Components Used:(Click to Buy)

- Wemos D1
- Bread Board
- Jumper Wire
- 1602 LCD with I2C
- MQ-135

What is MQ135 Gas Sensor?

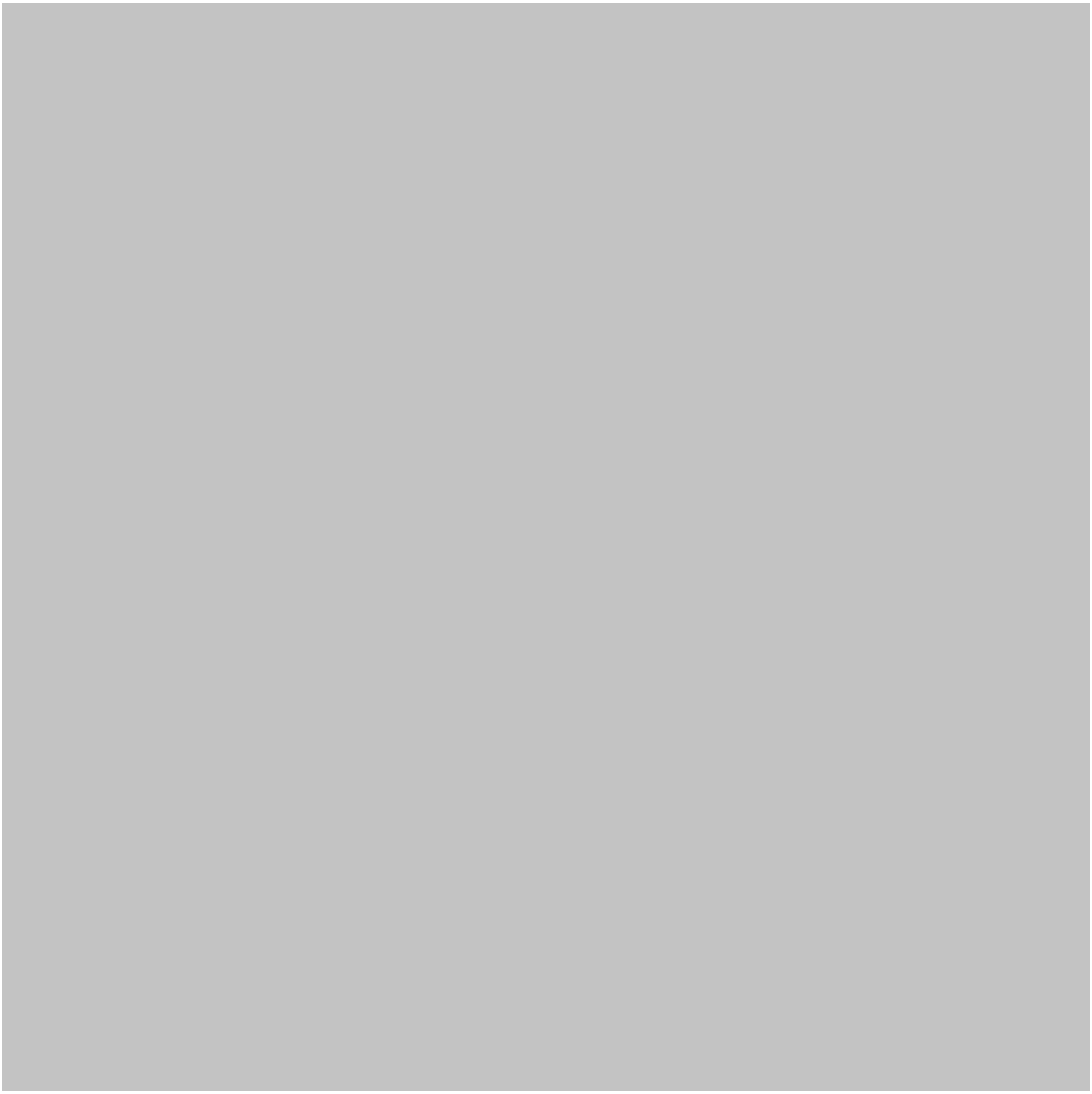
The MQ-135 gas sensor module consists of a steel exoskeleton under which a sensing element is housed. This sensing element is subjected to the current through connecting leads. So, this current is known as the heating current through it, the gases coming close to the sensing element get ionized and are absorbed by the sensing element. This changes the resistance of the sensing element which alters the value of the current going out of it. This resistance value shows in analogue reading.
It works on the 5V pin of Arduino or ESP8266 boards. It is suitable for detecting NH3, NOx, alcohol, Benzene, smoke, CO2, etc.

Connect ESP8266 with 1602 LCD via I2C

This display works with 5V power and via the I2C interface. To know in detail, how to connect LCD display via I2C, Follow this post.

Connect LCD Display with ESP8266 Using I2C Module

So, now connect display according to the diagram below.



So, here I have connected 5V of ESP8266 with VCC of MQ135. I will not use Digital Pin.

