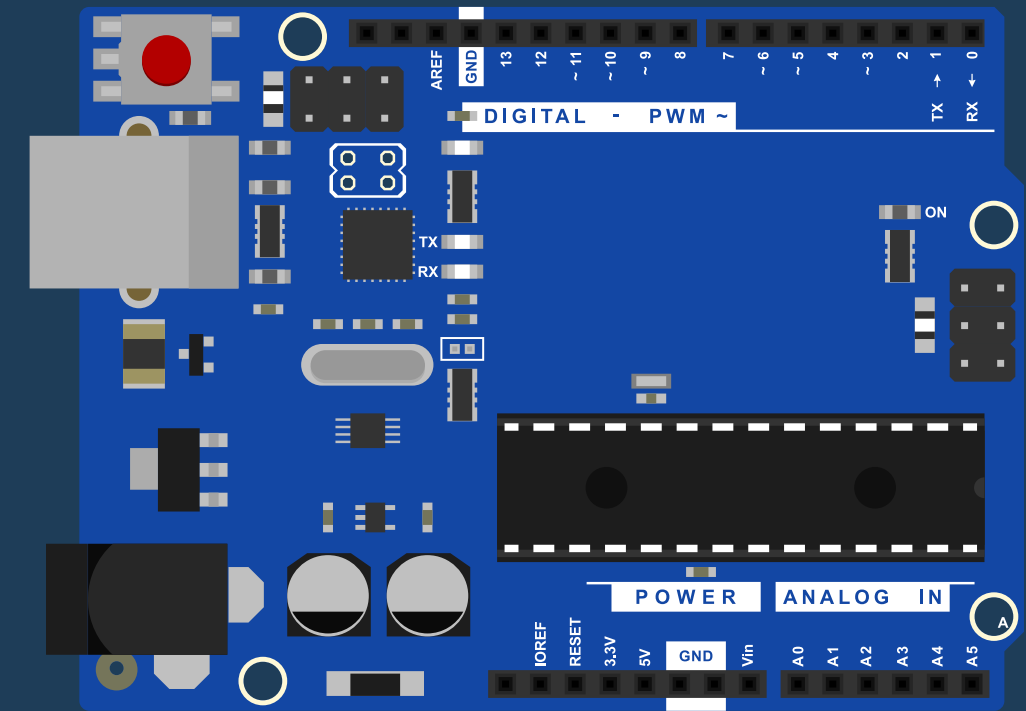# ARDUINO AIR QUALITY MONITOR
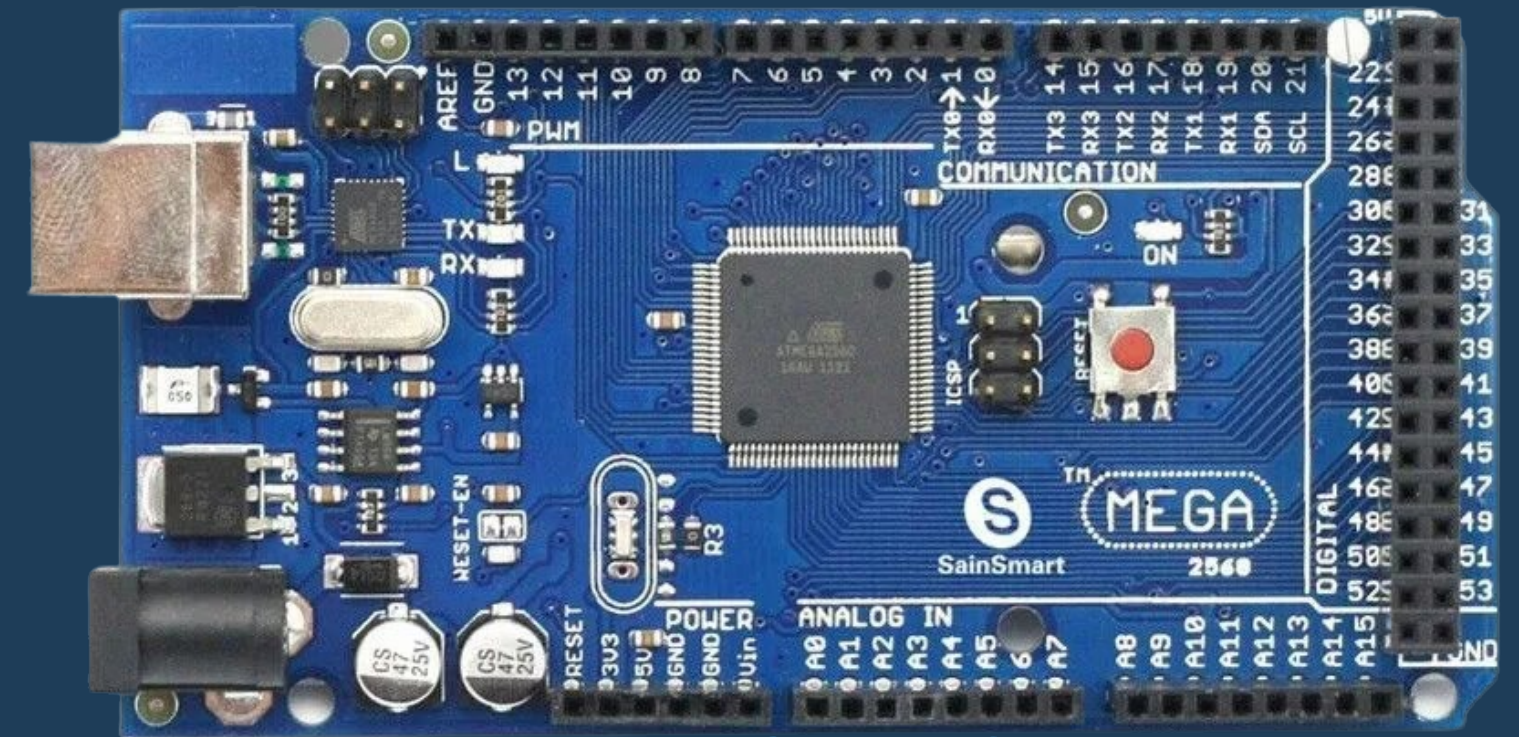
INDOOR
AIR QUALITY

What is Arduino?

ARDUINO UNO

- Arduino is an open-source electronics platform based on easy-to-use hardware and software.

- Arduino boards are able to read **inputs** and turn them into **outputs** .

