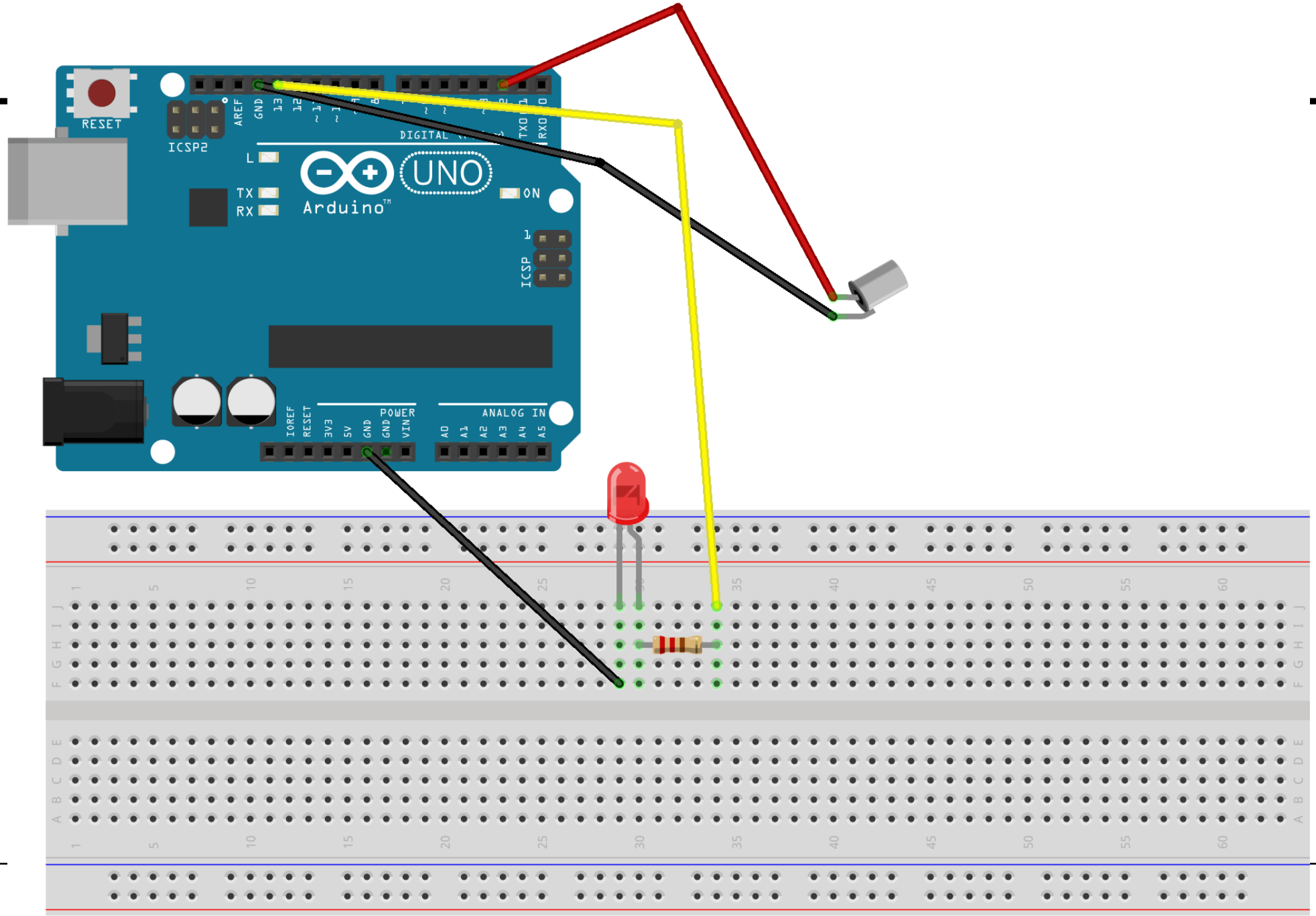
- Open the folder called extra4.0
- Open the code
- Build the Circuit
- Click the checkmark then the arrow


