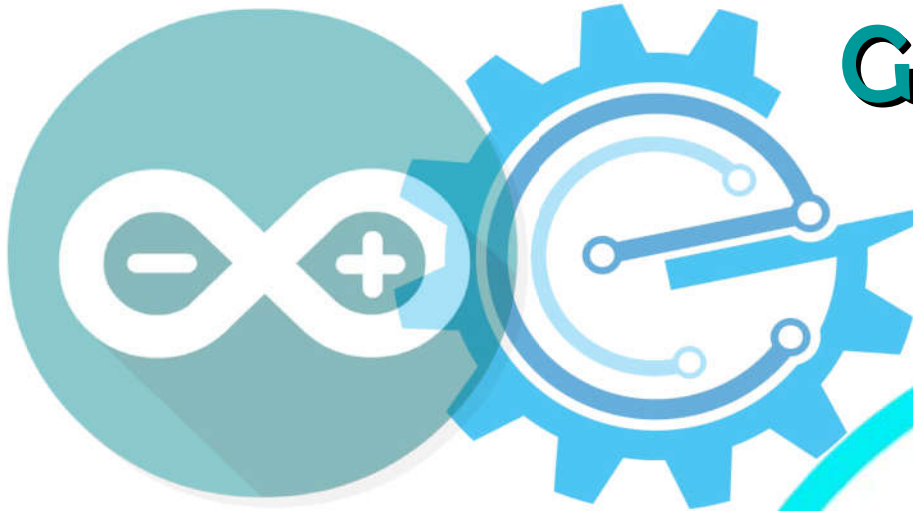


GIZDUINO



PLUS STARTER KIT



open hardware

ATmega 644P

Enable RX switch

32 I/O PINS

64KB Flash Memory

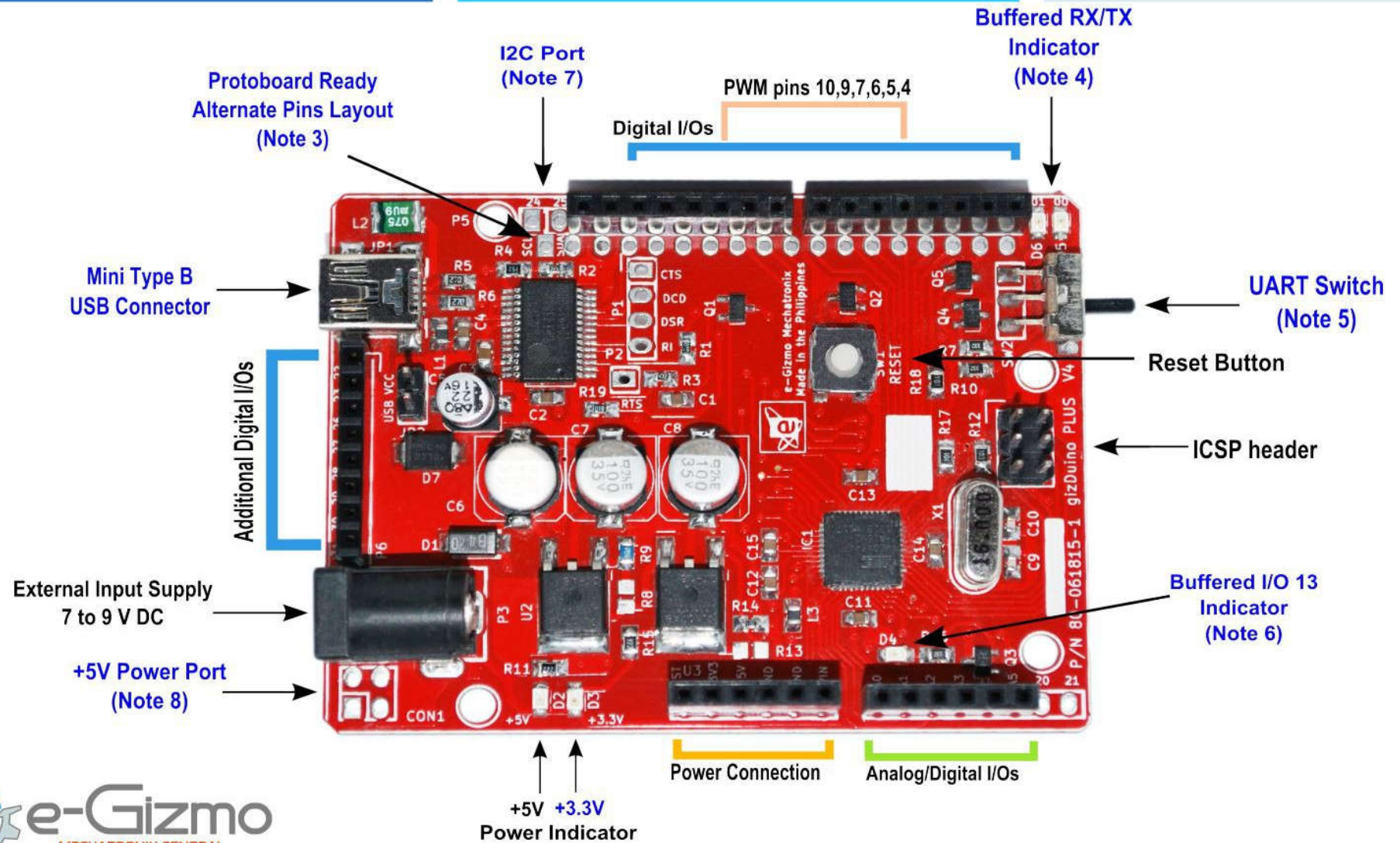
With Serial0 and Serial1

with Breadboard



gizDuino MAJOR PARTS PRESENTATION

PLUS



What are the devices use in __?

Output devices

(Digital/PWM)

- LED Lights
- Transistor
- Buzzer
- Servo
- DC Motor
- Stepper
- Relay

Input devices

(Digital/Analog)

- Push Buttons
- ADC (Analog to Digital Converter)
- LDR (Light Dependent Resistor)
- Temperature Sensor
- Weight sensor
- Compact Proximity
- Voltage Measurement
- Position

Serial Communication devices

(RX/TX/Modules/Shields/I2C)

- GSM (Text/Call)
- GPS (Location)
- WiFi (ESP8266,LoRa)
- Bluetooth (HC-05,HM-10..)
- RF Modules (UHF)
- Fingerprint
- Industrial Equipments with Serial Connections
- RFID
- LCD,RTC I2C

SPI Communication devices

(MOSI/MISO/SCK/CS)

- SD Card Shields (Data logging)
- Ethernet Shield (ENC,Wiznet)
- OLED Display

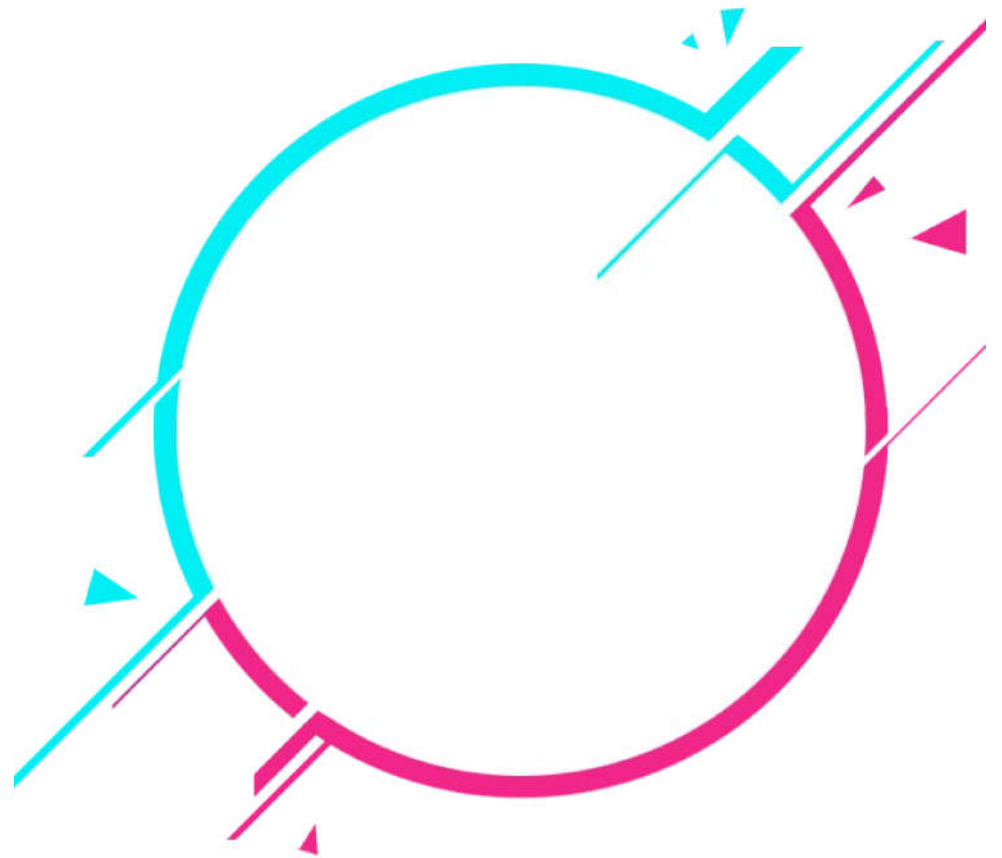
General Specifications

- Microcontroller: **ATmega644P**
- Power Input (DC): **USB (+5V), External (7~12V)**
- Input Voltage (limits): **6~20V**
- DC Current per pins: **40mA**
- Digital I/O Pins: **32 Digital (6 for PWM)**
- Analog Input Pins: **8**
- Hardware Serial Pin: **2**
- Flash Memory: **64KB (2KB used by bootloader)**

gizDuino **PLUS**

gizDuino PLUS Starter kit

- This Starter Kit is the most suitable for you! It contains the most basic learning Materials for microcontroller programming and interfacing.