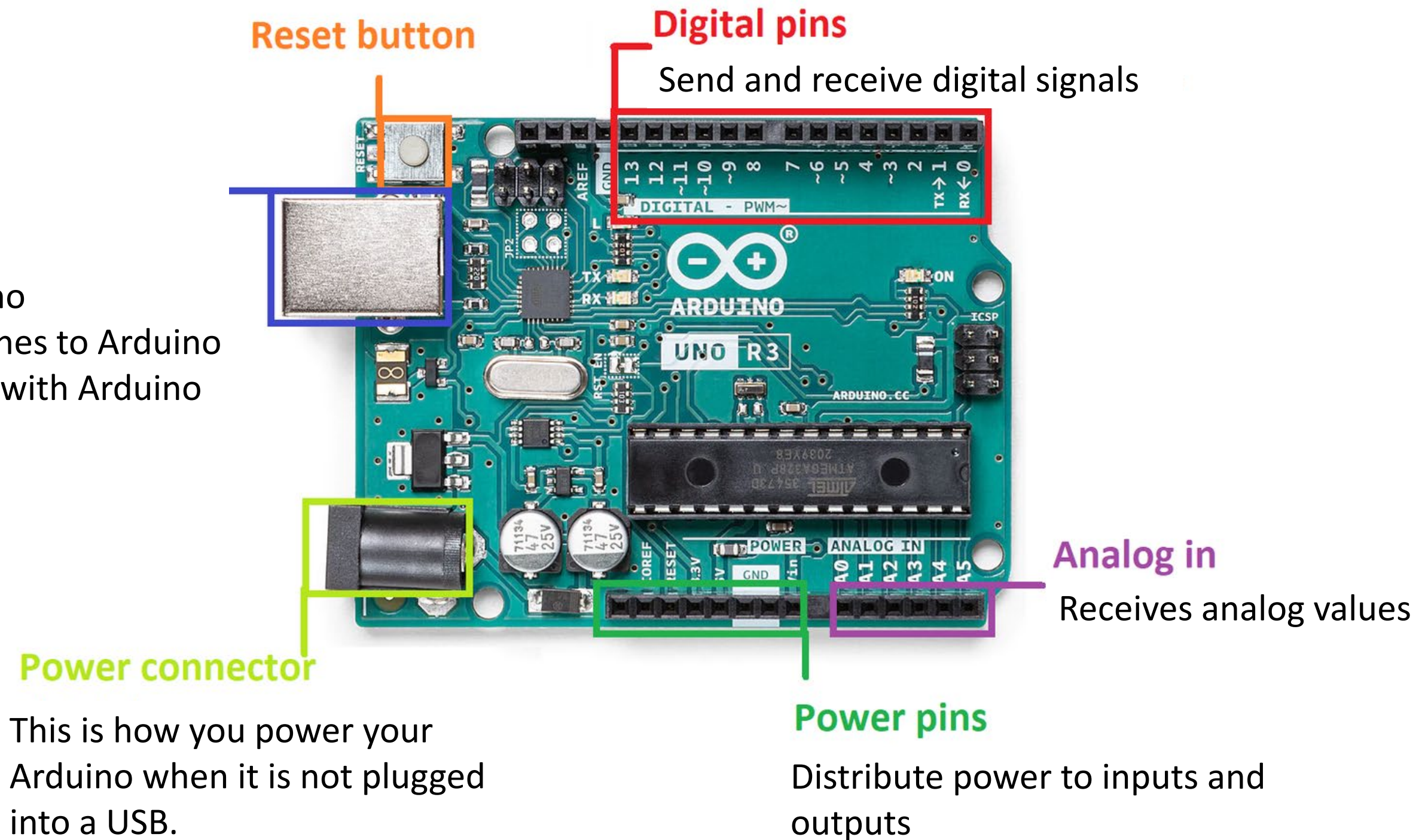- This board allows you to easily create **interactive projects.**
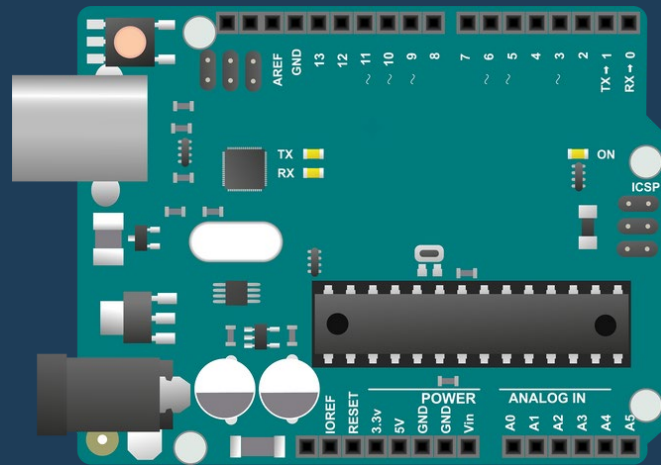

ARDUINO MEGA

What is Arduino?

Reset button

Digital pins

Send and receive digital signals

USB port

Used for:
- Powering Arduino
- Uploading sketches to Arduino
- Communicating with Arduino sketch

Analog in

Receives analog values

Power connector

This is how you power your Arduino when it is not plugged into a USB.

Power pins

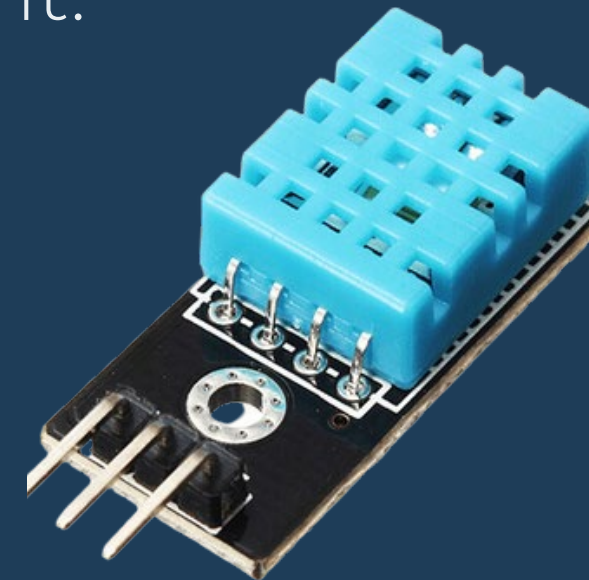Distribute power to inputs and outputs

MATERIALS

ARDUINO BOARD

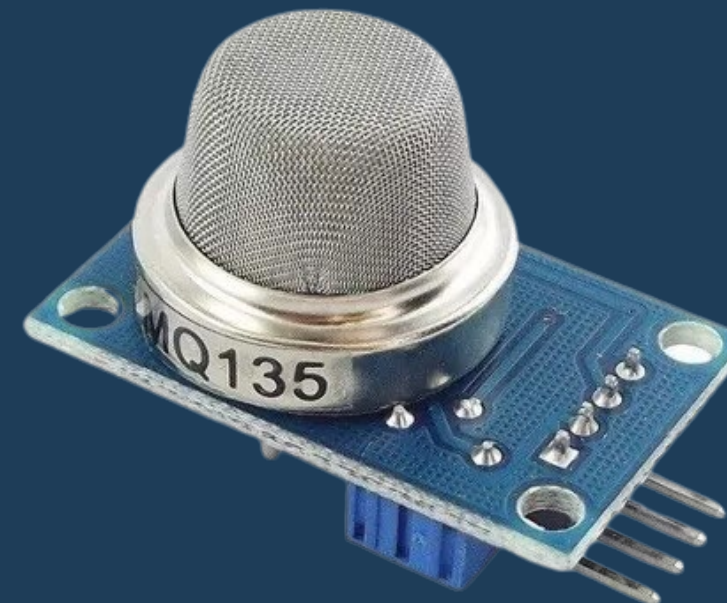Using this board, we are going to **develop** our project.

SENSOR DHT11

This sensor measures the **relative humidity** and **temperature** of the environment.
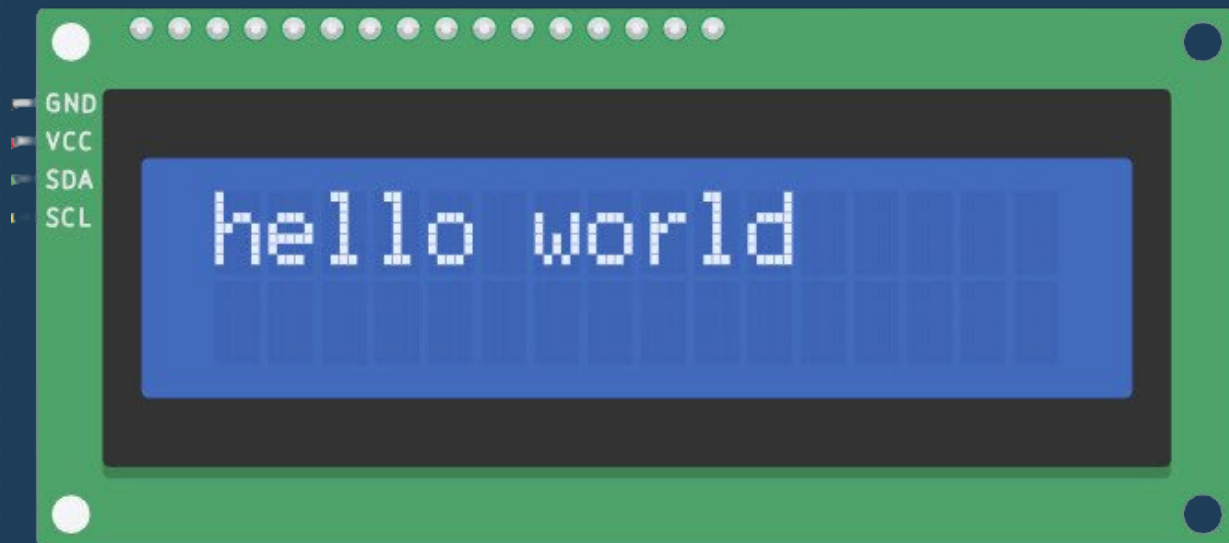
SENSOR MQ135

This sensor measures the **CO2** in parts per million (ppm).