SERVO
RESET
ICSP2
DIGITAL (PWM=~)
UNO
Arduino™
ON
TX
RX
L
ICSP
ANALOG IN

EXTRA PROJECT 5.0

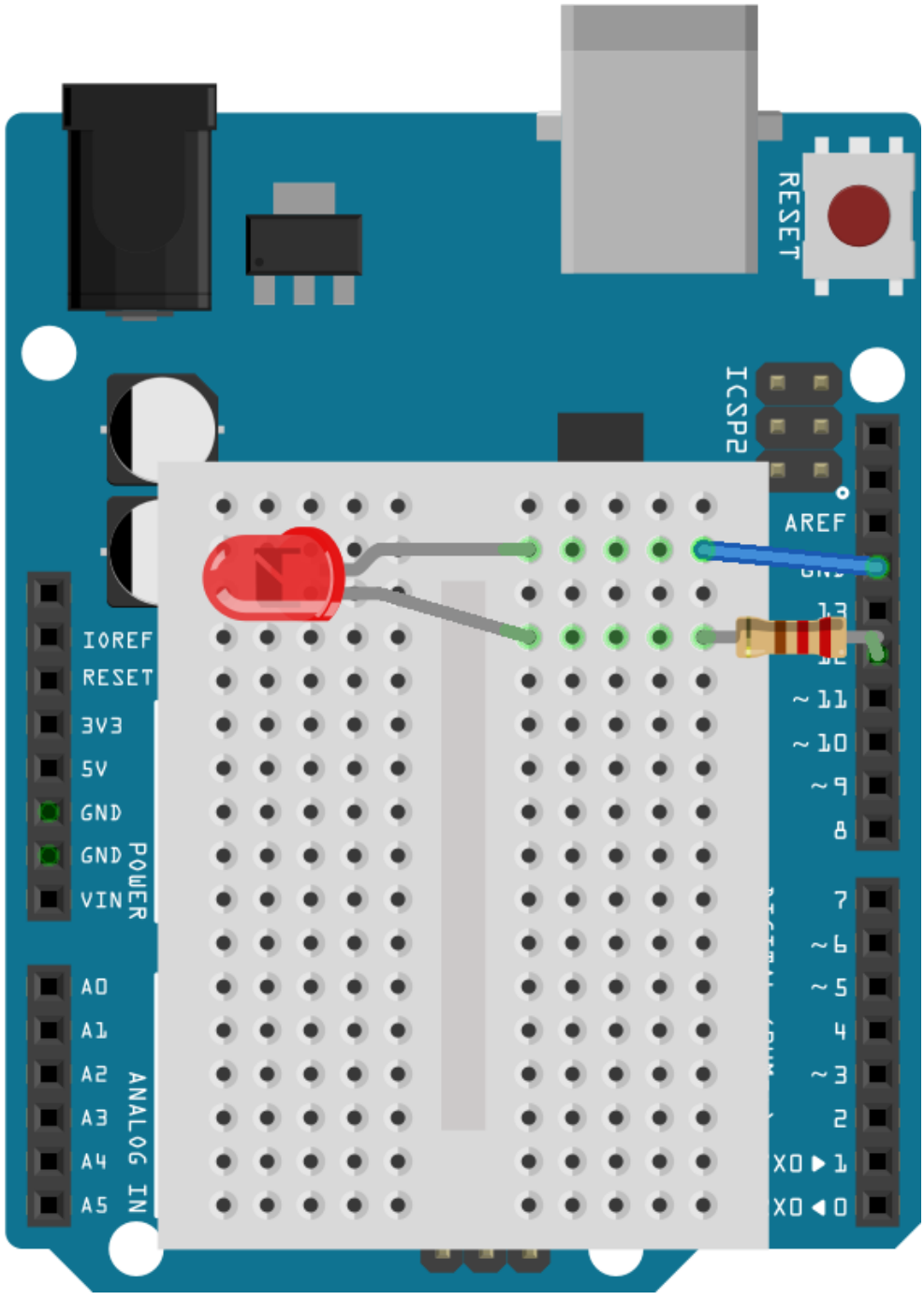
- Open the folder called extra5.0
- Open the code
- Build the Circuit
  - 220 Ohm Resistor
- Click the checkmark then the arrow