Arduino IDE

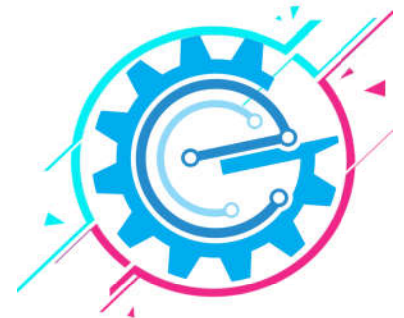
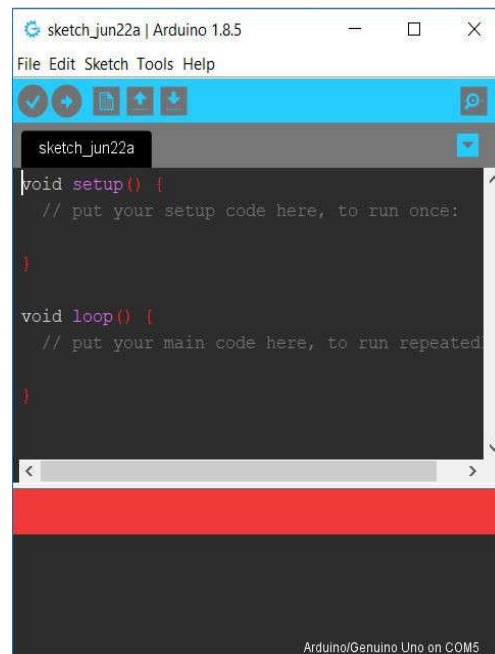
www.e-gizmo.net/oc/kits documents/ARDUINO IDE SOFTWARES
Download Arduino 1.8.5 egizmo themes new (Windows)
Choose your Arduino IDE for your OS.

Drivers **Install this first!**

www.e-gizmo.net/oc/kits documents/ARDUINO IDE SOFTWARES
Download Prolific Driver v10.0 (Windows)
(For Mac OS users) Download md_PL2303_MacOSX

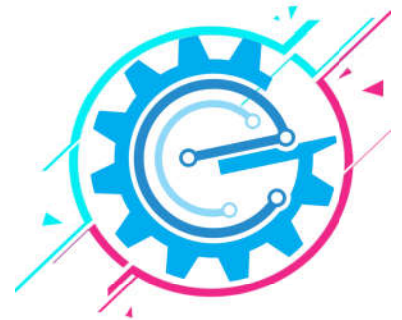


PL2303_Prolific_DriverInstaller_v1.10.0



gizDuino
PLUS

Connect the gizDuino PLUS to PC



Uploading BLINK.ino

On the Arduino IDE.

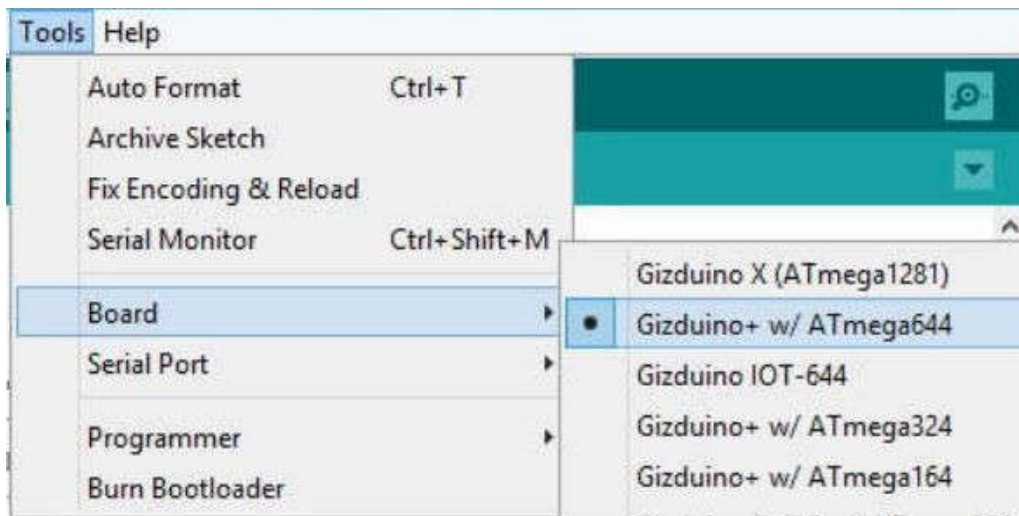
1. BLINK codes

Go to File> Open > BLINK.ino



2. Board select

Go to Tools>Boards>Gizduino + w/ATmega644



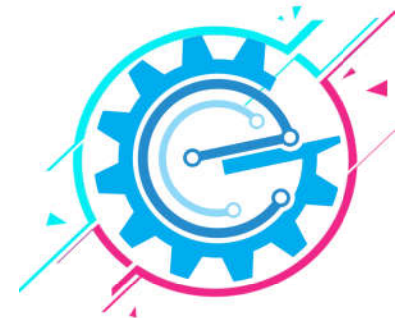
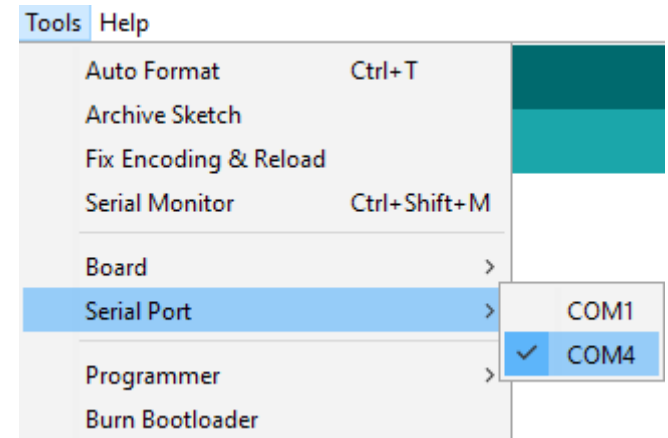
3. Port select

Go to Tools>Port>COM#

Select the correct port

Go to Device Manager

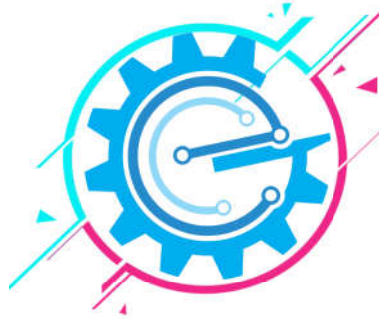
if you're not sure.



gizDuino PLUS



Parts list:



Quantity	Components	Descriptions
8		Red LED 5mm
8		Green LED 5mm
1		Clear LED 5mm
8		560 Ohms 1/4W
3		10K Ohms 1/4W
1		2.2K Ohms 1/4W
1		220 Ohms 1/4W
1		10 Ohms 1/4W
1		1N4002 Diode
1		MPS2222A Transistor TO92
2		Button Switch
1		3 pins connector
1		2 pins connector

Quantity	Components	Descriptions
1		10K or 12K Ohms Potentiometer
8		Red LED 5mm
1		LDR 2 pins
1		74LS595 IC Shift Register
1		SG-90 Servo Motor
1		DC Motor
1		+5V Buzzer
1		Relay 5V Ea2-4.5NU
1		Solder less Breadboard ZY-60
20		Wires
1		USB Cable
1		2x16 LCD Display *(Optional)