MATERIALS

LCD SCREEN

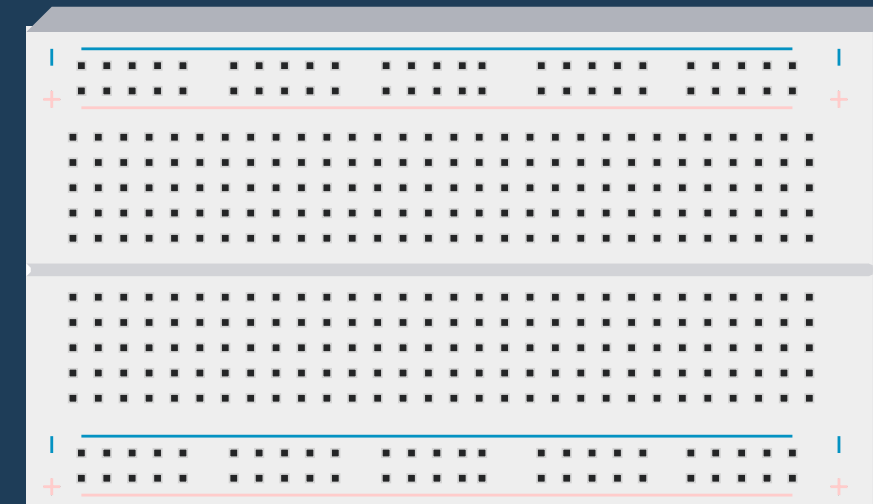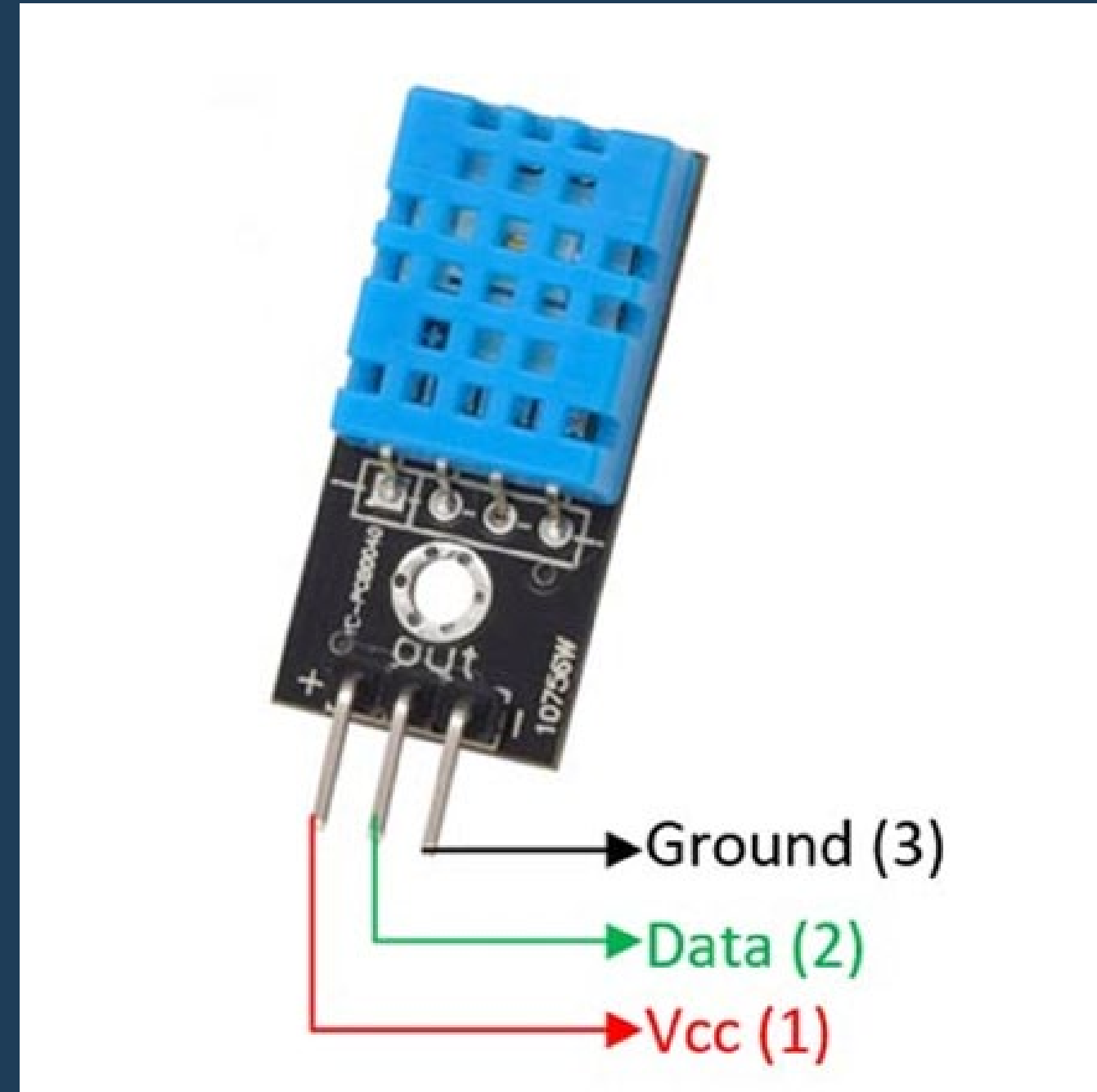Displays the air quality data measured by our sensors.
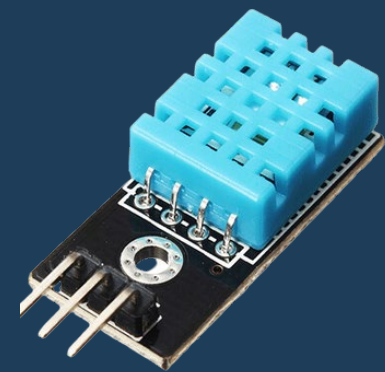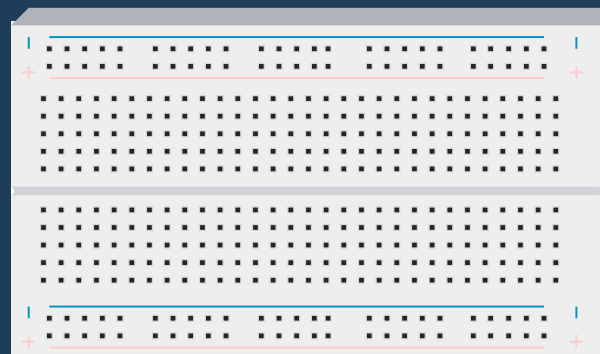
GND
VCC
SDA
SCL

hello world

PROTOBOARD

With this tool, we will be able to **create and test** the electronic connections of our project.