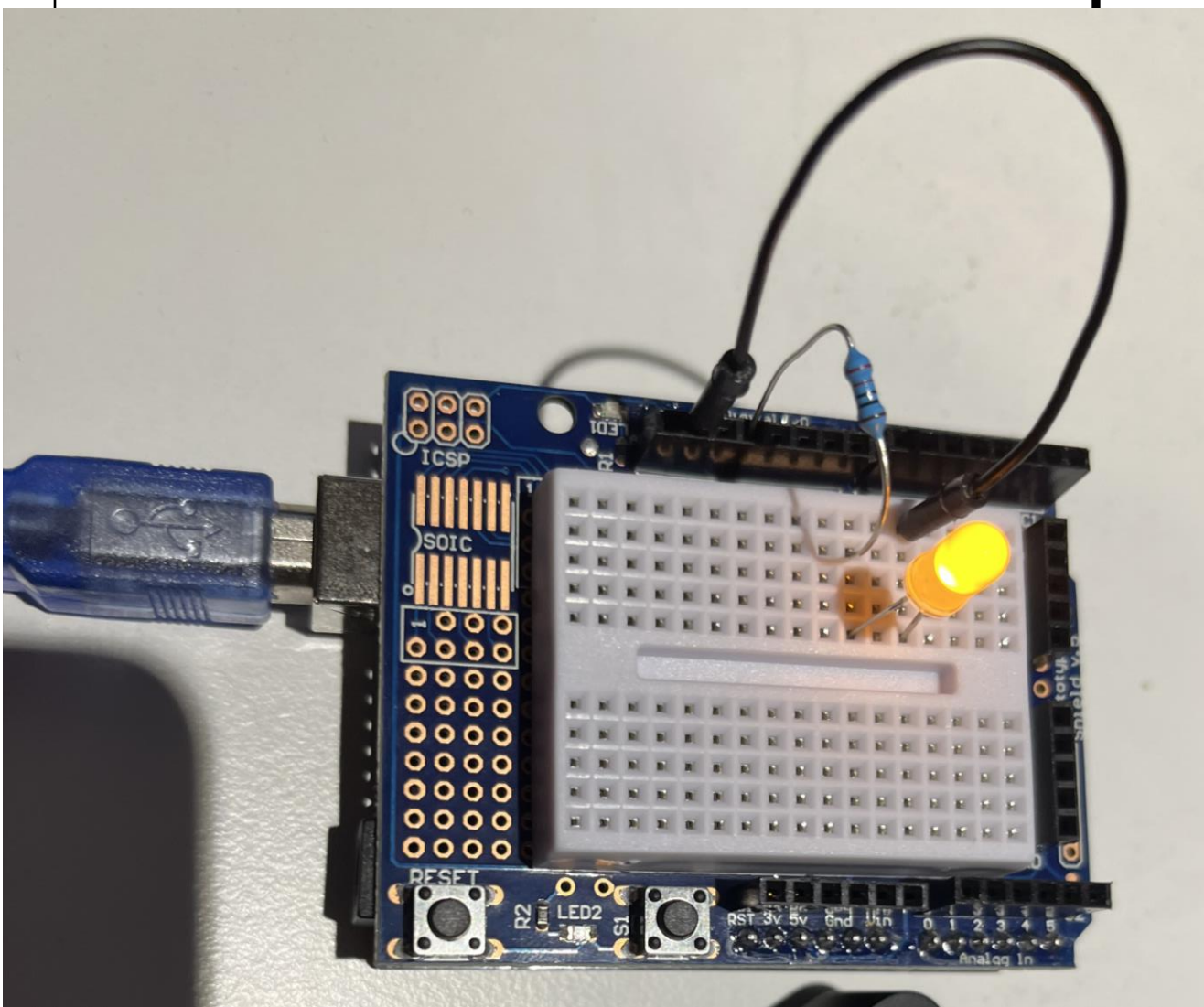
- Project from
  - https://lastminuteengineers.com/ball-tilt-switch-sensor-arduino-tutorial/


RESET
ICSP2
AREF
GND
DIGITAL
TXD
RXD
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
IOREF
RESET
3V3
5V
GND
GND
VIN
ANALOG IN
A0
A1
A2
A3
A4
A5
fritzing

EXTRA PROJECT 6.0

- Open the folder called extra5.0
- Open the code
- Build the Circuit Similar to the 1st project
  - 220 Ohm Resistor
- You can use the code from project 1.5
- Click the checkmark then the arrow