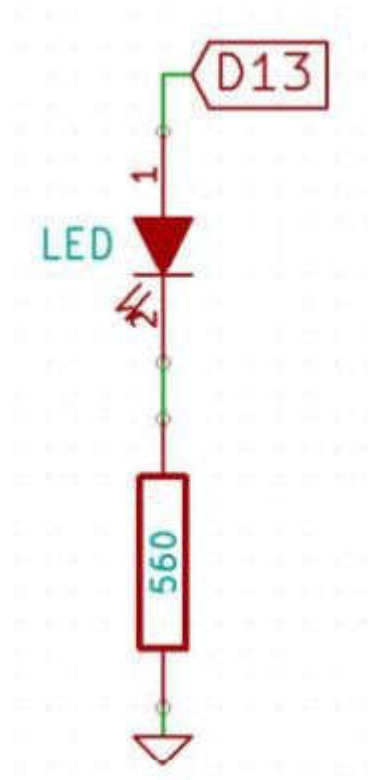
gizDuino PLUS

LED Blinking

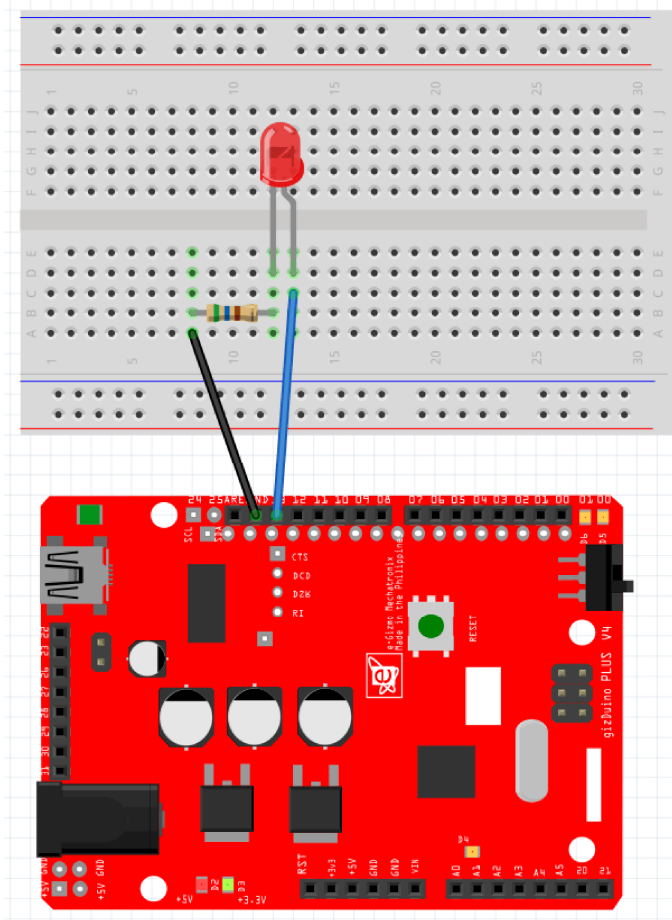
Qty	Materials
1	Red LED 5mm
1	560 Ohms 1/4W

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the BLINK.ino
STEP 5: Then, Click Upload.

Schematic



Breadboard



Upload the BLINK.ino code.

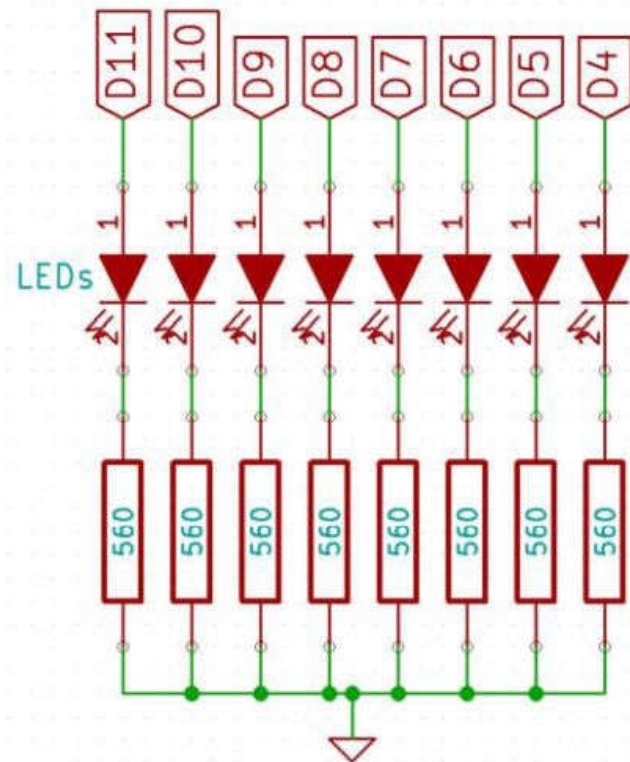


gizDuino Multiple blinking LEDs **PLUS**

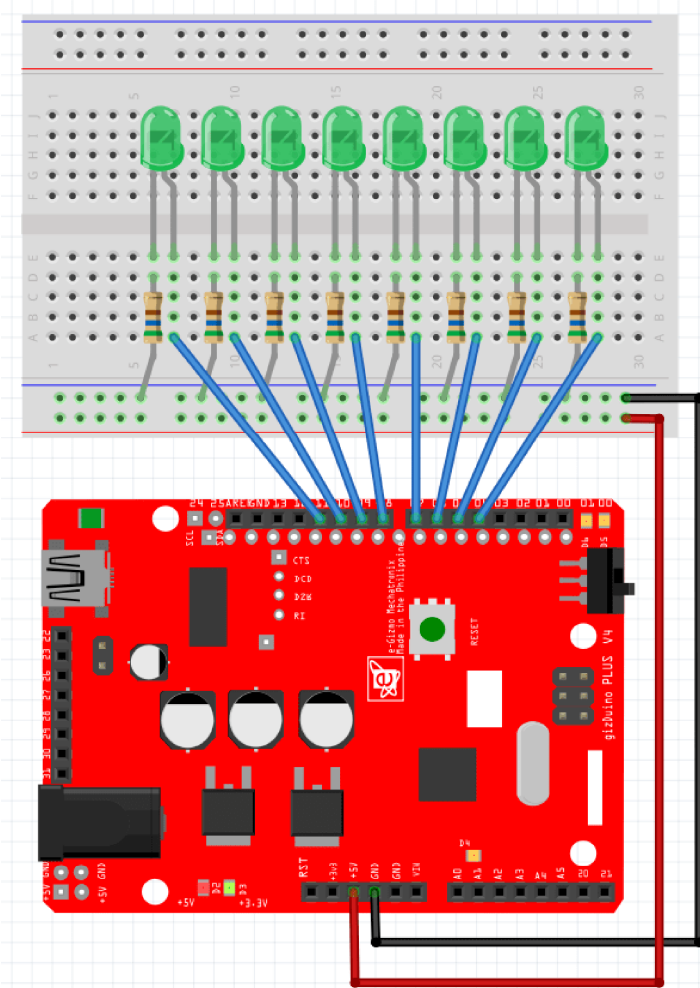
Qty	Materials
8	Green LED 5mm
8	560 Ohms 1/4W

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the LED 8 BLINK.ino
STEP 5: Then, Click Upload.

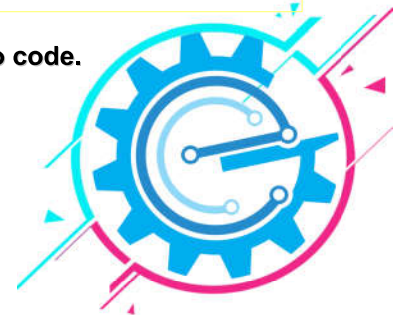
Schematic



Breadboard



Upload the LED 8 BLINK.ino code.

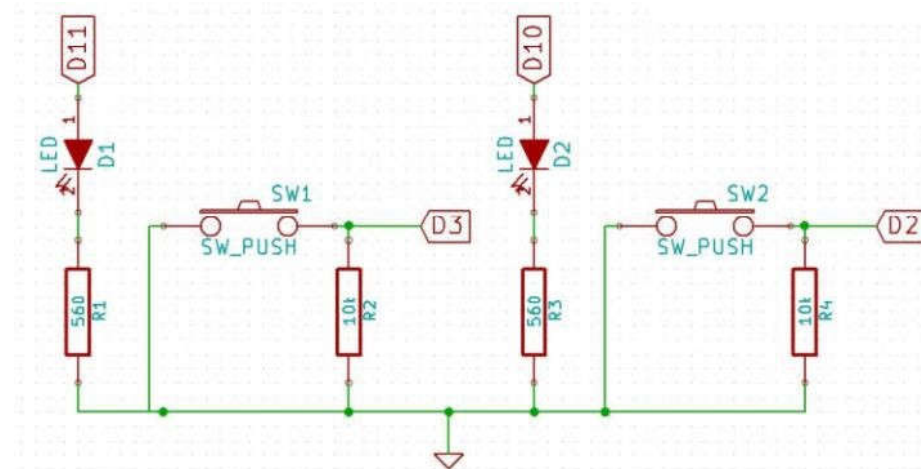


gizDuino Latch & Switch Button PLUS

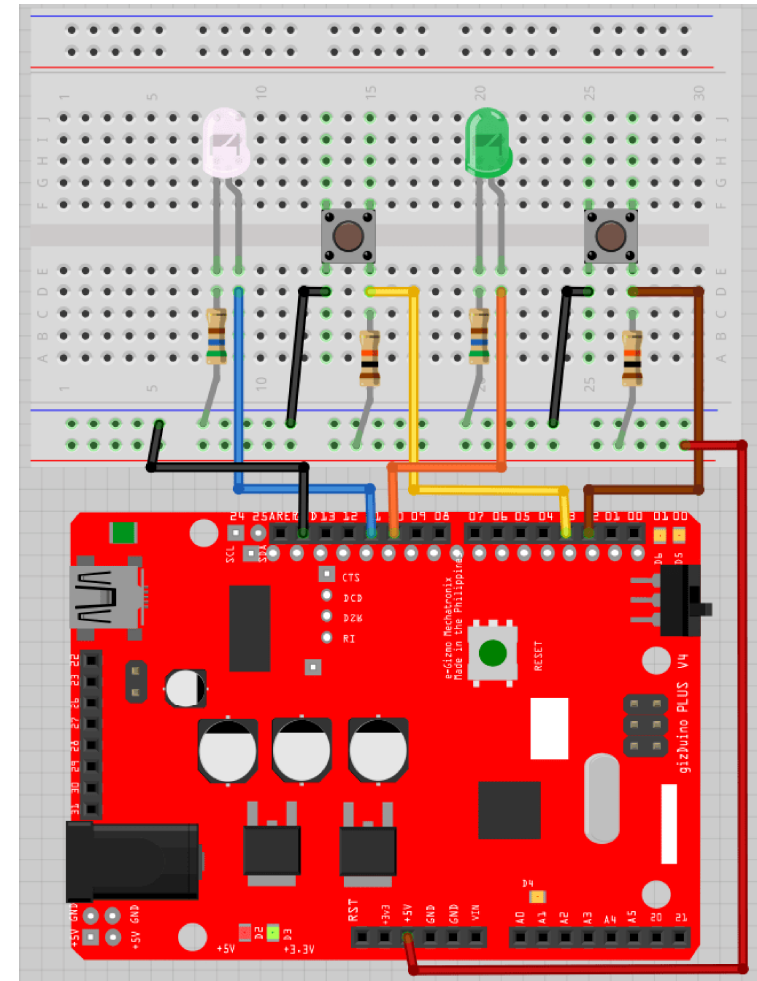
Qty	Materials
1	Clear LED 5mm
1	Red LED 5mm
2	Button
2	560 Ohms 1/4W
2	10k Ohms 1/4W

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the BUTTON.ino
STEP 5: Then, Click Upload.