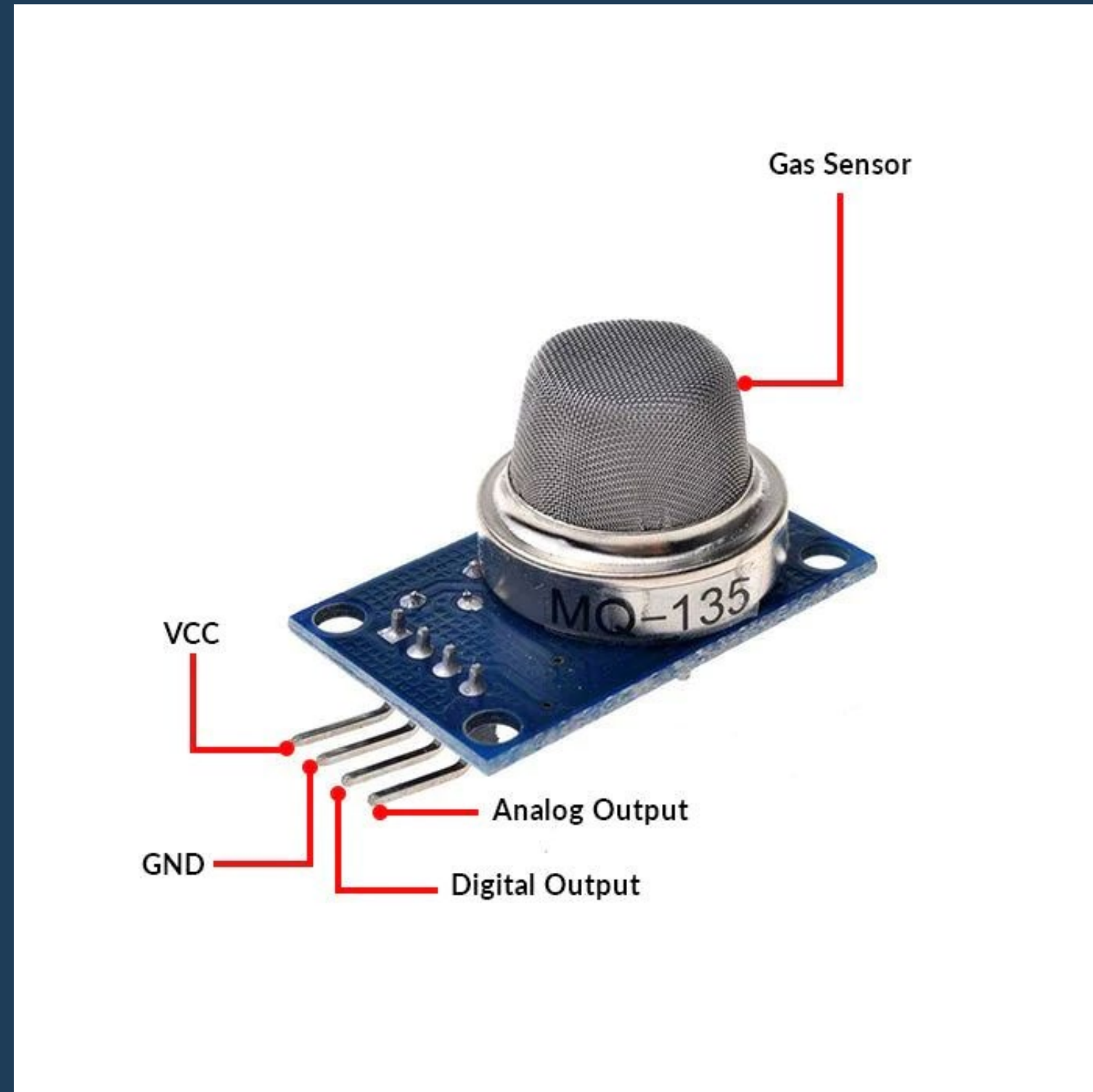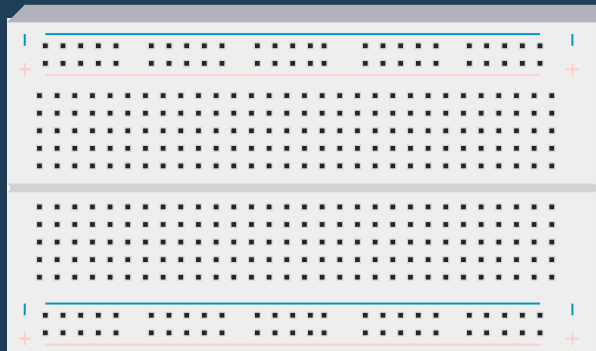## JUMPERS

Used to establish connections on the protoboard.

CONNECTIONS

DHT11 TO ARDUINO

Ground (3)

Data (2)

Vcc (1)

CONNECTIONS

DTH11 TO ARDUINO

SENSOR	ARDUINO
+	3.3 V (Power pin)
Data / out	2 (Digital pin)
-	Ground (Power pin)
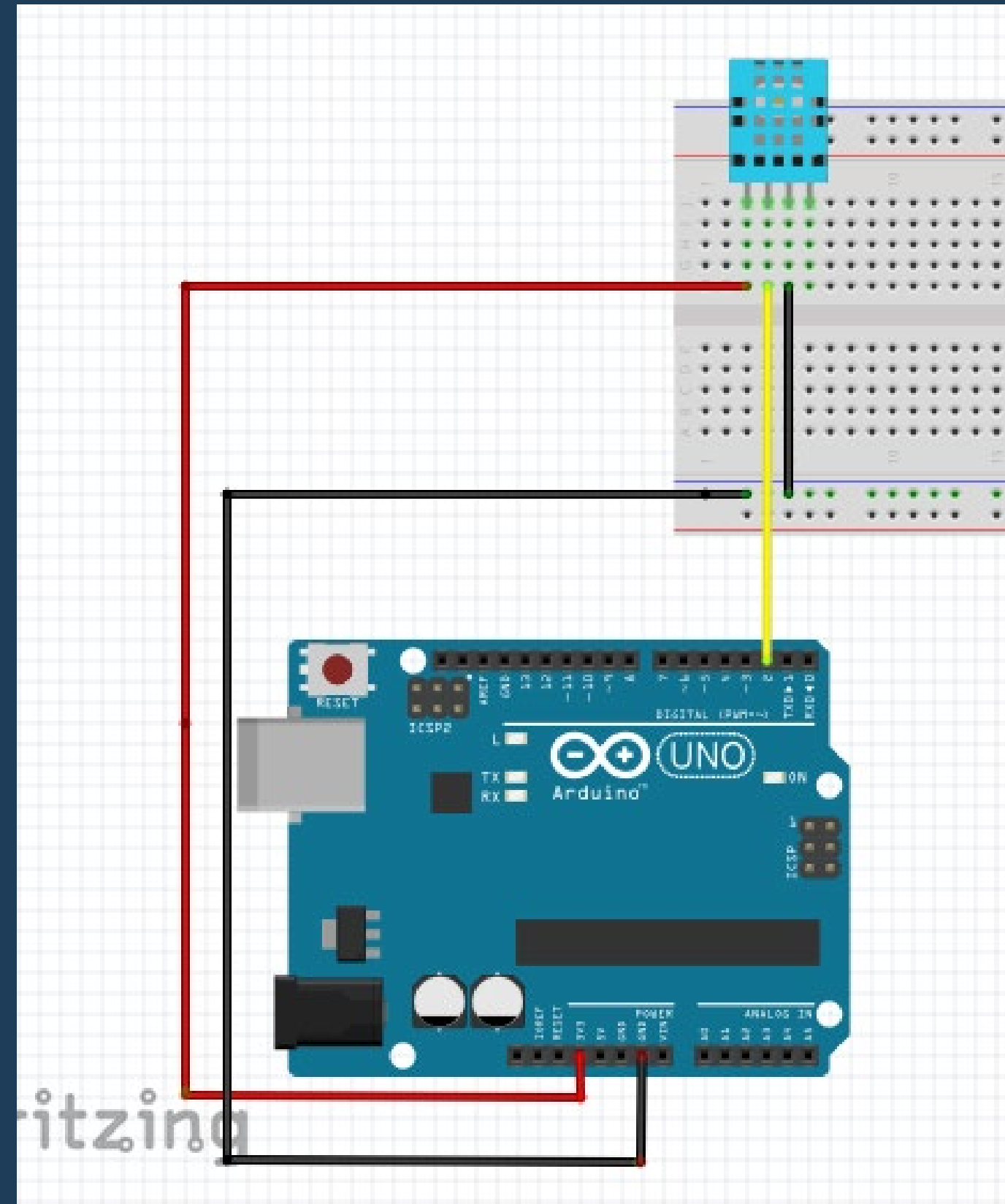
CONNECTIONS