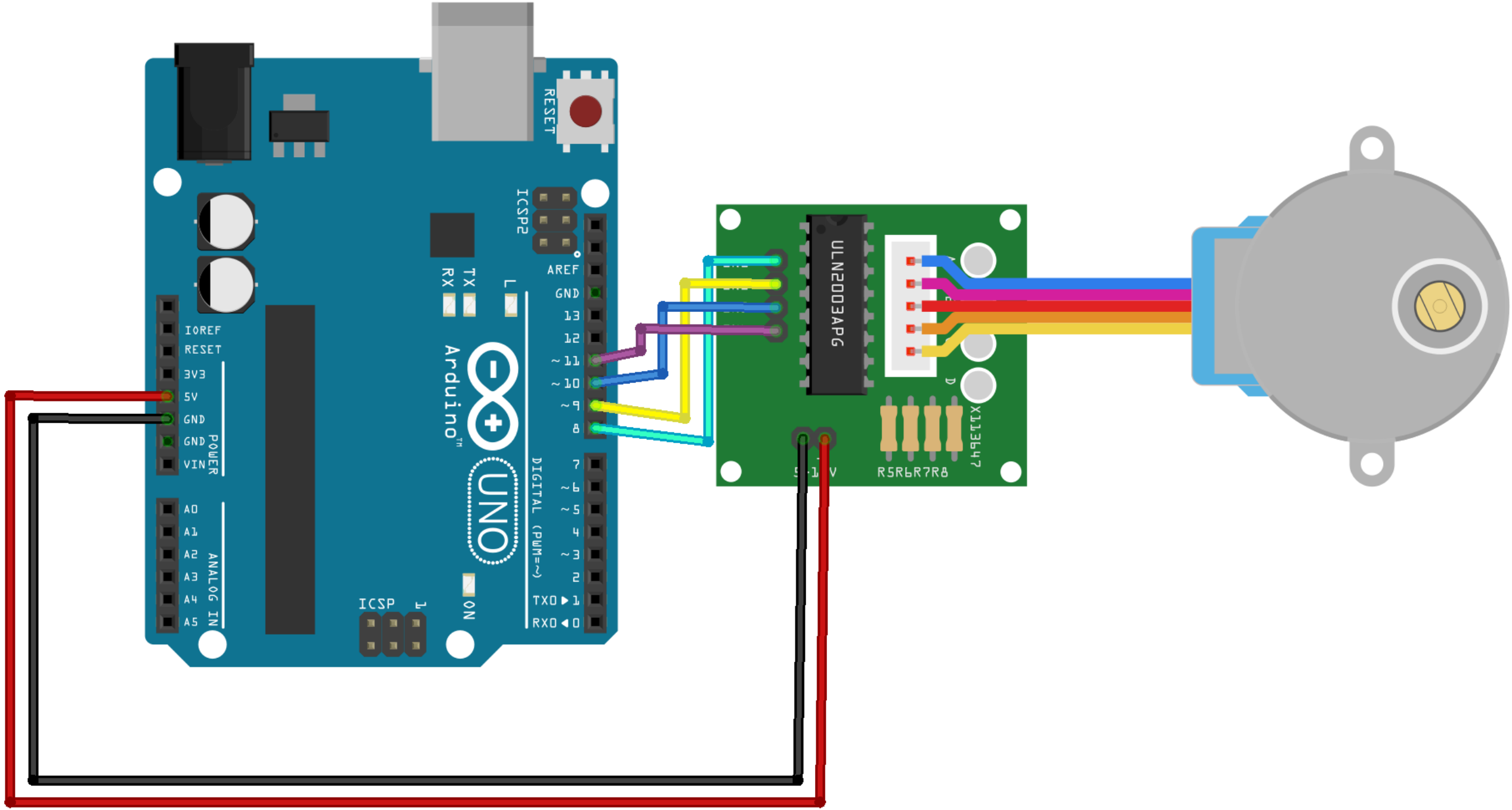

RESET
ICSP2
AREF
IOREF
RESET
3V3
5V
GND
GND
VIN
POWER
A0
A1
A2
A3
A4
A5
ANALOG IN
13
~ 11
~ 10
~ 9
8
7
~ 6
~ 5
4
~ 3
2
TX→1
RX←0


ICSP
SOIC
RESET
R2
LED2
S1
RST 3v 5v Gnd Vin
0 1 2 3 4 5
Analog In

EXTRA PROJECT 7.0

- Open the folder called extra7.0
- Open the code
- Build the Circuit
- Click the checkmark then the arrow