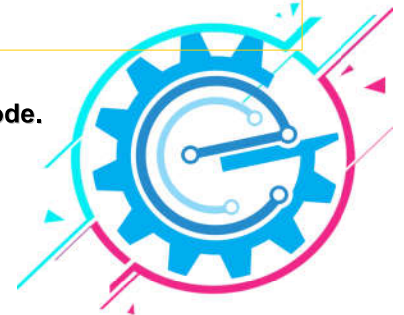
Schematic



Breadboard



Upload the BUTTON.ino code.

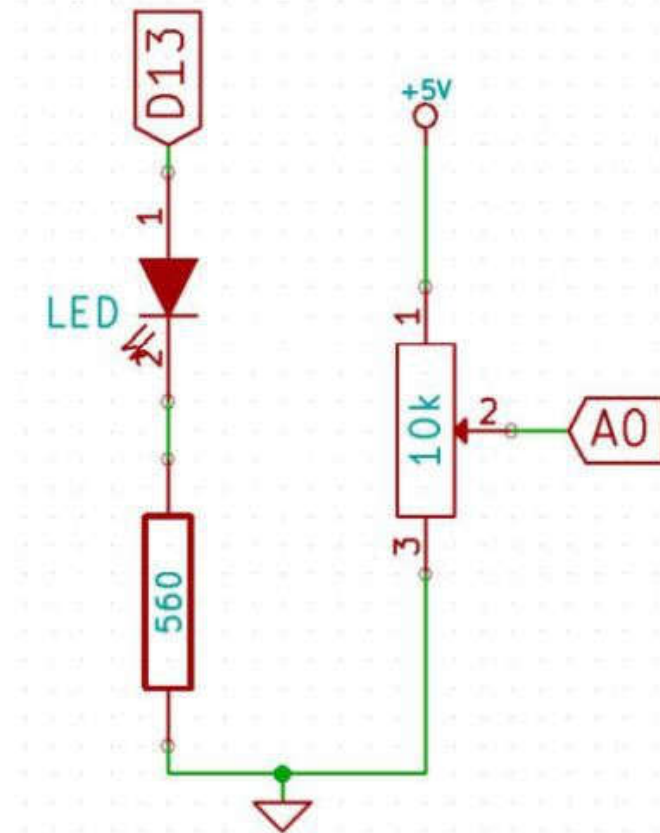


gizDuino Potentiometer PLUS

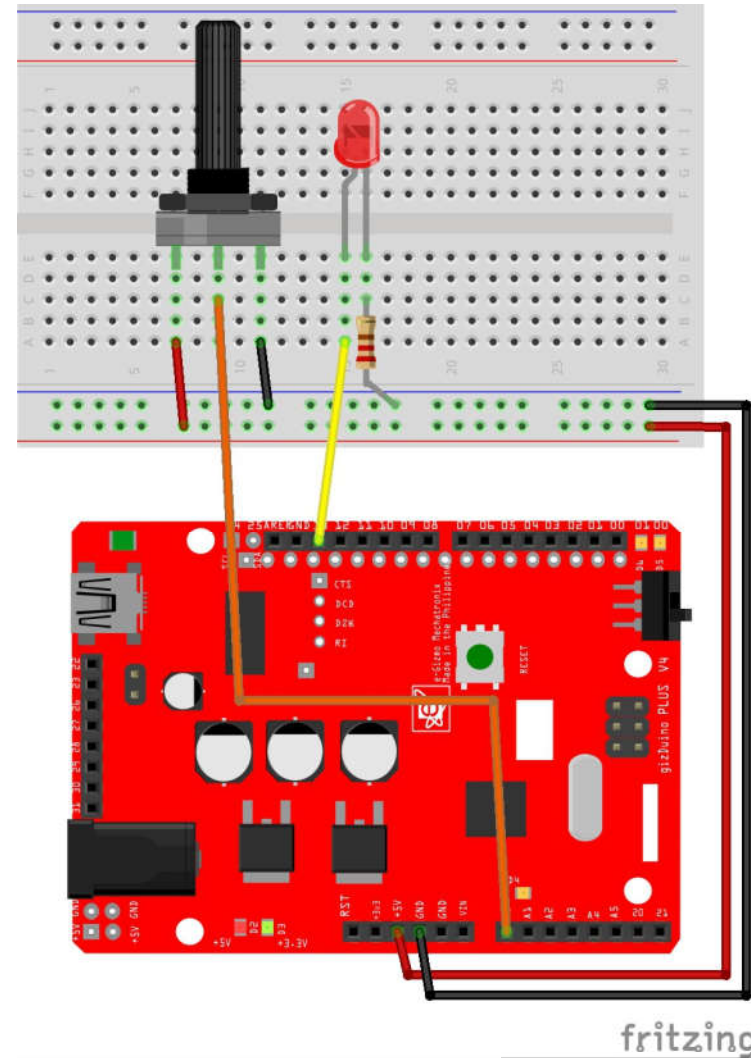
Qty	Materials
1	Red LED 5mm
1	560 Ohms 1/4W
1	10k Potentiometer

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the POTENTIOMETER.ino
STEP 5: Then, Click Upload.

Schematic



Breadboard



Upload the POTENTIOMETER.ino code.

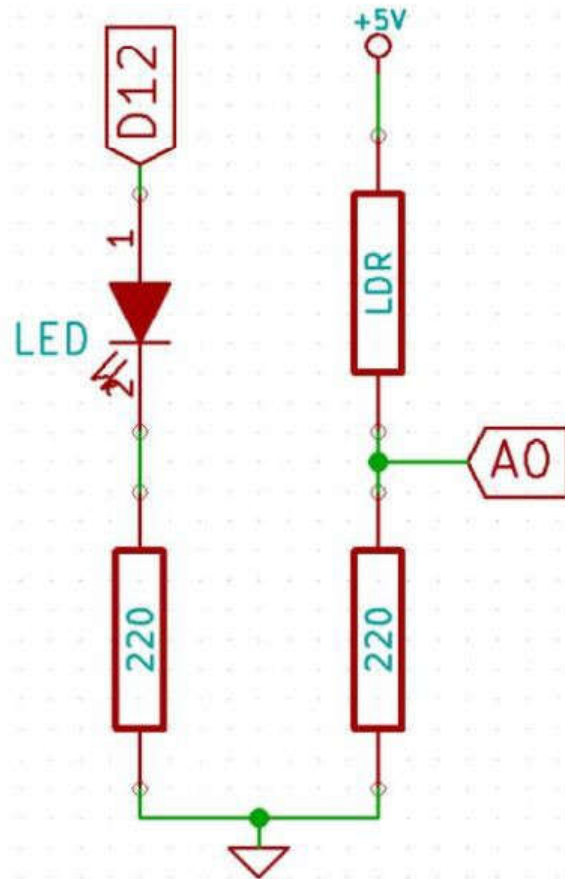


gizDuino LDR PLUS

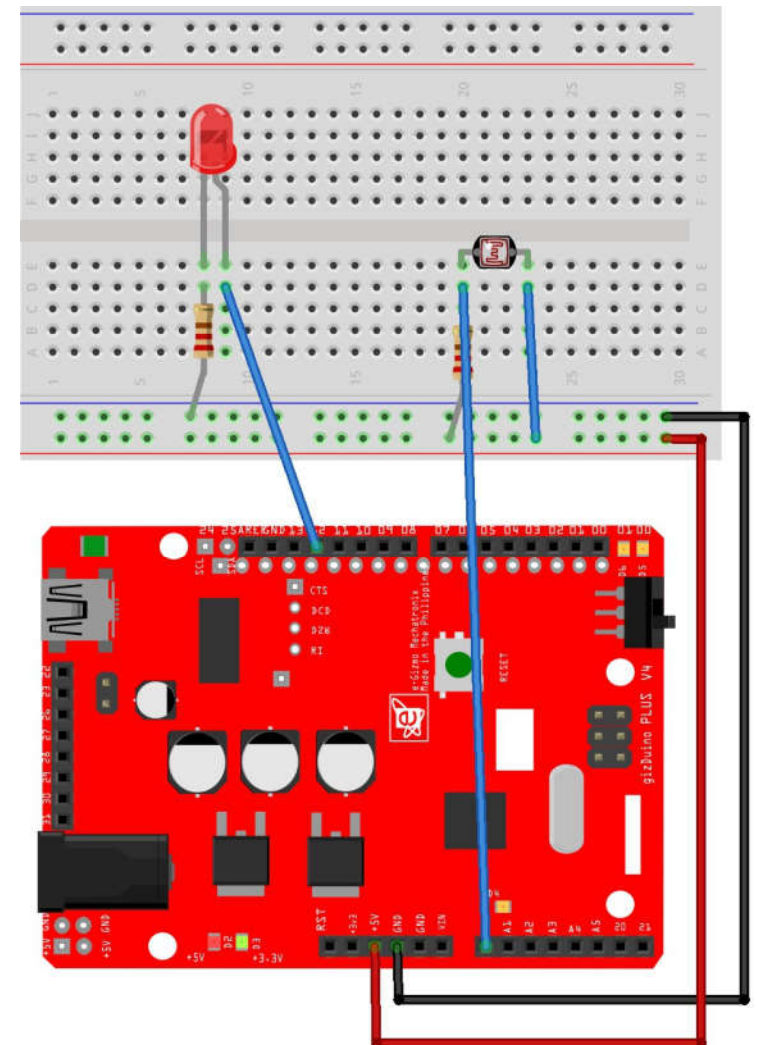
Qty	Materials
1	Red LED 5mm
1	LDR 2pins
1	220 Ohms 1/4W

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the LDR.ino
STEP 5: Then, Click Upload.