CONNECTIONS

MQ135 TO ARDUINO

SENSOR	ARDUINO
AO (Analog output)	A0 (Analog in)
GND	Ground (Power pin)
VCC	5 V (Power pin)
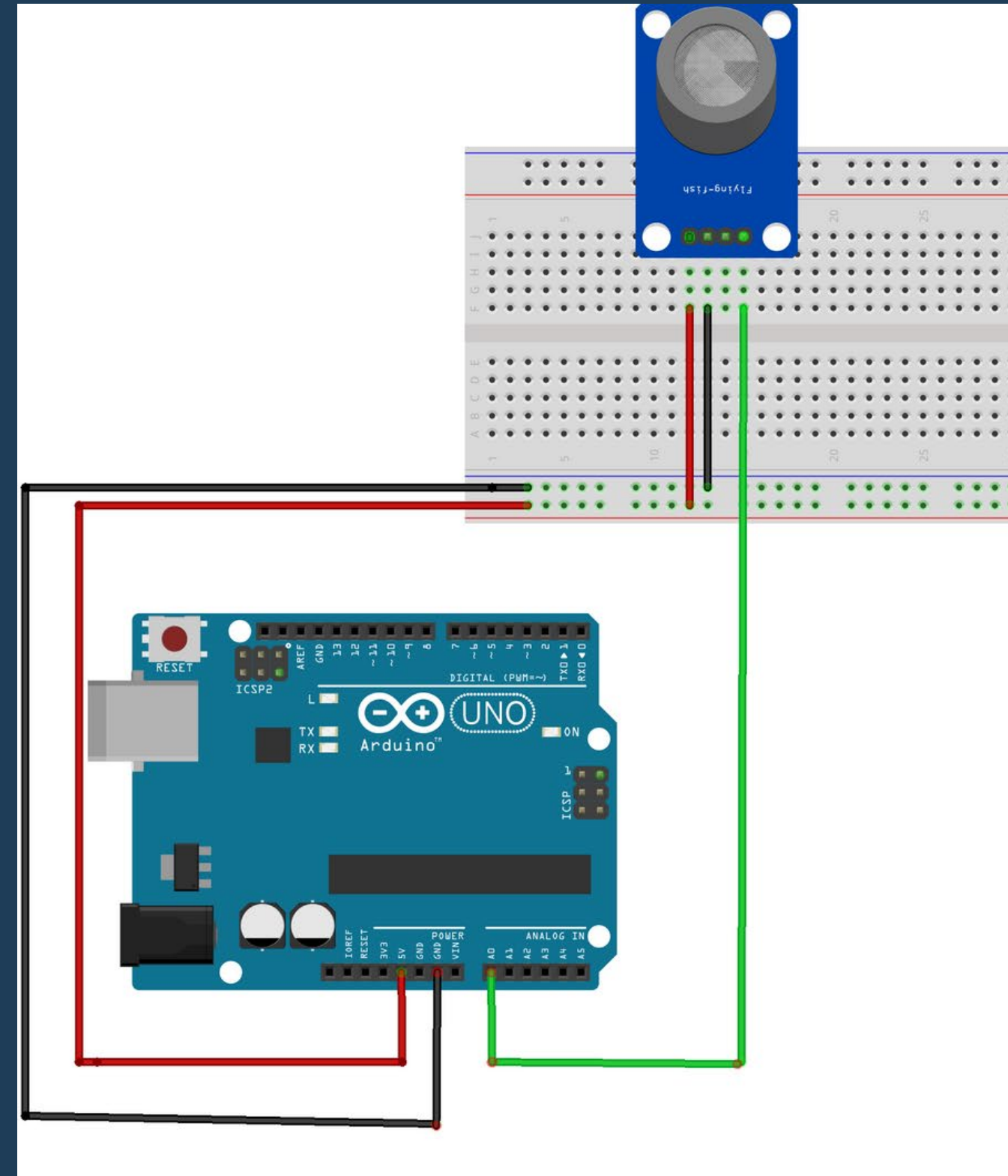
CONNECTIONS
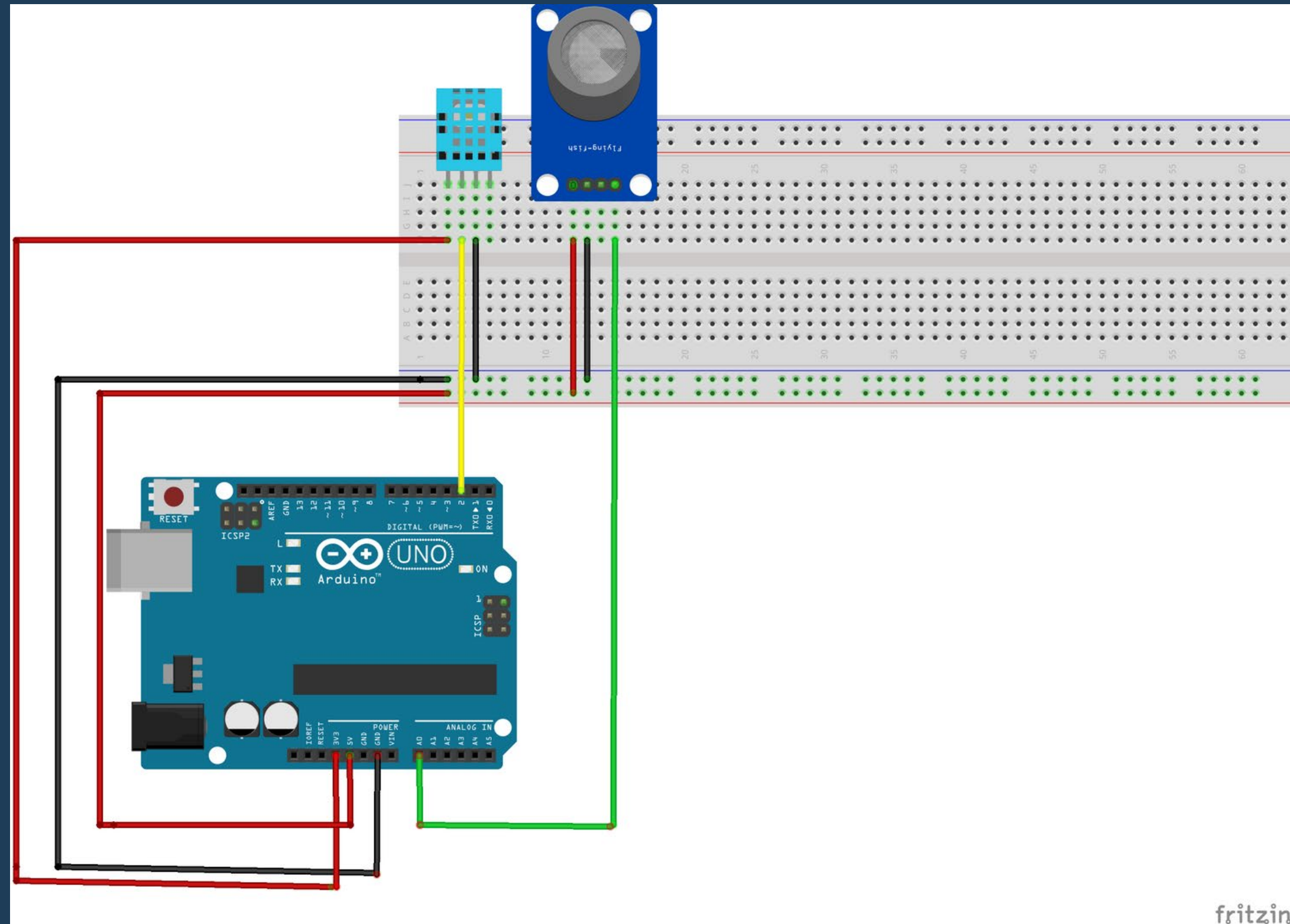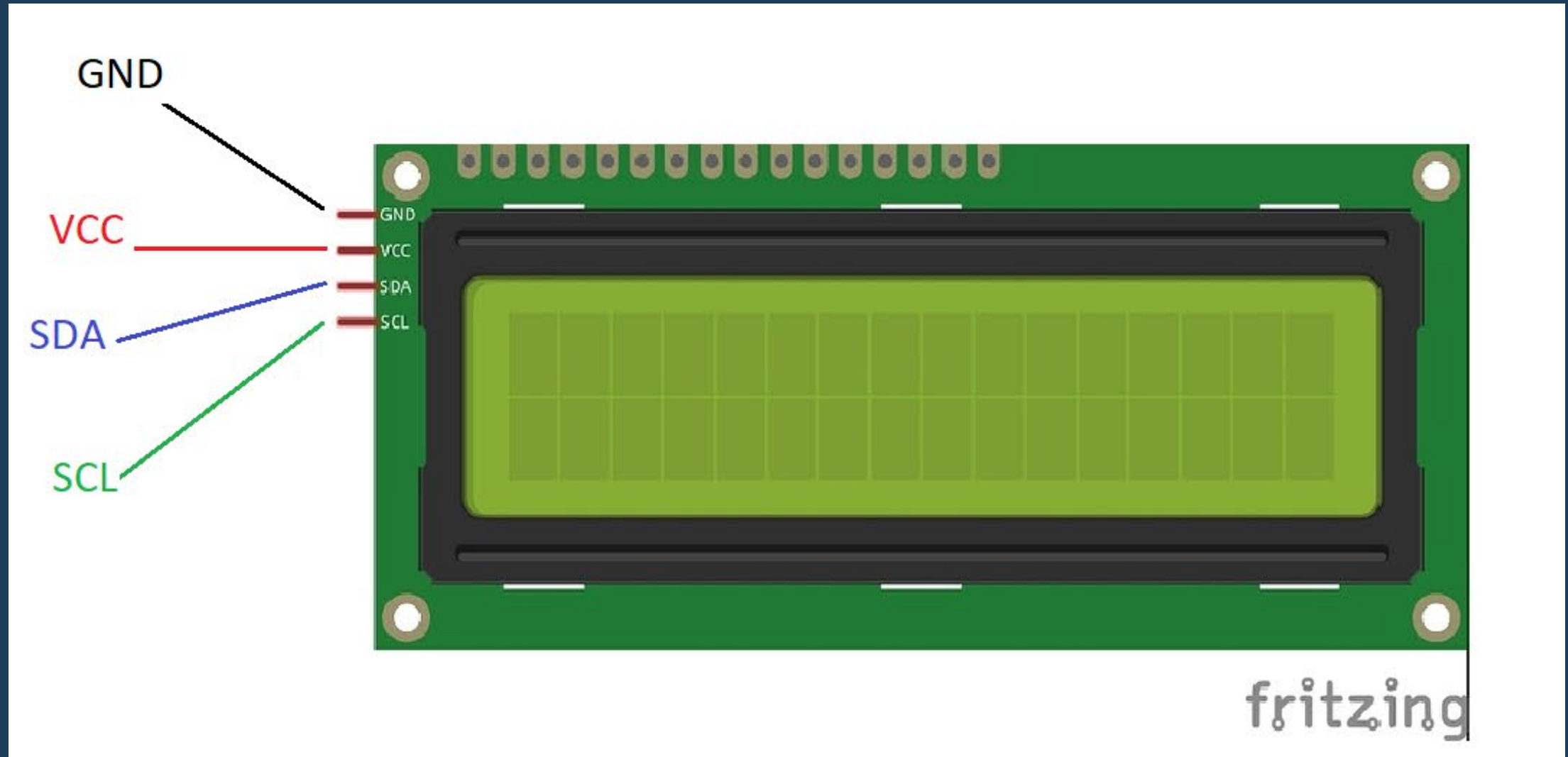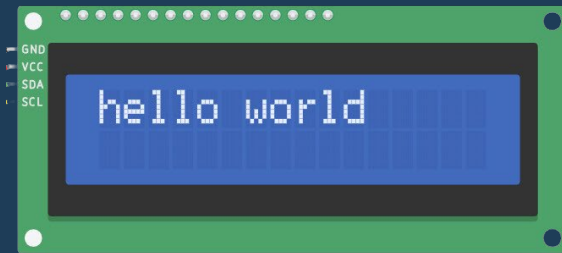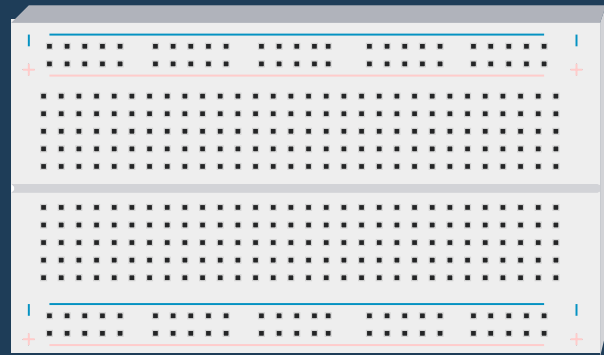
CONNECTIONS