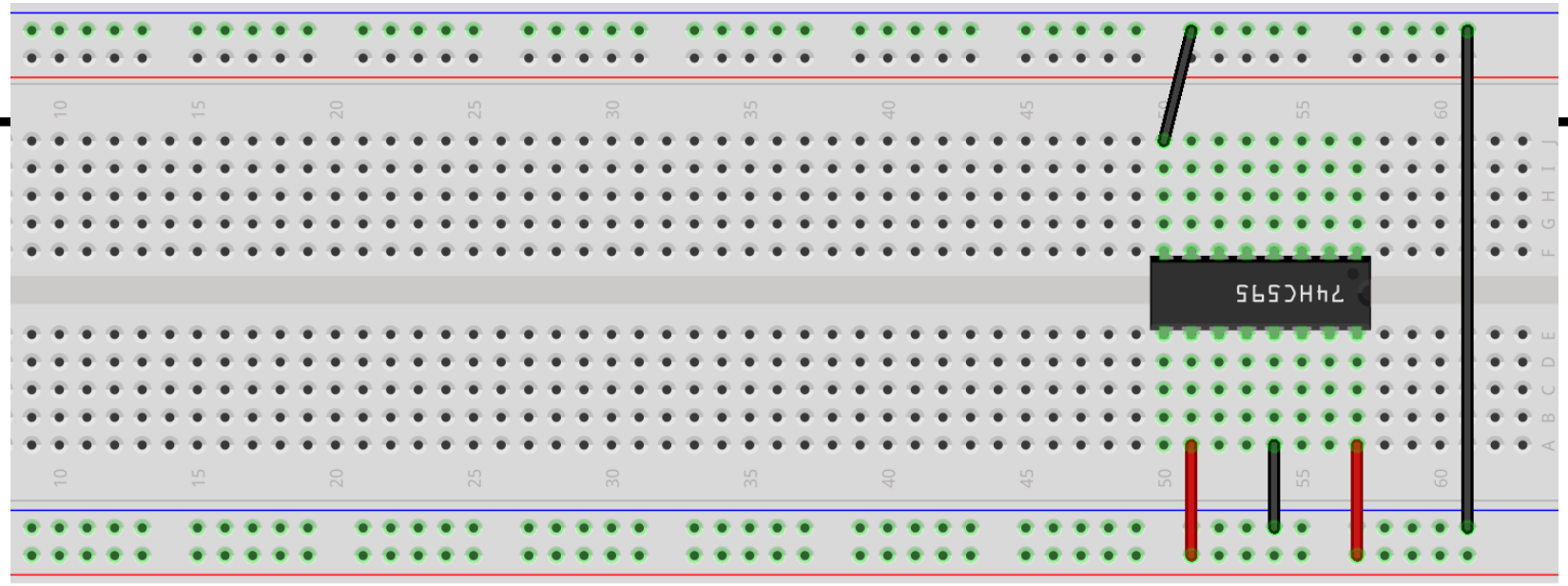
- Project from
  - https://lastminuteengineers.com/28byj48-stepper-motor-arduino-tutorial/

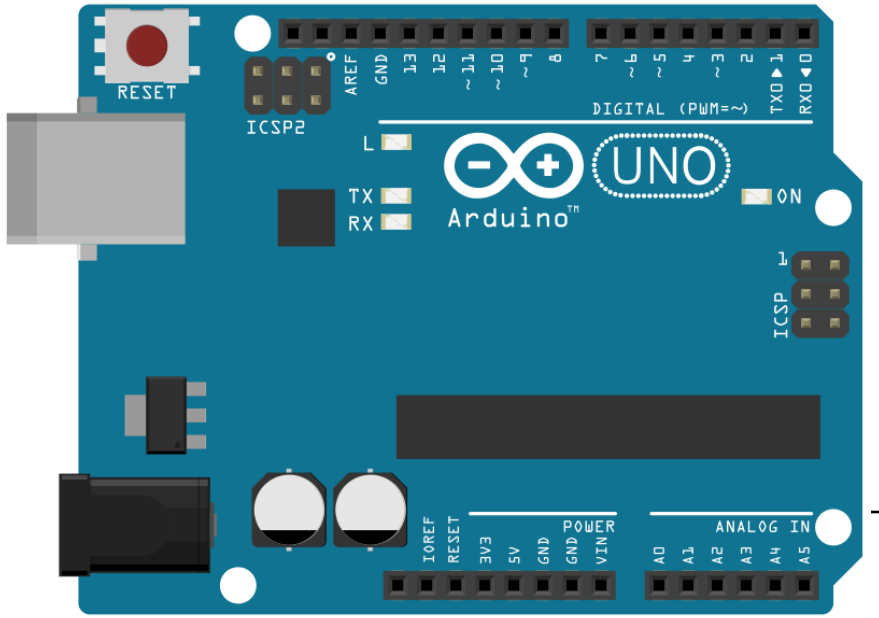

RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
ON
ICSP
Arduino™
UNO
IOREF
RESET
3V3
5V
GND
GND
VIN
POWER
A0
A1
A2
A3
A4
A5
ANALOG IN
ULN2003APG
R5R6R7R8
X113647