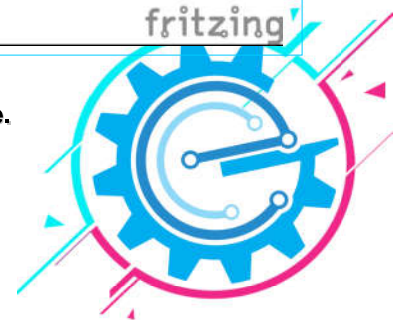
Schematic



Breadboard



Upload the LDR.ino code.



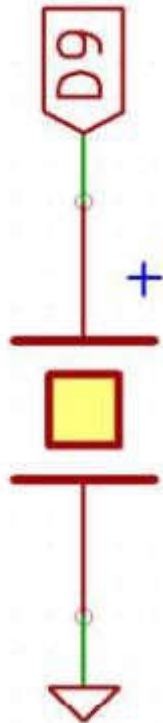
gizDuino Buzzer

PLUS

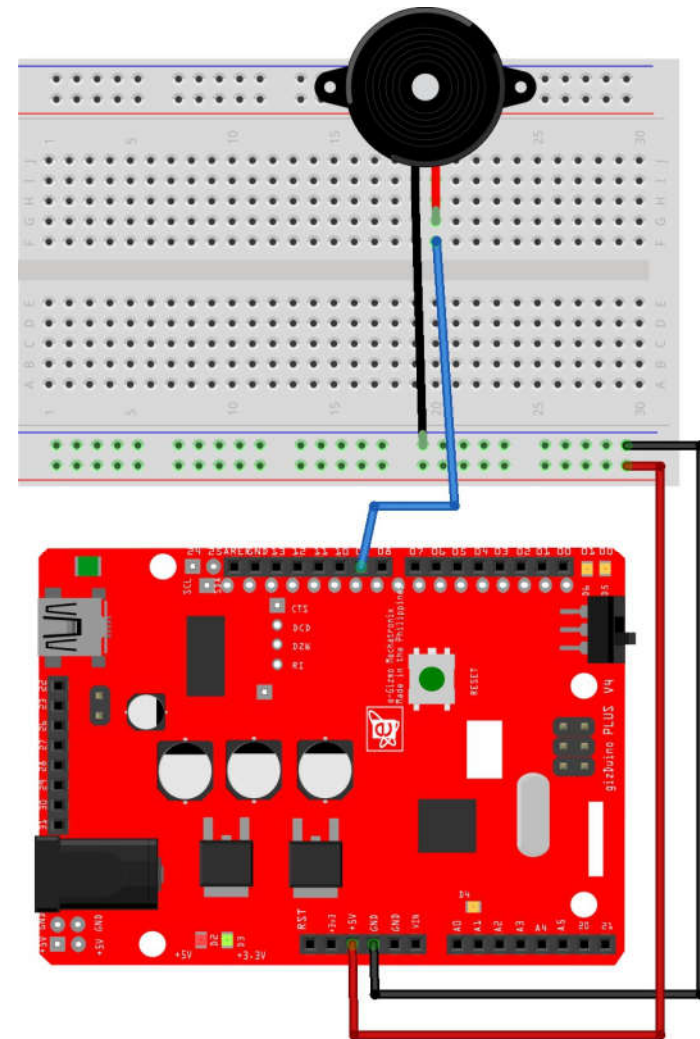
Qty	Materials
1	+5V Buzzer

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the BUZZER.ino
STEP 5: Then, Click Upload.

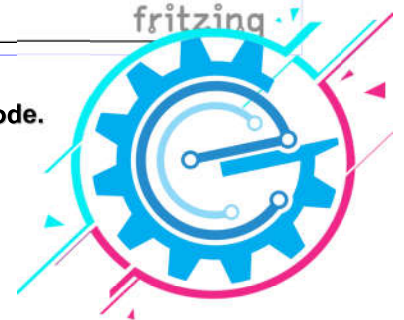
Schematic



Breadboard



Upload the BUZZER.ino code.

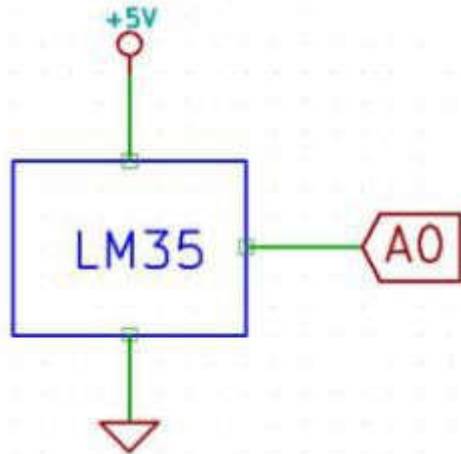


gizDuino Temperature Sensor **PLUS**

Qty	Materials
1	LM34/LM35

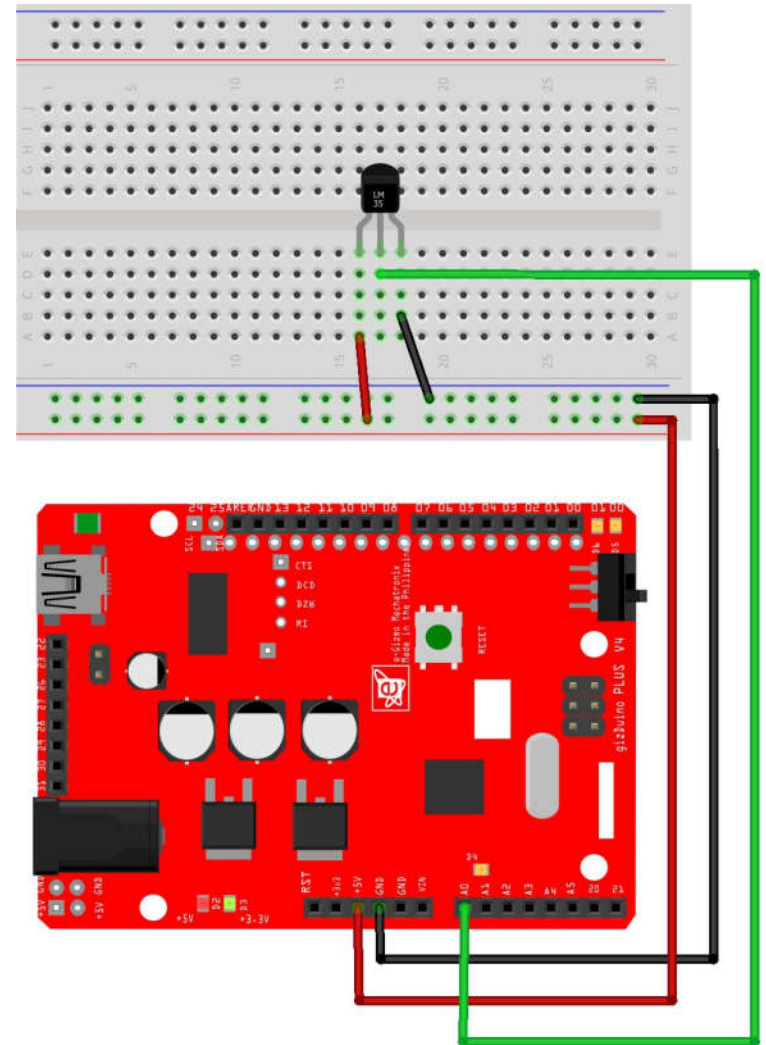
STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the LM34.ino
STEP 5: Then, Click Upload.

Schematic



Note: Kindly see the IC's Part Number if it is LM35 or LM34.

Breadboard



Upload the LM34.ino code.