CONNECTIONS

SENSOR	ARDUINO
GND	Ground (Power pin)
VCC	5v (Power pin)
SDA (Analog output)	A4 (Analog in)
SCL (Analog output)	A5 (Analog in)
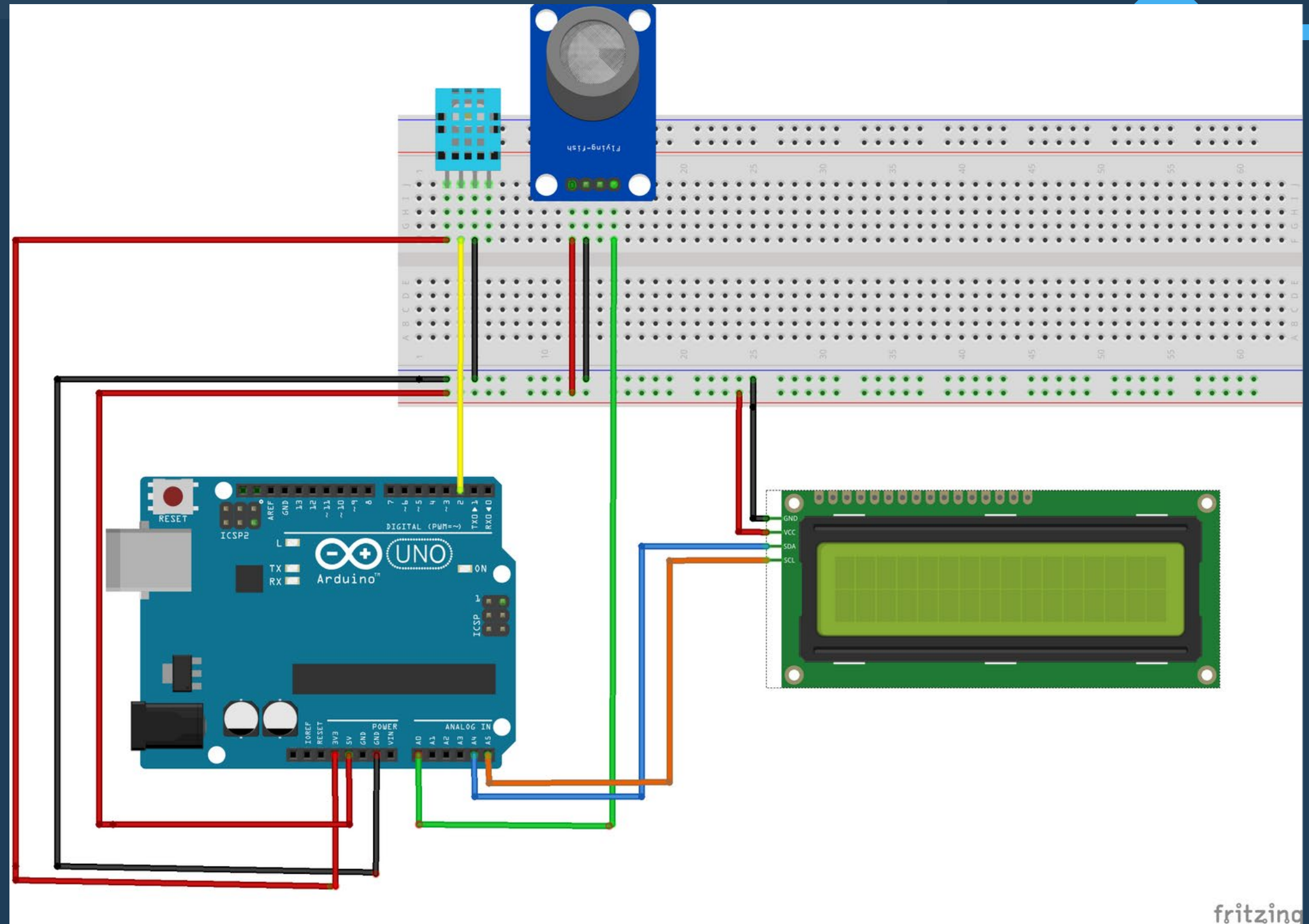
ARDUINO IDE
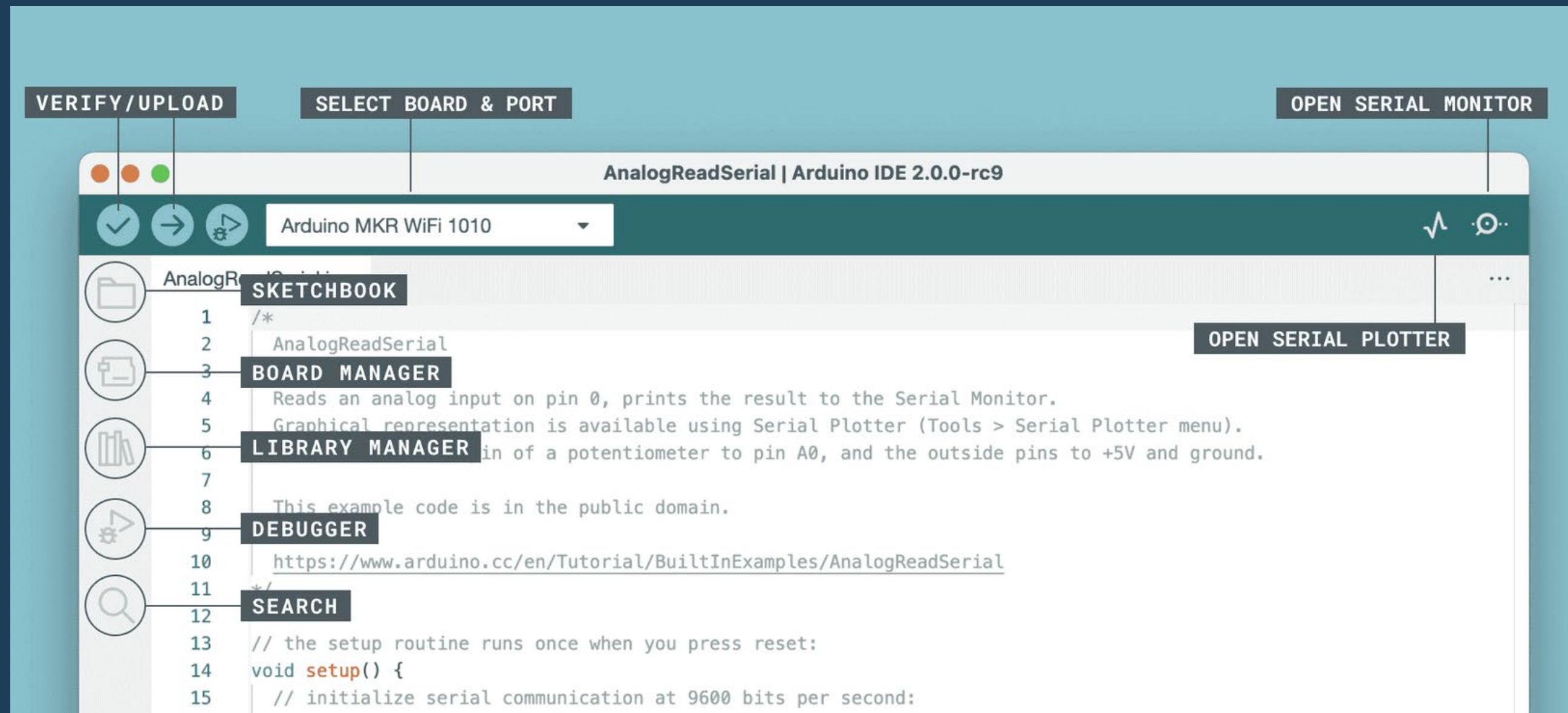
Is a software application used to program Arduino microcontrollers.