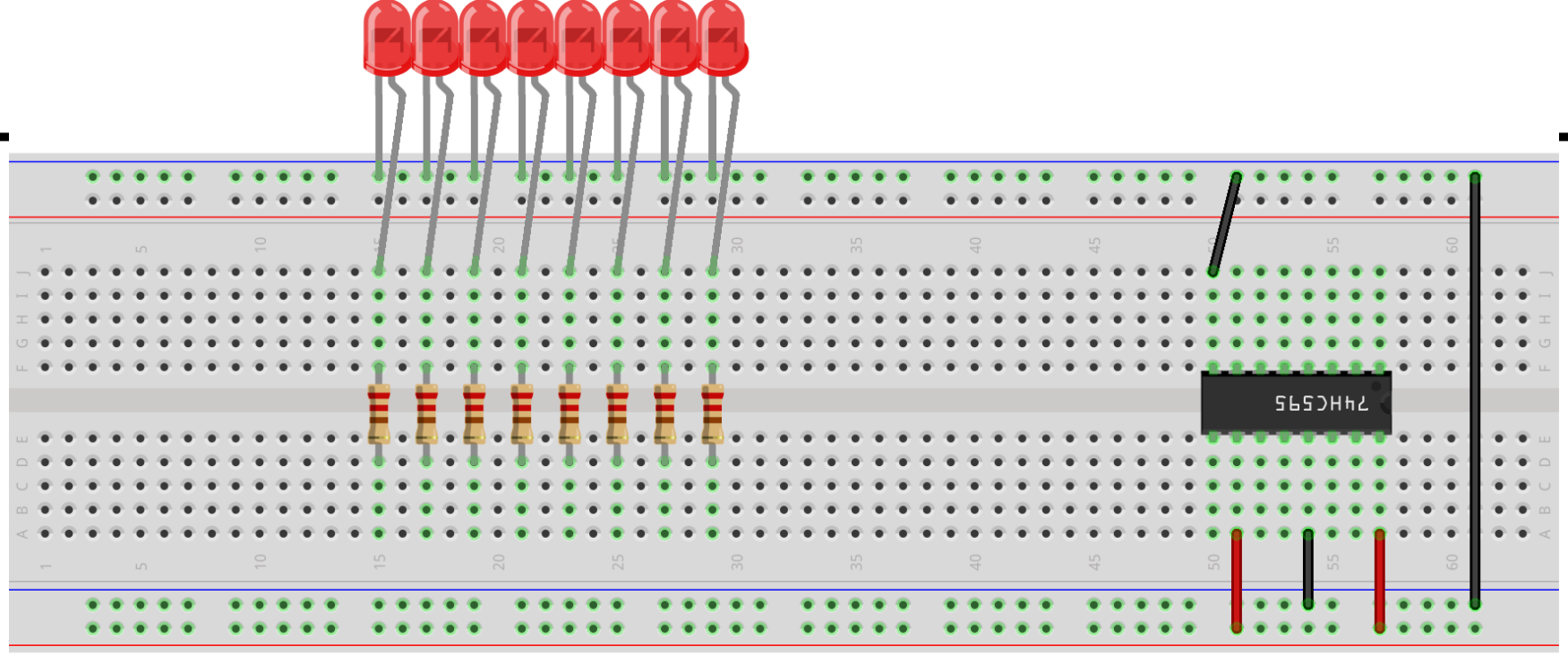
EXTRA PROJECT 8.0

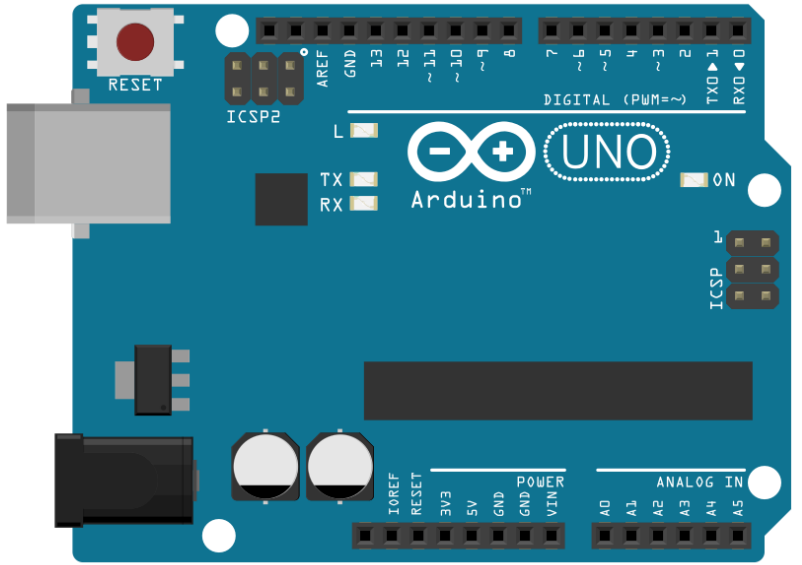
- Open the folder called extra8.0 and extra8.5
- Open the code
- Build the Circuit
- Click the checkmark then the arrow