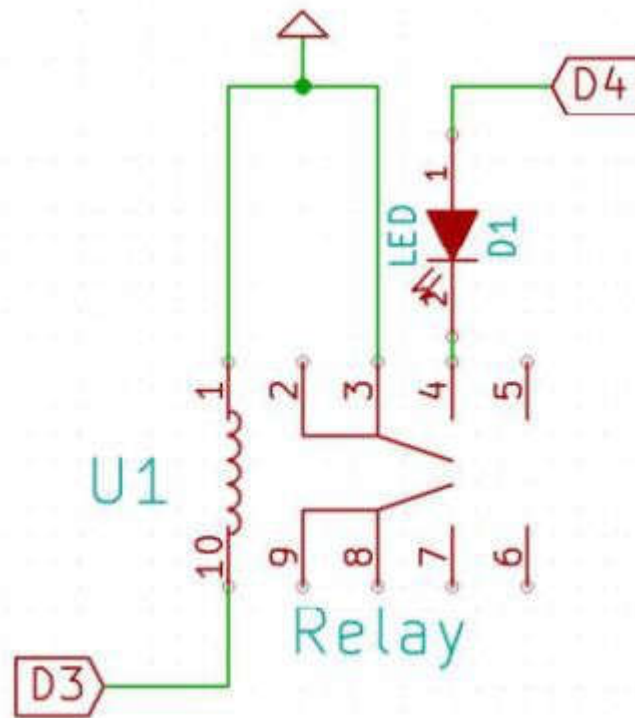


gizDuino Relay PLUS

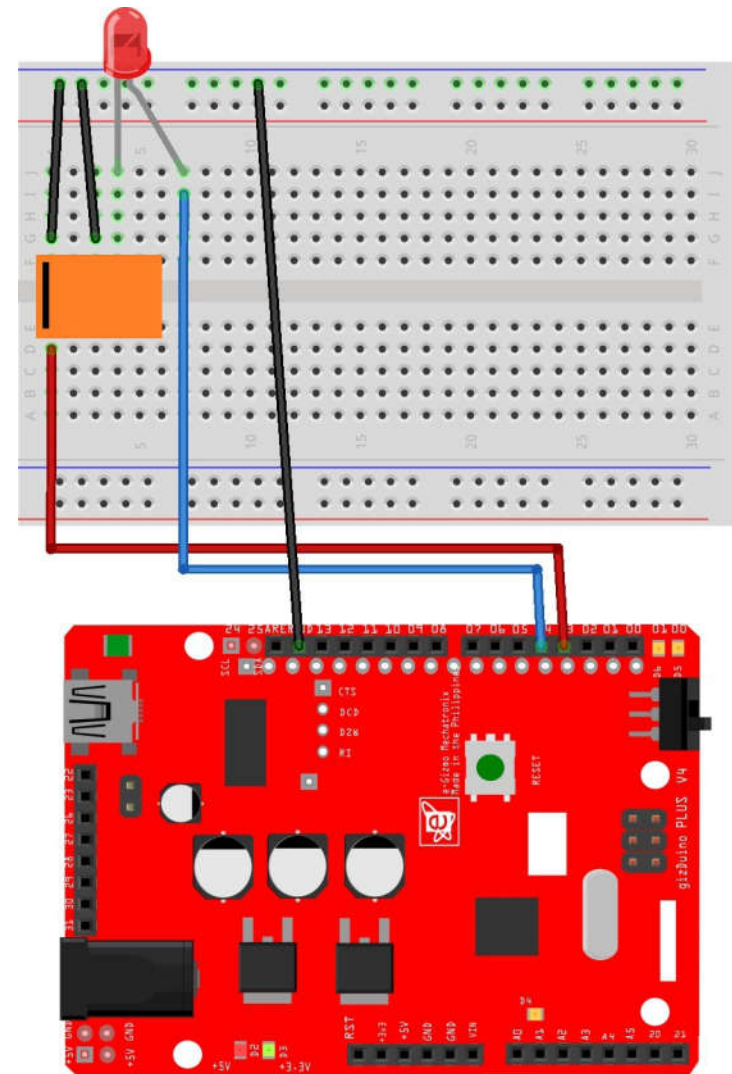
Qty	Materials
1	Ea2-4.5NU Relay
1	Red LED 5mm

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the RELAY.ino
STEP 5: Then, Click Upload.

Schematic



Breadboard



Upload the RELAY.ino code.

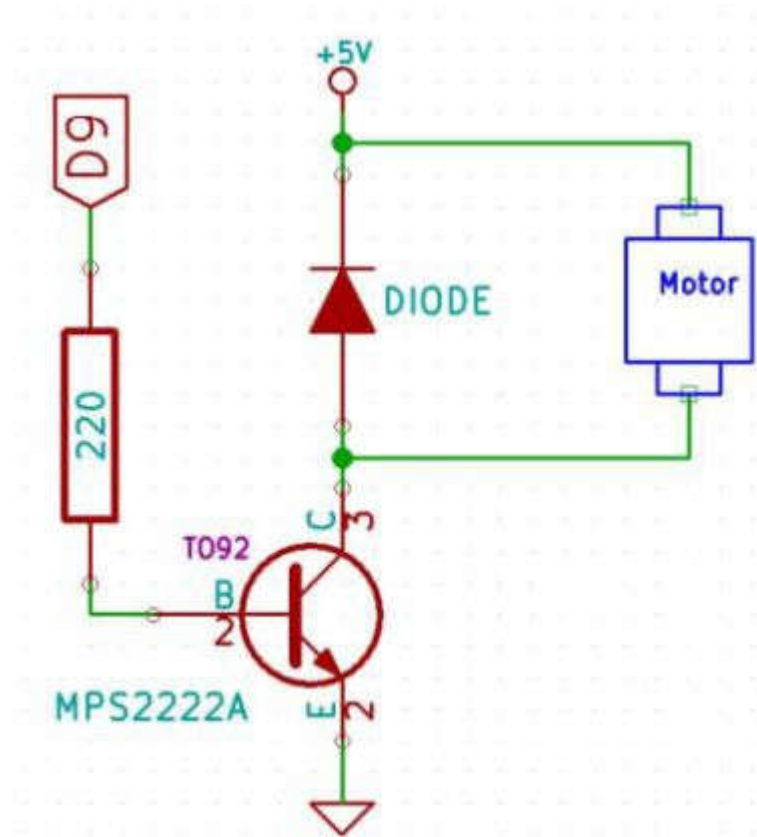


gizDuino DC Motor PLUS

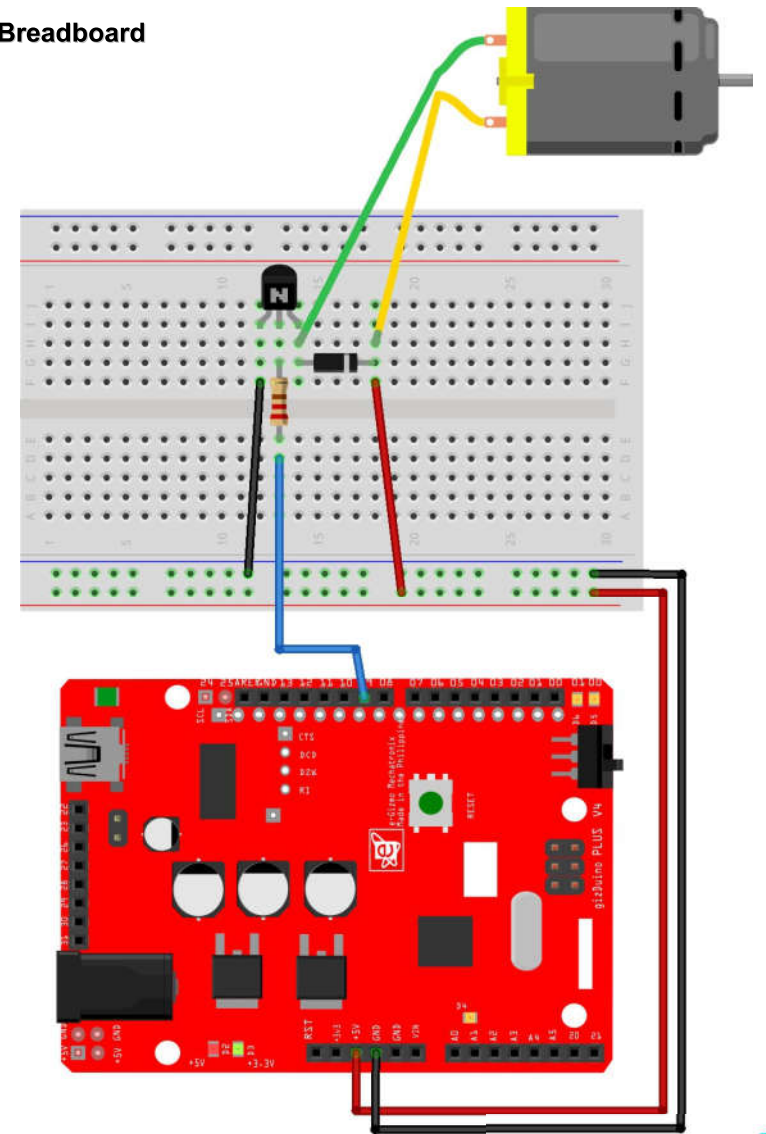
Qty	Materials
1	DC Motor
1	2.2K Ohms 1/4W
1	Transistor MPS2222A
1	1N4002 Diode

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the MOTOR.ino
STEP 5: Then, Click Upload.

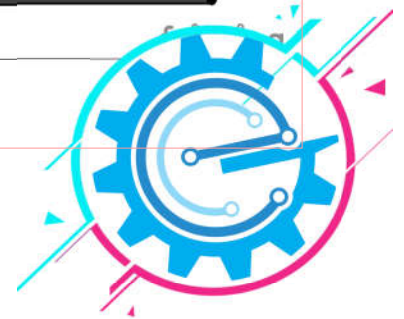
Schematic



Breadboard



Upload the MOTOR.ino code.