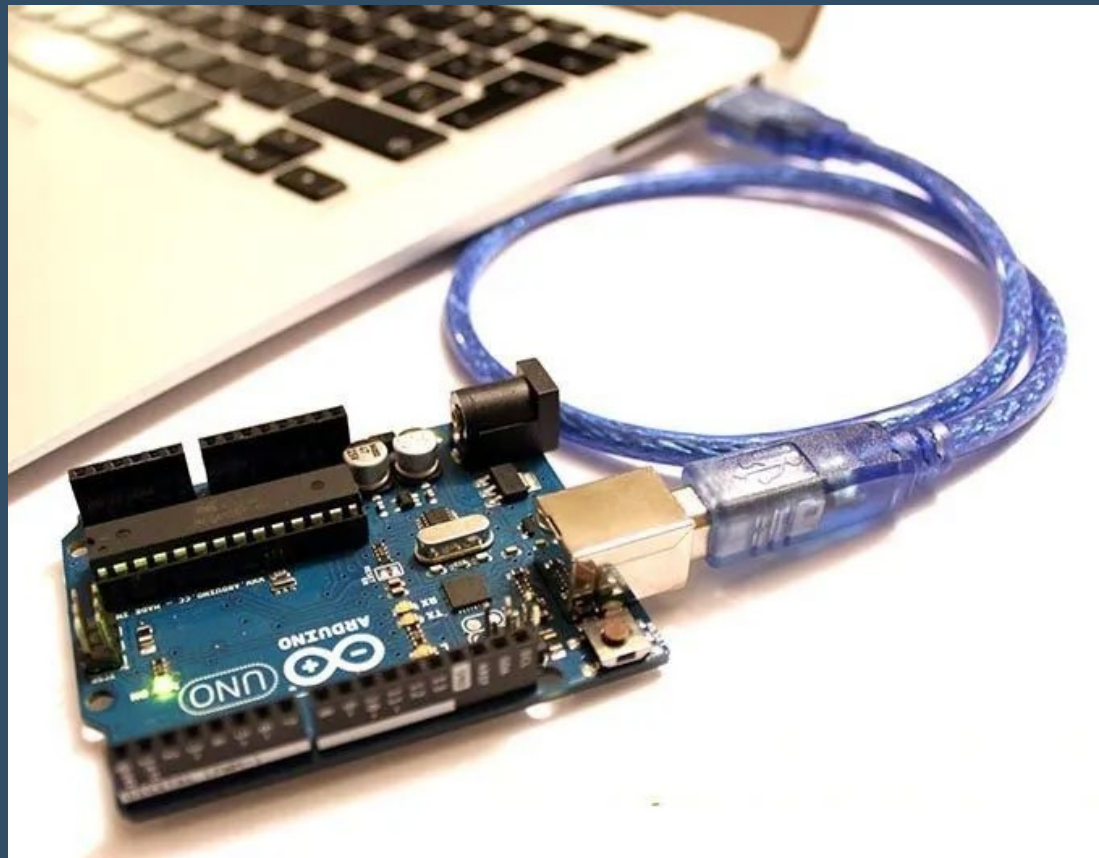
It provides an interface for writing, compiling, and uploading code to Arduino boards.
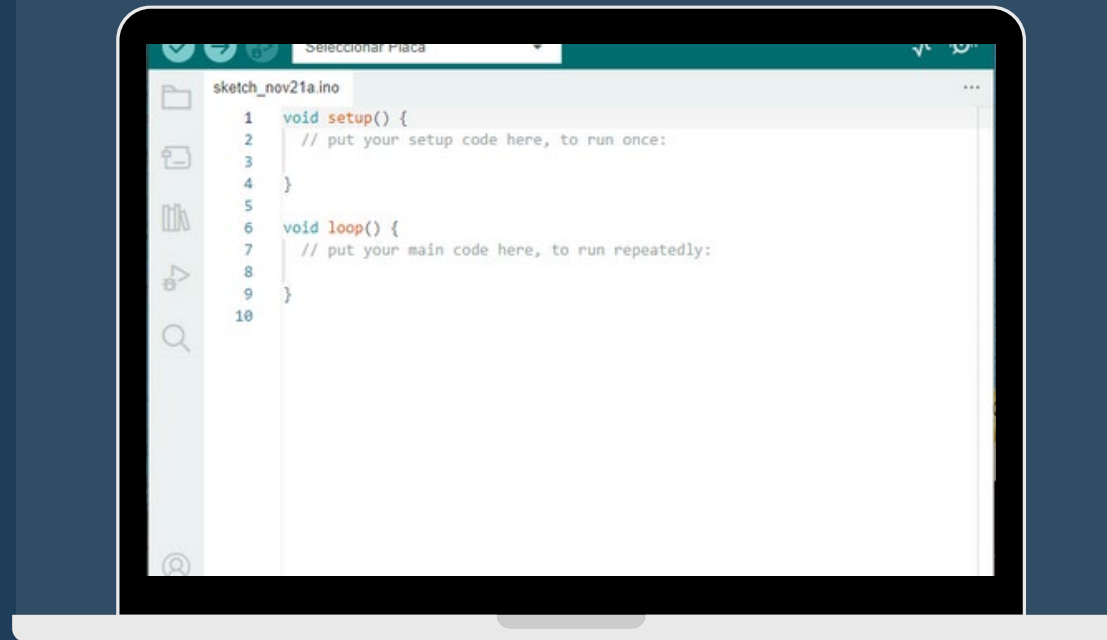
ARDUINO IDE INSTALLATION
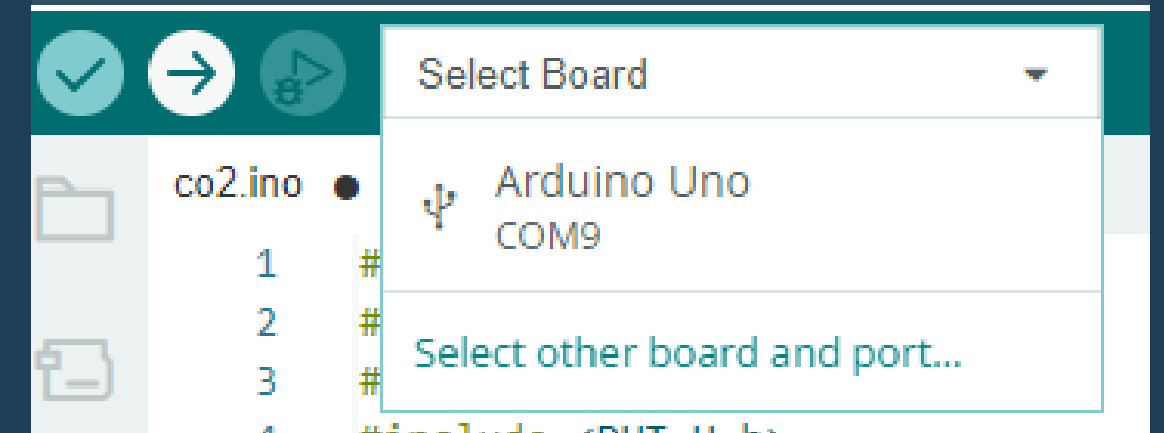
UPLOAD CODE TO THE ARDUINO BOARD

