



## EXPERIMENT – 3.1

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**Semester:** 6<sup>th</sup>

**Subject Name:** IOT LAB

**Subject Code:** 20CSP-358

### 1. Aim:

Interfacing Air Quality Sensor (MQ135), displays data on LCD

### 2. Apparatus:

Components Required:

You will need the following components

- 1 × Arduino Uno R3
- 1 × MQ 135 Air Quality Sensor Module
- 4 × Jumper

### 3. Theory:

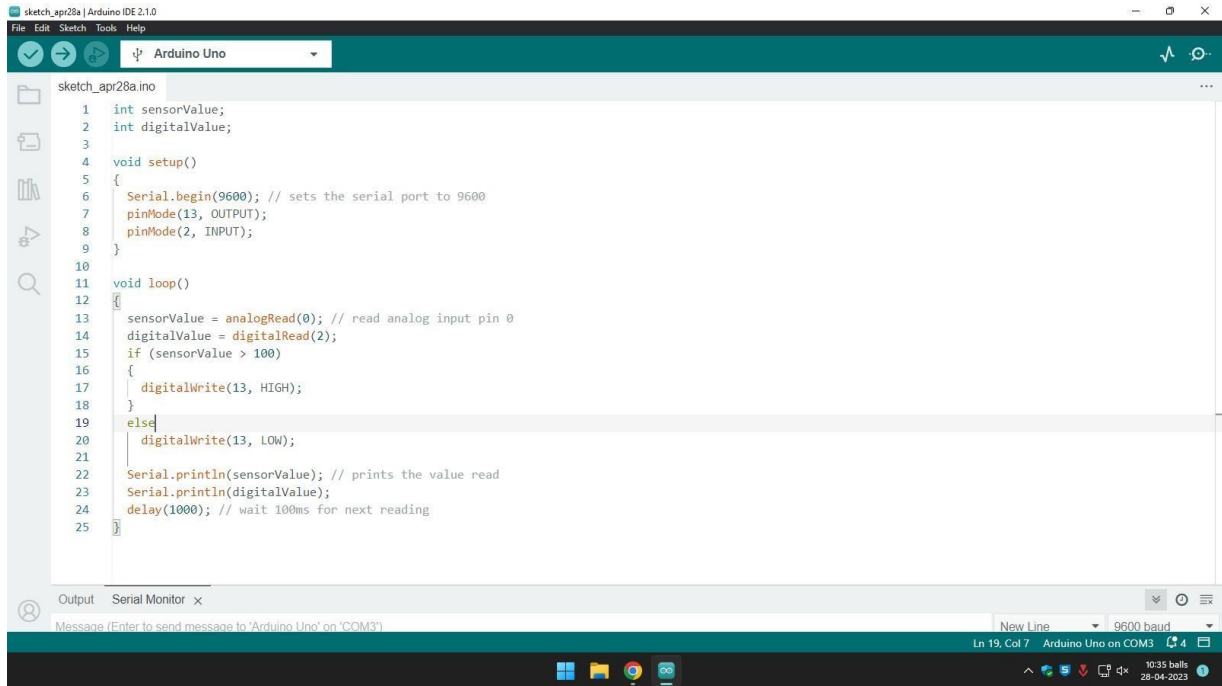
#### Air Quality Sensor:

MQ-135 sensor belongs to the MQ series that are used to detect different gasses present in the air. The MQ-135 sensor is used to detect gases such as NH<sub>3</sub>, NO<sub>x</sub>, alcohol, Benzene, smoke, CO<sub>2</sub>, etc. steel exoskeleton houses a sensing device within the gas sensor module.

This sensor has 4 pins:

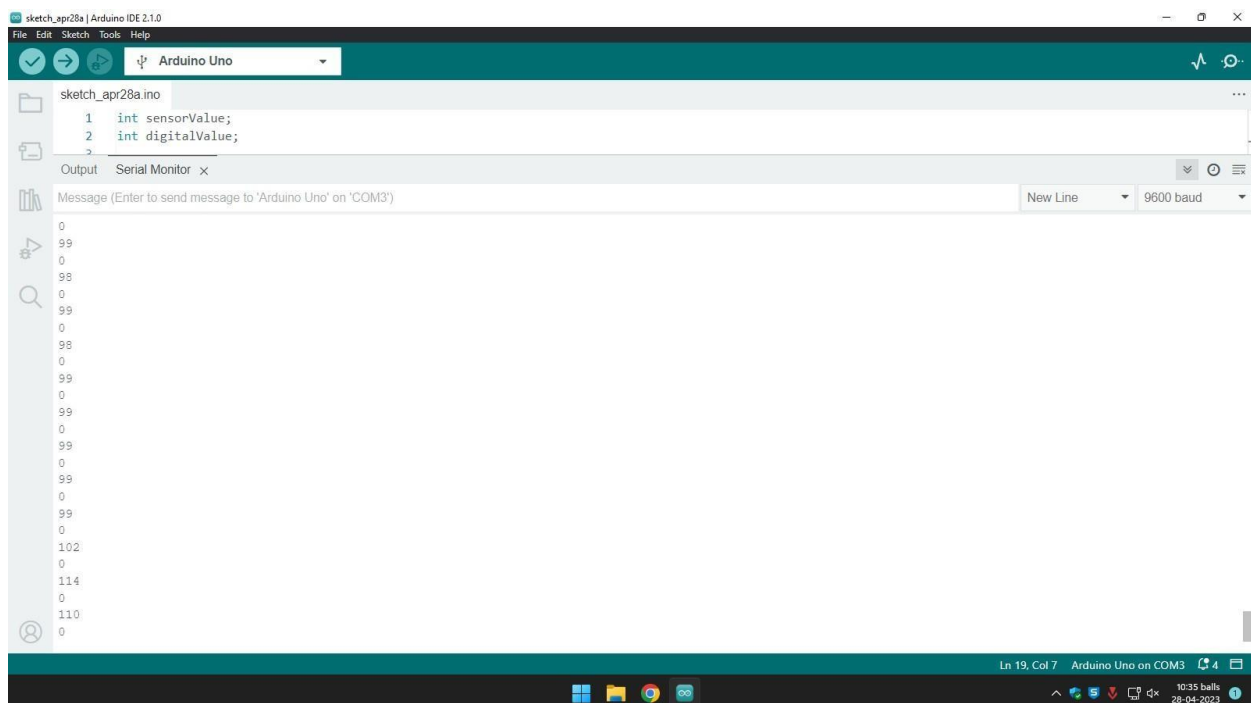
- 5V: Module power supply – 5 V
- GND: Ground
- DOUT: Digital output
- AOUT: Analog output

## 4. Code-



```
1 int sensorValue;
2 int digitalValue;
3
4 void setup()
5 {
6   Serial.begin(9600); // sets the serial port to 9600
7   pinMode(13, OUTPUT);
8   pinMode(2, INPUT);
9 }
10
11 void loop()
12 {
13   sensorValue = analogRead(0); // read analog input pin 0
14   digitalValue = digitalRead(2);
15   if (sensorValue > 100)
16   {
17     digitalWrite(13, HIGH);
18   }
19   else
20     digitalWrite(13, LOW);
21
22   Serial.println(sensorValue); // prints the value read
23   Serial.println(digitalValue);
24   delay(1000); // wait 1000ms for next reading
25 }
```

## 5. Circuit/Output



```
0
99
0
98
0
99
0
98
0
99
0
99
0
99
0
102
0
114
0
110
0
```