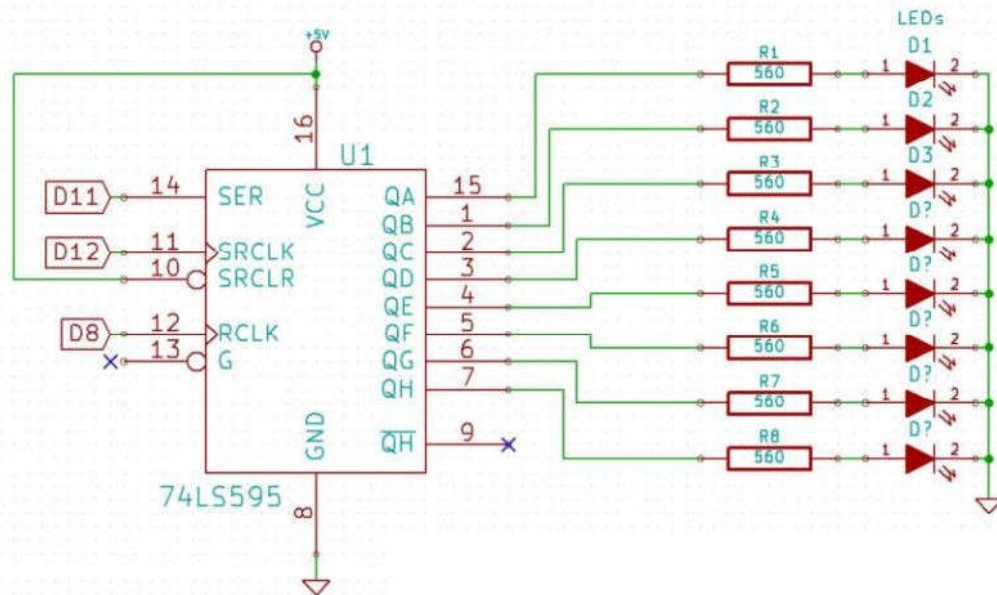
gizDuino Shift register

PLUS

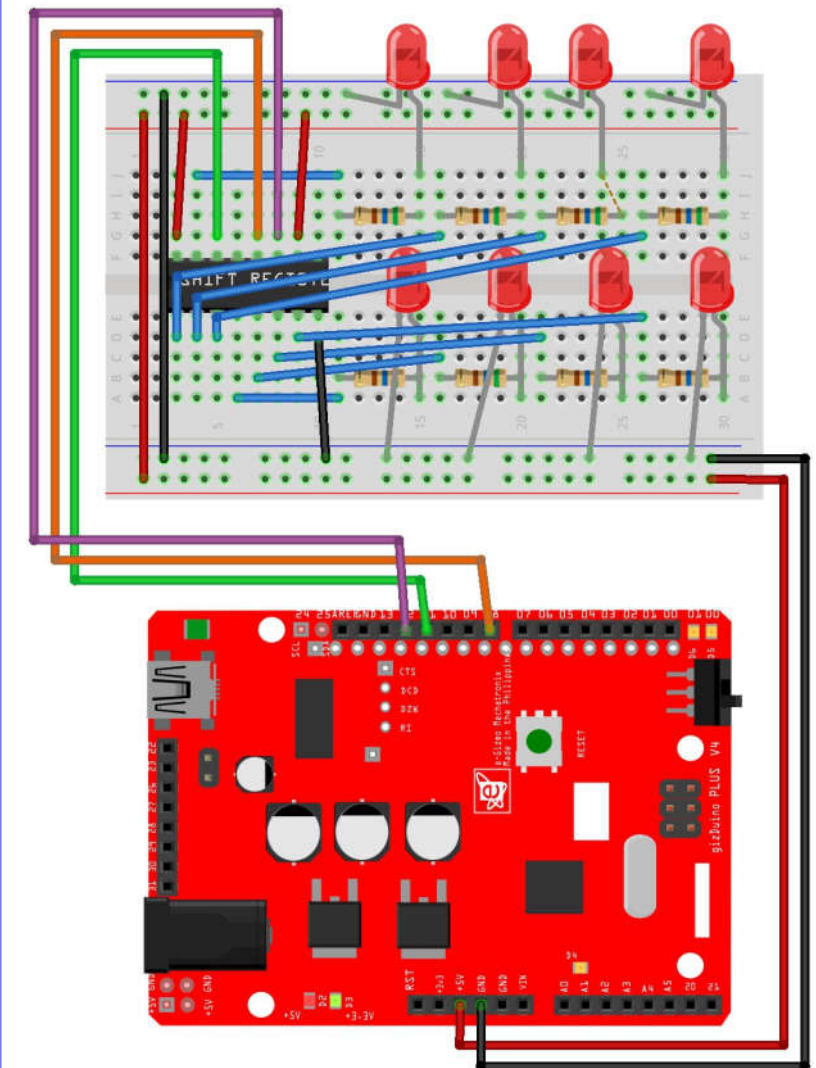
Qty	Materials
1	SN74LS595N Shift Register
8	560 Ohms 1/4W
8	Red LED 5mm

STEP 1: Construct the circuit.
 STEP 2: Connect the USB Cable to PC.
 STEP 3: Open the Arduino IDE.
 STEP 4: Open the SHIFT REGISTER.ino
 STEP 5: Then, Click Upload.

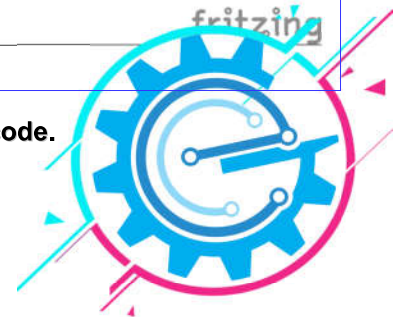
Schematic



Breadboard



Upload the SHIFT REGISTER.ino code.

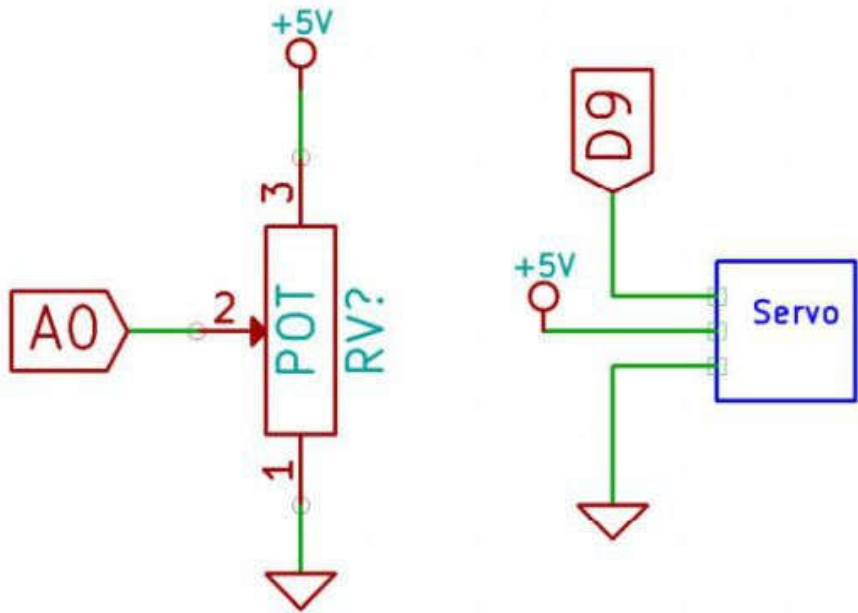


gizDuino Servo Motor PLUS

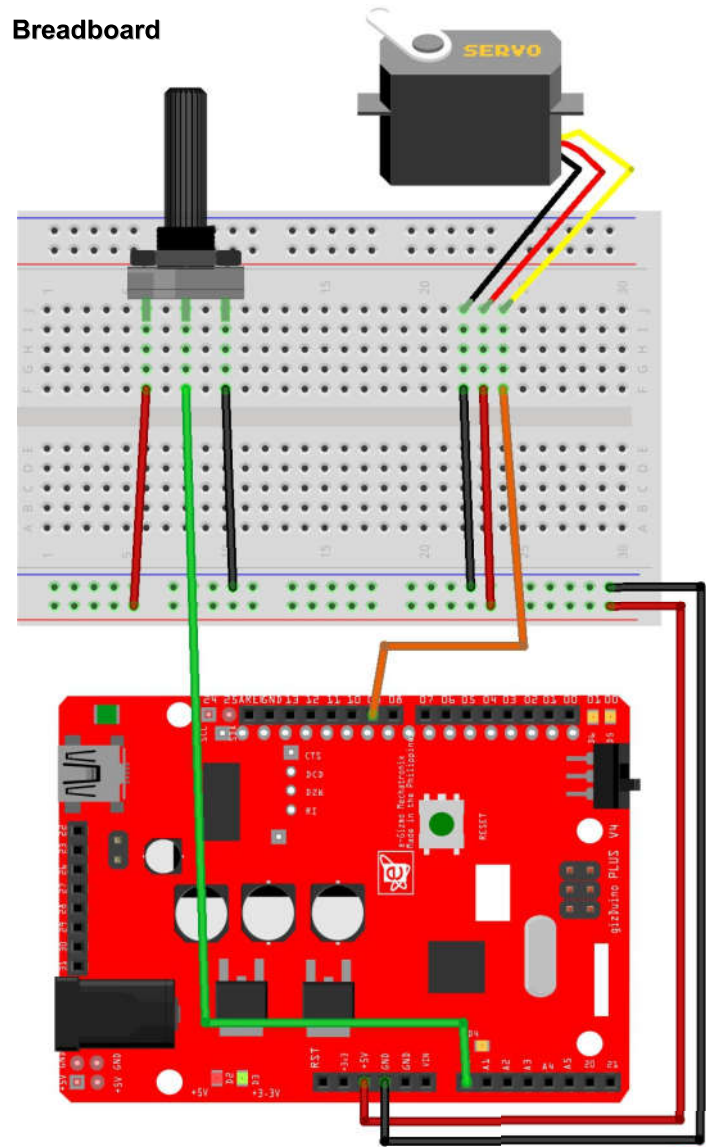
Qty	Materials
1	10K Potentiometer
1	SG-90 Servo Motor

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the SERVO.ino
STEP 5: Then, Click Upload.