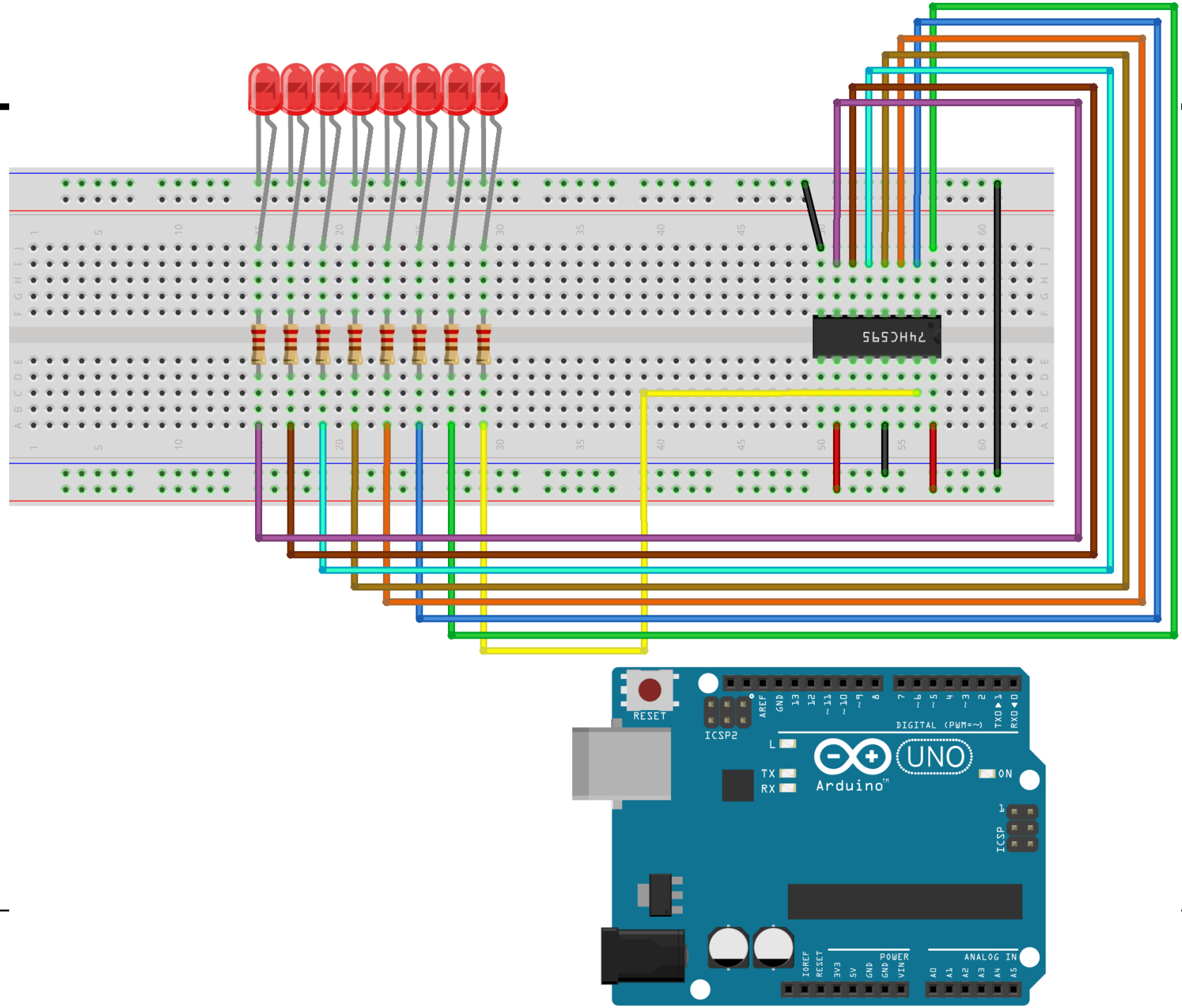
- Project from
  - https://www.youtube.com/watch?v=pBdjMayFK5Y
  - https://docs.arduino.cc/tutorials/communication/guide-to-shift-out/#shftout13