Code Explain

Firstly, in the void setup area, I have initialized the display with static texts

which is being read on line no 21.

Arduino Sketch for MQ135 Gas Sensor

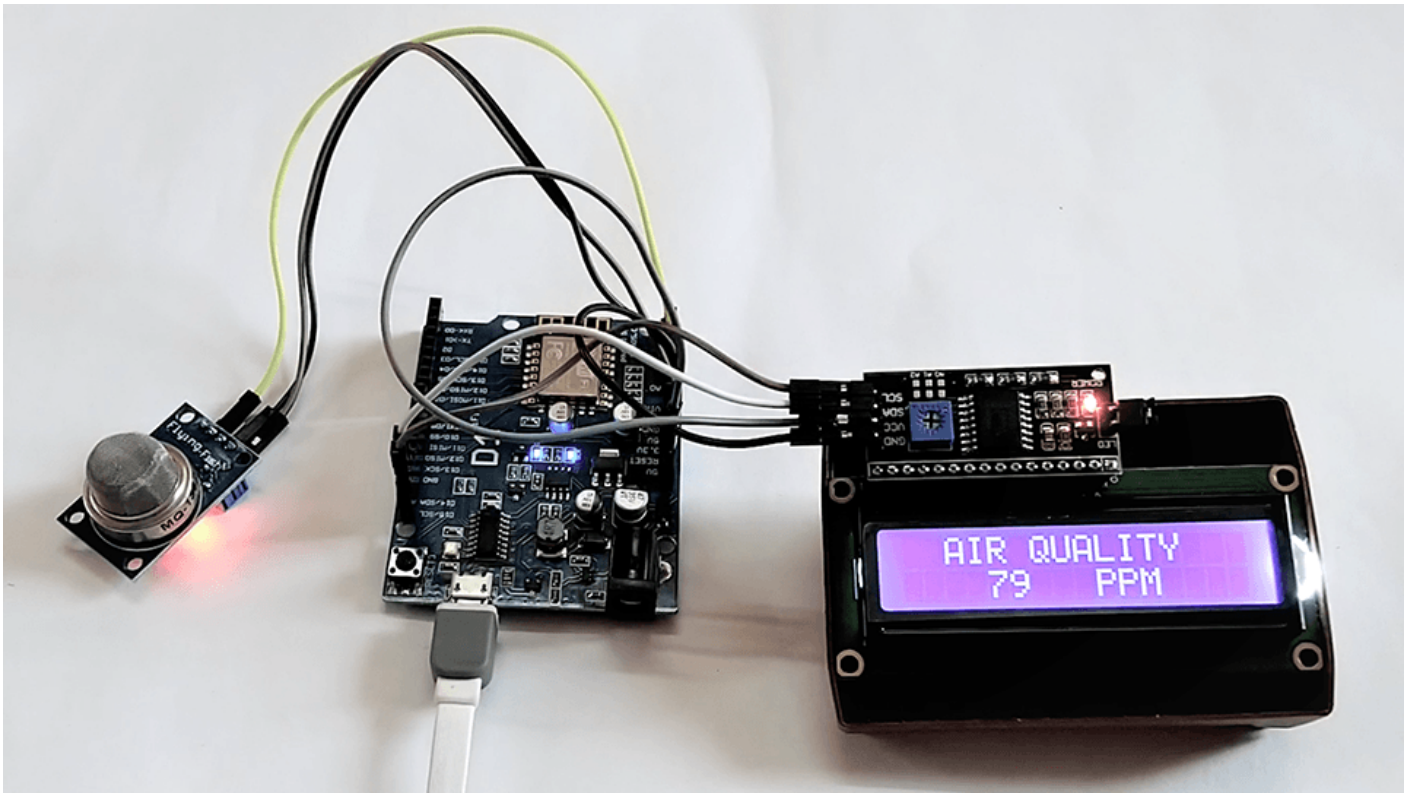
```
Arduino
```

```
/*
MQ135 with 1602 LCD using I2C
by somtips.com
*/
#include &lt;Arduino.h&gt;
#include &lt;LiquidCrystal_I2C.h&gt;
LiquidCrystal_I2C lcd(0x27,16,2);  // set the LCD address to 0x27 for a 16 chars and 2 line d

void setup()
{
  lcd.init();
  lcd.backlight();
  lcd.setCursor(2,0);
  lcd.print("AIR QUALITY");
  lcd.setCursor(9,1);
  lcd.print("PPM");
}

void loop()
{
  int sensorValue = analogRead(A0);
  lcd.setCursor(4,1);
  lcd.print(sensorValue);
  delay(2000);
}
```

Output



Finally, here you can see Air quality is showing in PPM on the LCD display.

MQ-135 Air Quality Gas Sensor with ESP8266 Wem...

If you do not have LCD display, you can also do this using ST7789 SPI TFT LCD Display. Follow this post.

MQ135 Gas Sensor with ESP8266 and ST7789 SPI Display

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