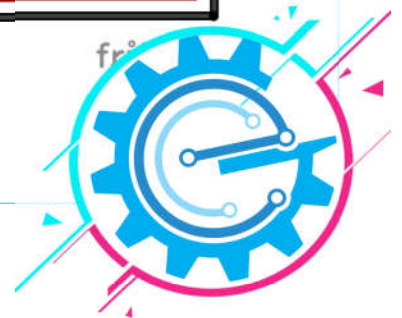
Schematic



Breadboard



Upload the SERVO.ino code.

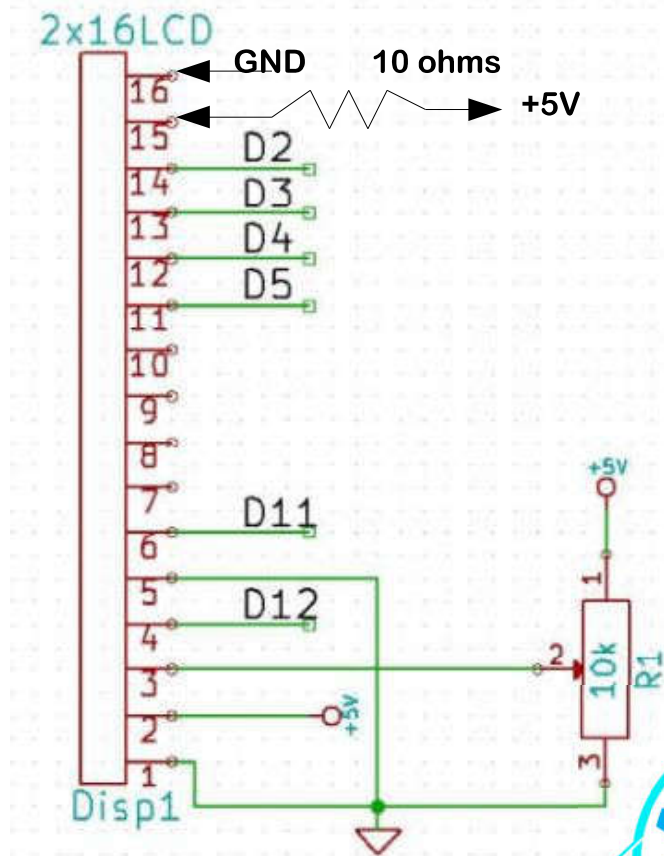


gizDuino 2x16 LCD Display PLUS

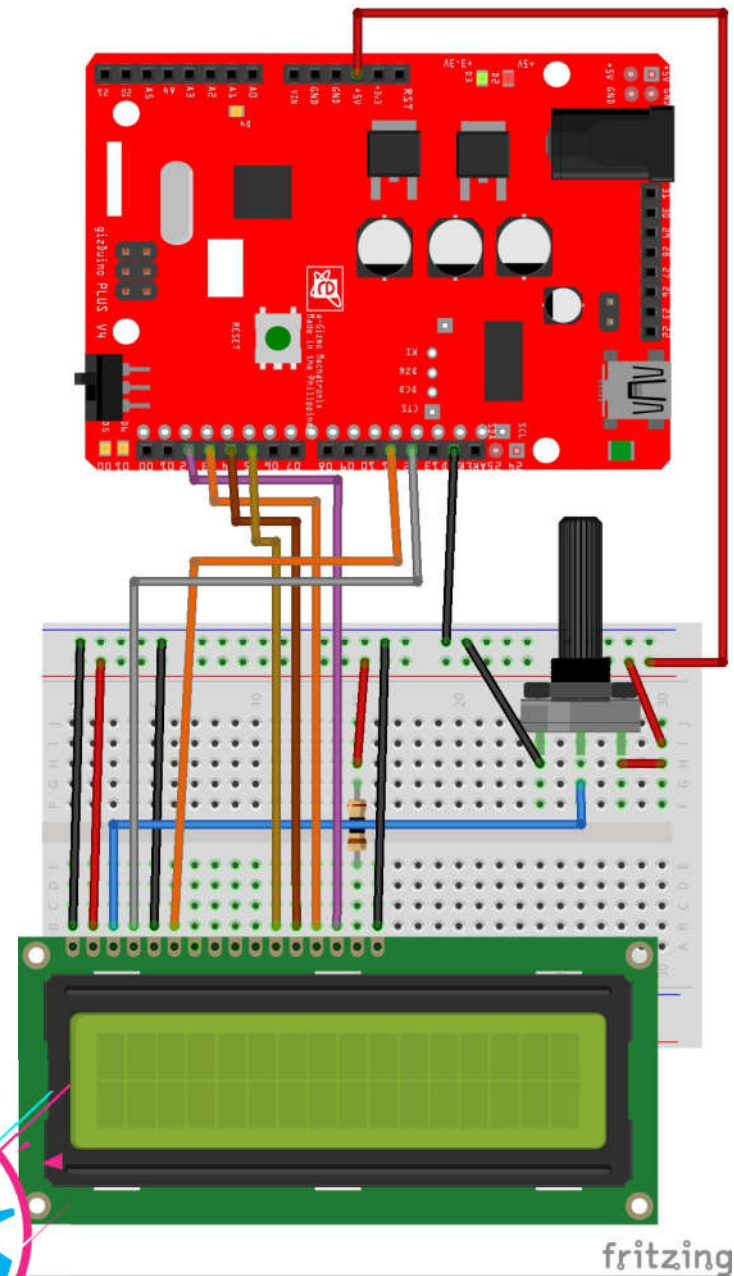
Qty	Materials
1	2x16 LCD Display
1	10k Potentiometer
1	10 Ohms 1/4W

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the LCD.ino
STEP 5: Then, Click Upload.

Schematic



Breadboard



Upload the LCD.ino code.

gizDuino 2x16 LCD Display with I2C **PLUS**

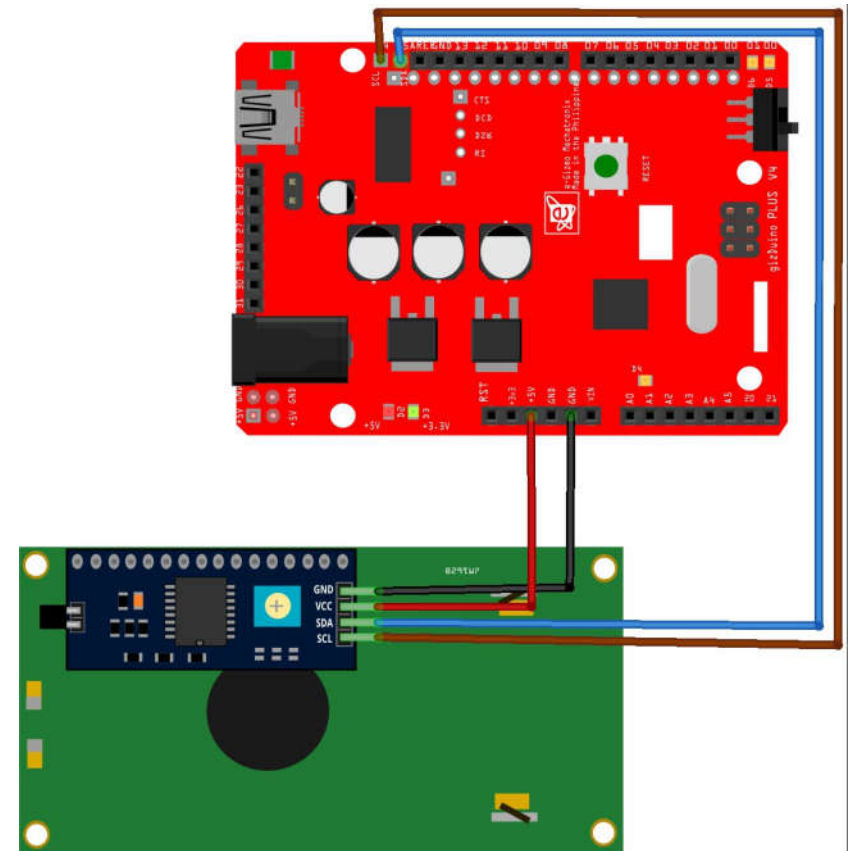
Qty	Materials
1	2x16 LCD i2c Display

STEP 1: Construct the circuit.
STEP 2: Connect the USB Cable to PC.
STEP 3: Open the Arduino IDE.
STEP 4: Open the LCDI2C.ino
STEP 5: Then, Click Upload.

```
// Set the LCD I2C address number  
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  
//Some are use 0x3F address
```

Then adjust the trimmer resistor for display contrast.

Breadboard



fritzing

Upload the LCDI2C.ino code.