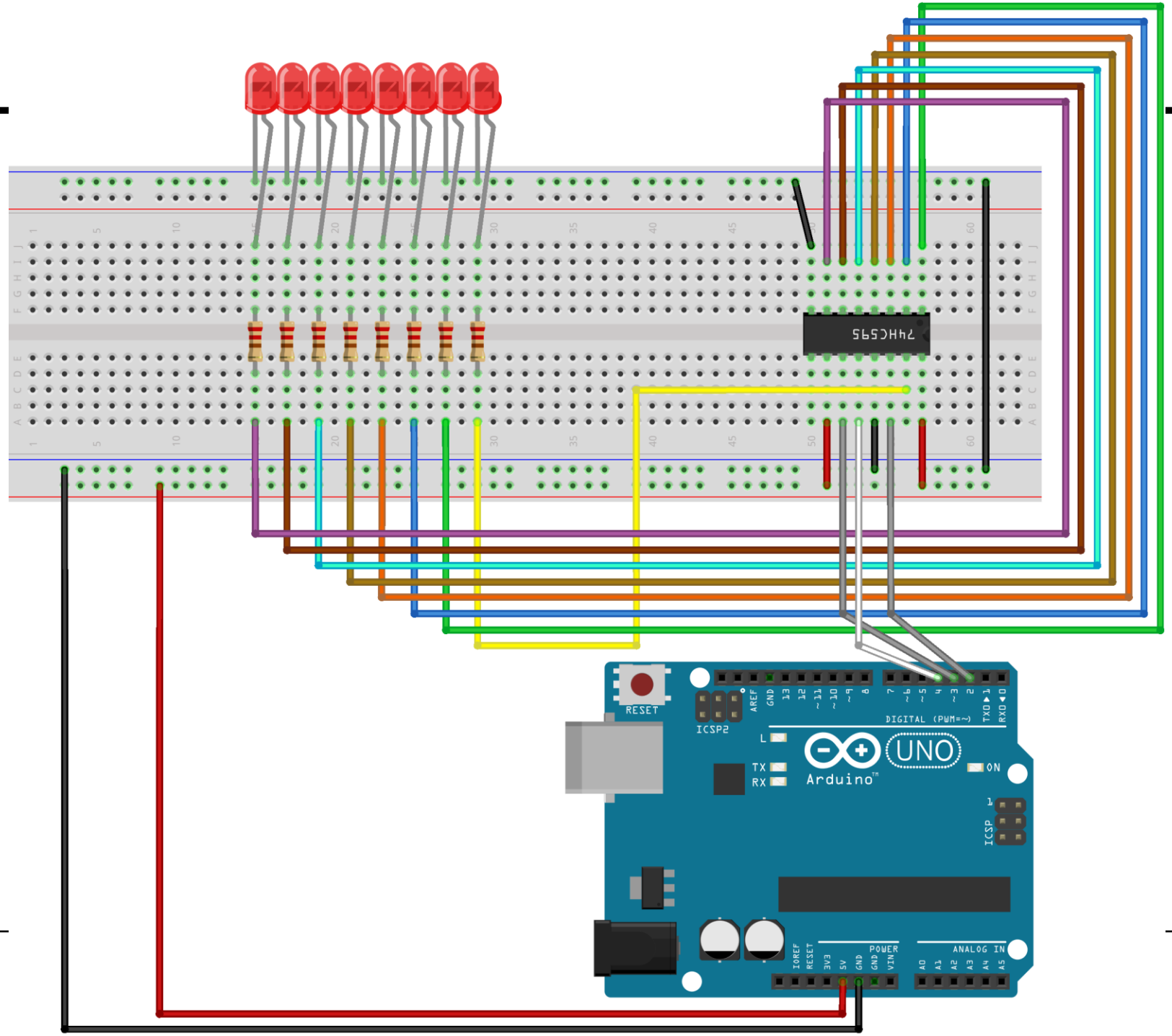

74HC595


RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
ANALOG IN
IOREF
RESET
3V3
5V
GND
GND
VIN
A0
A1
A2
A3
A4
A5


74HC595


RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
IOREF
RESET
3V3
5V
GND
GND
VIN
ANALOG IN
A0
A1
A2
A3
A4
A5


74HC595
RESET
ICSP2
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
ANALOG IN


74HC595
RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TXD▶1
RXD◀0
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
IOREF
RESET
3V3
5V
GND
GND
VIN
ANALOG IN
A0
A1
A2
A3
A4
A5