1. CONNECT THE ARDUINO BOARD TO YOUR COMPUTER.
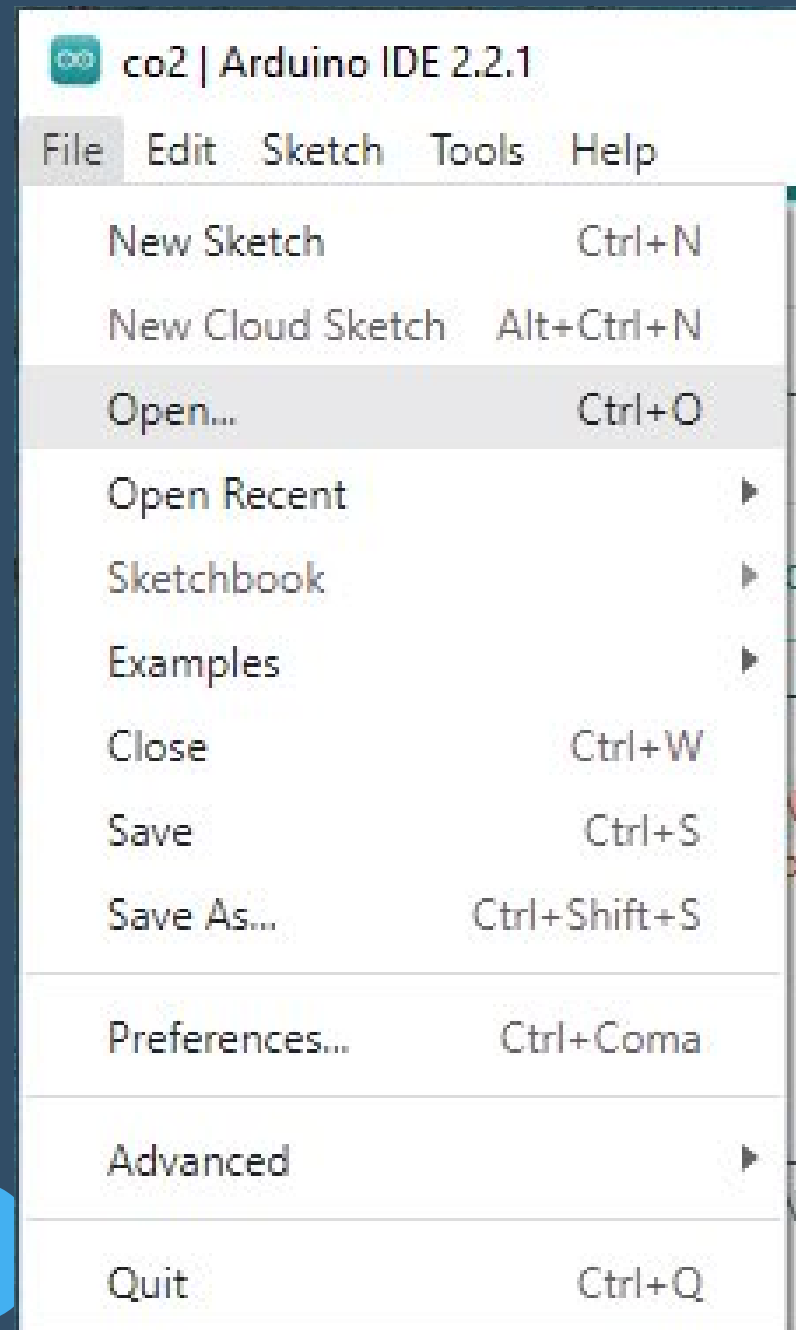
2. OPEN THE ARDUINO IDE ON YOUR COMPUTER.
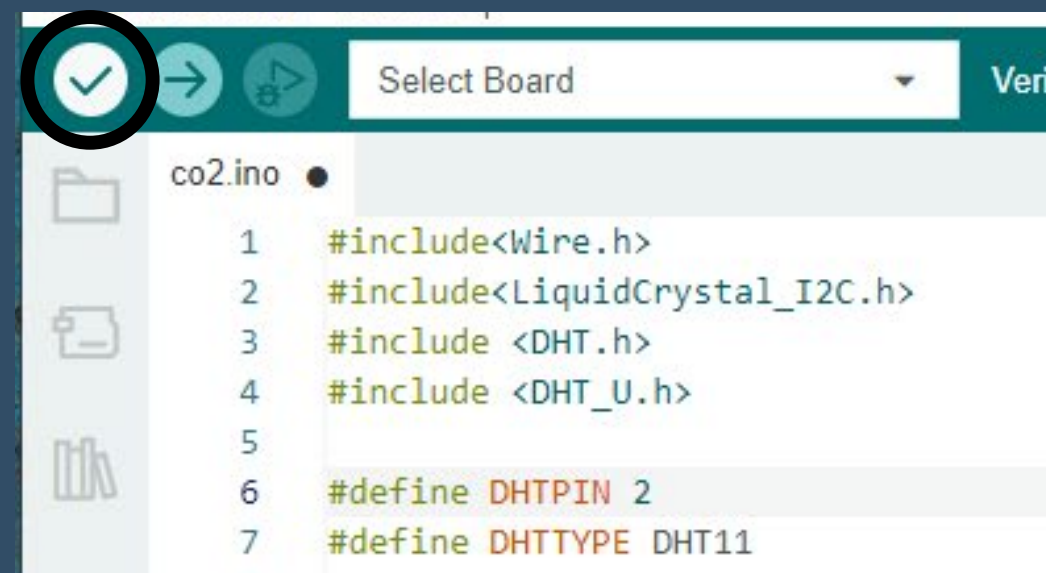
3. SELECT THE BOARD AND PORT.

UPLOAD CODE TO THE ARDUINO BOARD
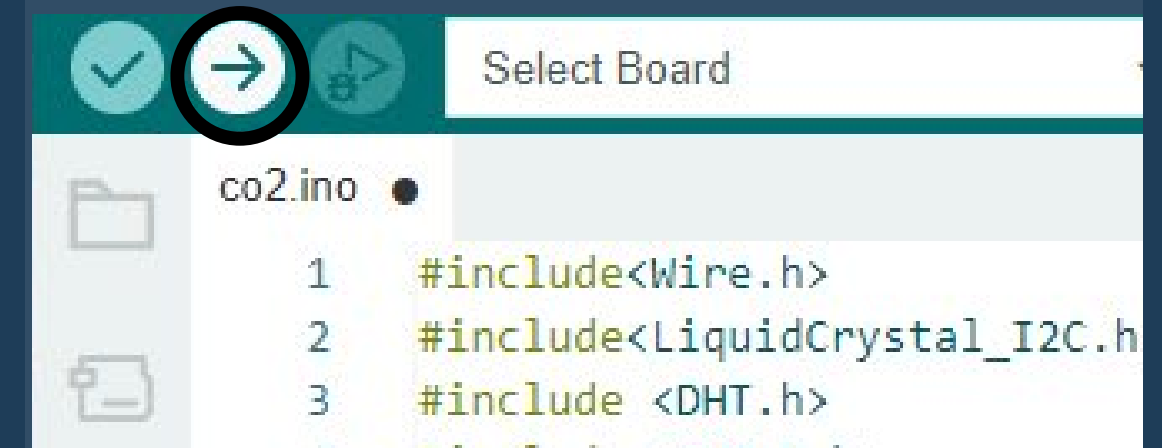
4. WRITE OR OPEN THE CODE.

5. COMPILE THE CODE.

Click the verify button.

6. UPLOAD THE CODE.

Click the upload button.

PROGRAMMING THE ARDUINO BOARD

You can ask your teacher for the code.

BIBLIOGRAPHIC REFERENCES

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https://projecthub.arduino.cc

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your Mac [Vídeo]. YouTube.
https://www.youtube.com/watch?v=6eMyKhAx--g

Software. (s. f.). Arduino.
https://www.arduino.cc/en/software