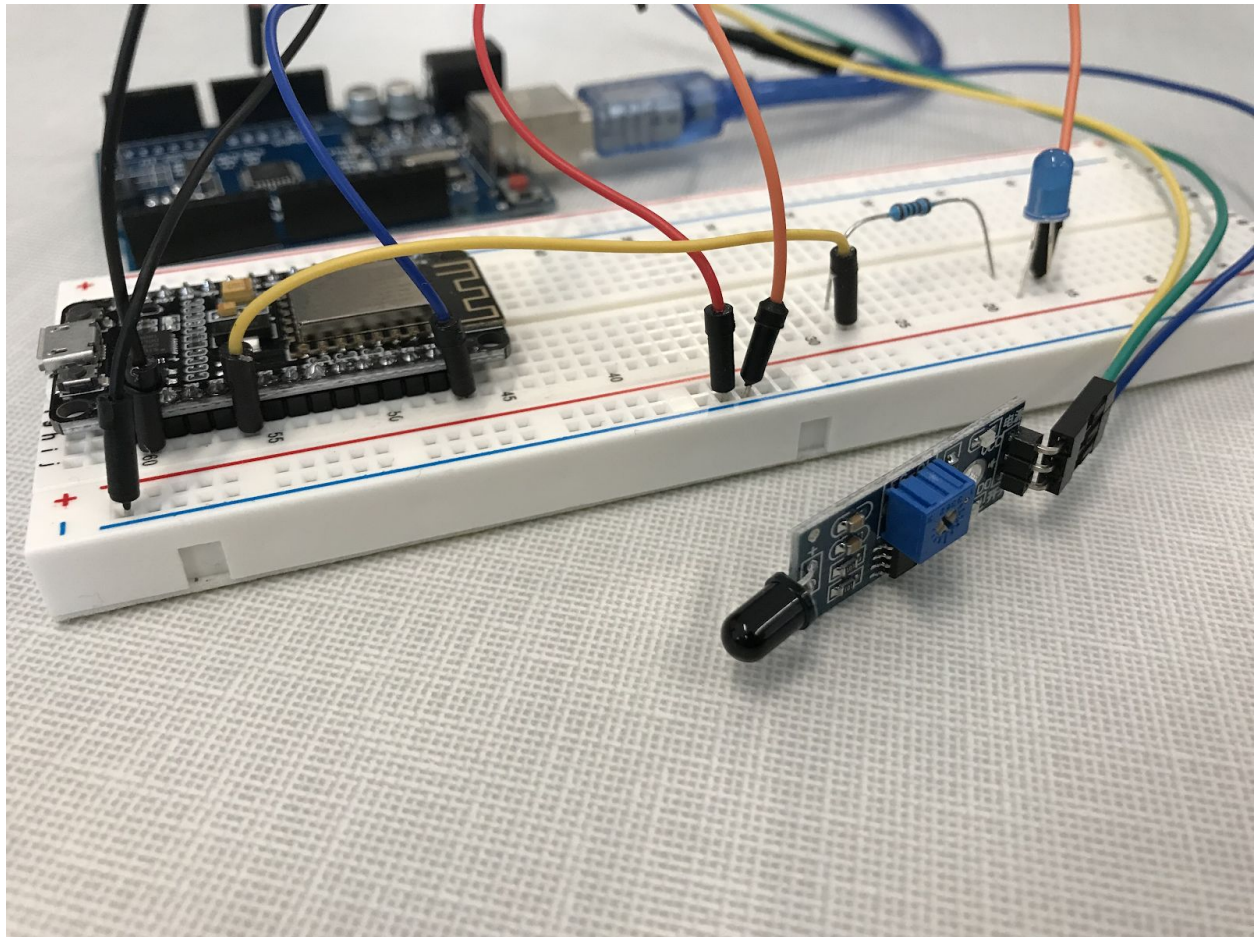
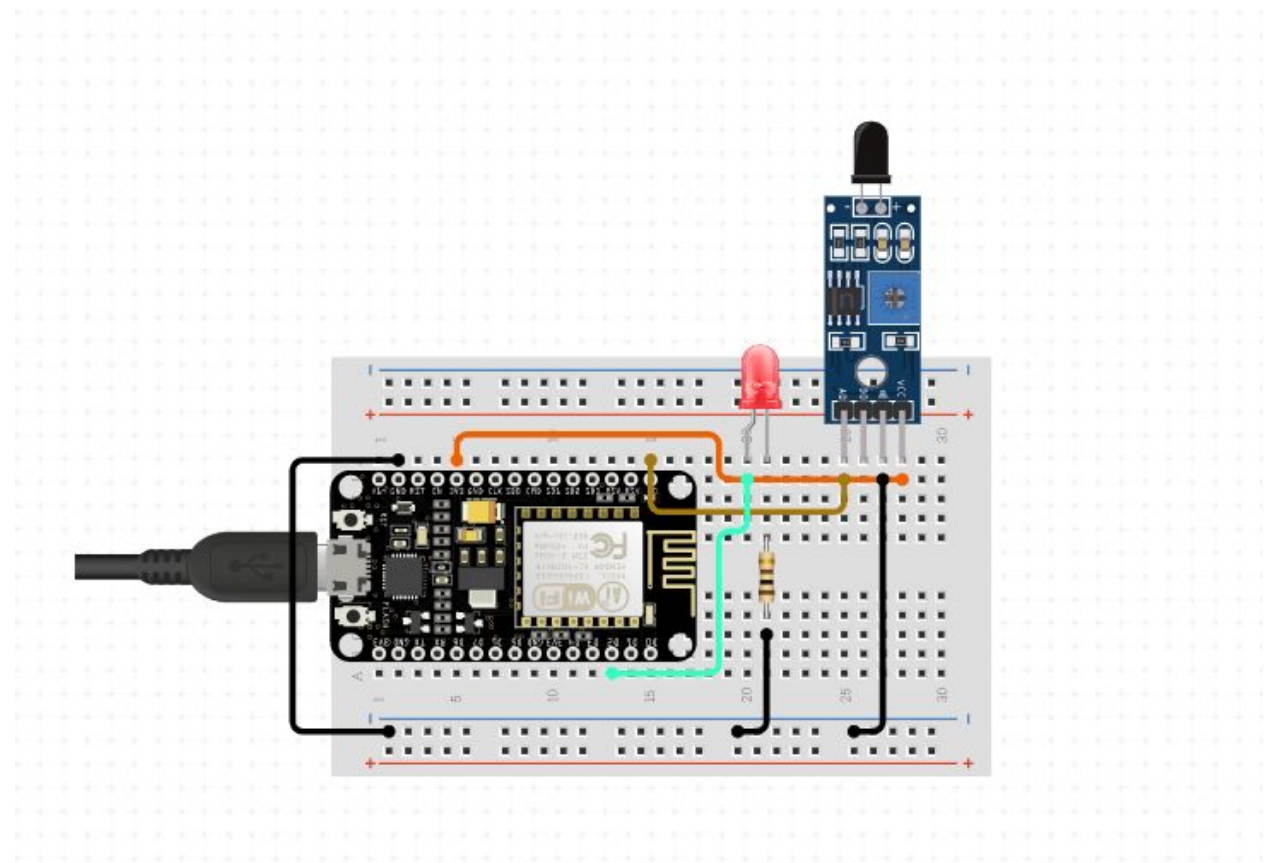


In TOOLS, go to BOARD and go to NodeMCU 1.0 (ESP-12E Module)
//we will be using this one for the wifi module

Flame Sensor:



Schematic:



This sensor has the usage of the 3.3V to power the sensor from the wifi module. The analog output of the sensor is connected to the A0 input of the Node MCU. The Digital output of the sensor is plugged into the D0 output. 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 D7 output of the NodeMCU.

Unit Testing:

While designing this sensor, we first connected the sensor to the Node MCU with the schematic given above. This sensor is primarily a digital output sensor, which means that when an infrared signal is picked up by the sensor, it will send a digital logic high. The NodeMCU has WiFi connecting capabilities, so we established a WiFi connection through a mobile hotspot, and updated this value in the Firebase database.

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 that a fire was detected.