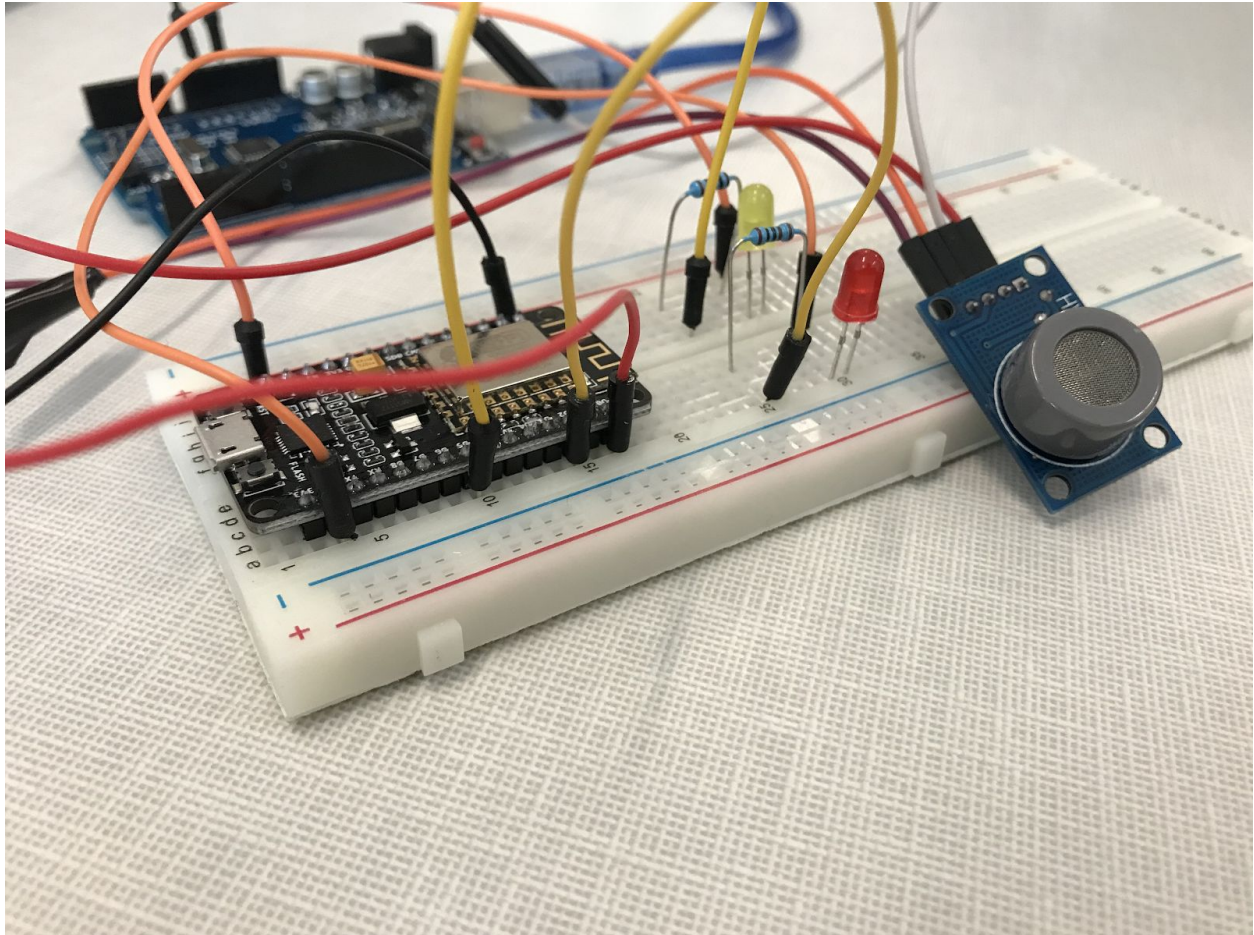
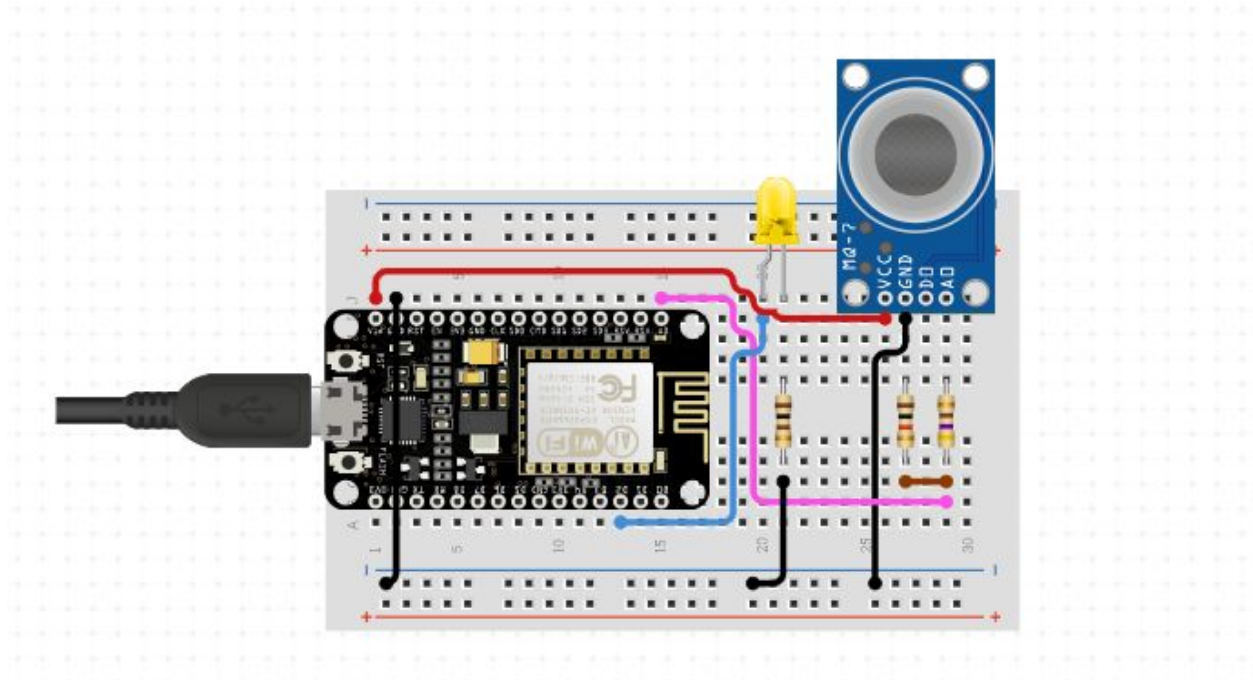


In TOOLS, go to BOARD and go to NodeMCU 1.0 (ESP-12E Module)
//we will be using this one for the wifi module

CO Sensor:



Schematic:



This sensor requires the usage of the 5V to power the sensor from the arduino UNO. The analog output of the sensor is connected to the A0 input of the Node MCU.

The 3.3V output of the NodeMCU is connected to a 1Kohm resistor in series with the LED cathode.

The anode of the LED is connected to the D5 output of the NodeMCU.

This code is taking the raw data of the measured values.

Unit Testing:

First power the sensor up by applying 5V to into the circuit. This will warm up the sensor and enable it to start recording. Now we have to make sure that the wifi is set up correctly. To do this we connected to our phone data. Having a wifi connection, we are able to send our collected data into our database. Now that all the necessary requirements are done, we can start testing the CO sensor. To do this we first light a candle and put a glass cup over it. This will change all of the oxygen inside the cup to CO. When this happens put the sensor inside the glass cup and wait for the sensor to pick up a reading. Once the reading is found the arduino program will record the value found.

Integration Testing:

This sensor is connected directly our Firebase database. We first made sure that it is connected to the WiFi. Then, by triggering our sensor, we had the Firebase database open and saw the instantaneous change.