

EMBEDDED SYSTEMS

PRESNTATION

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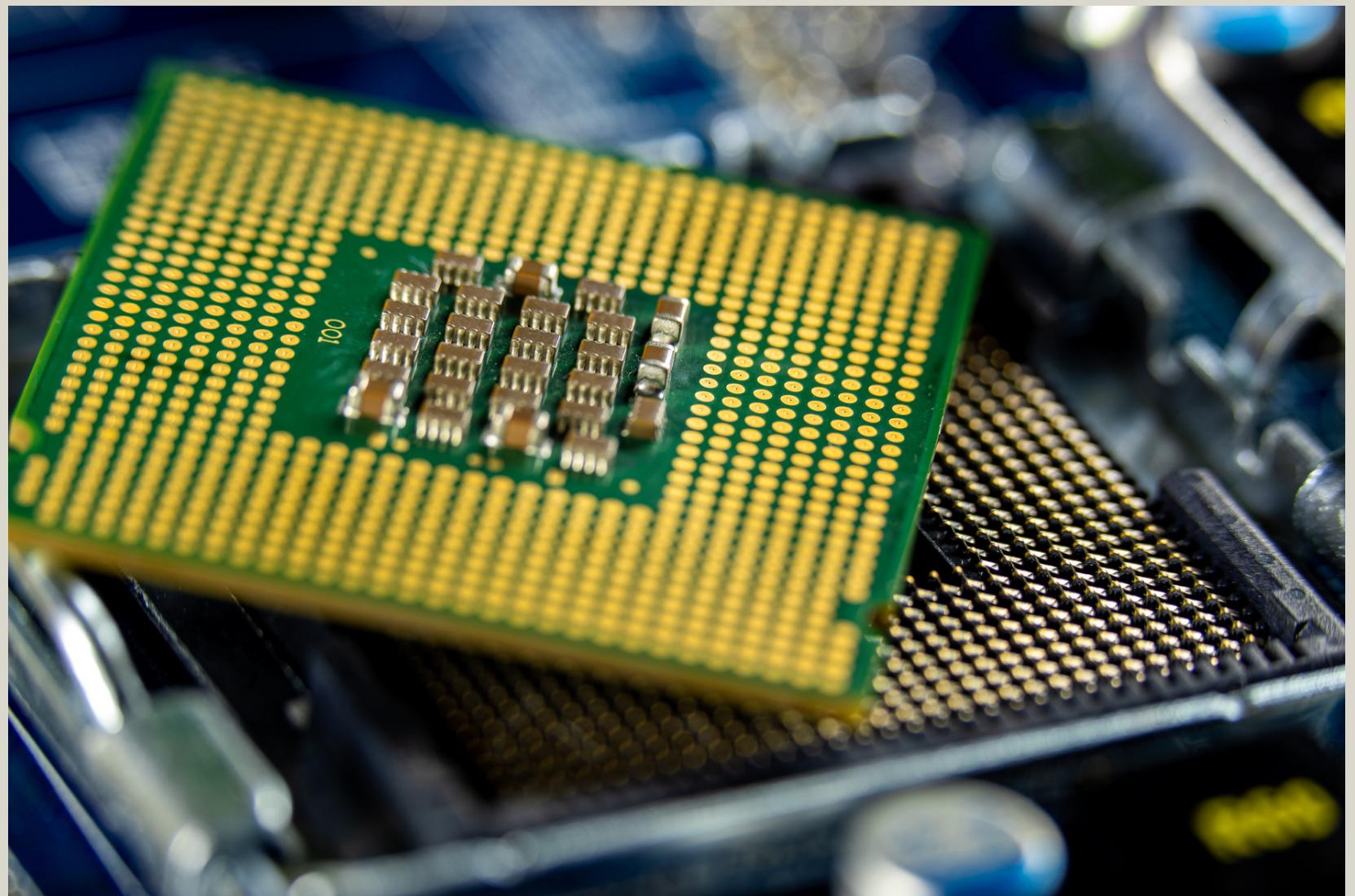
Mini-Project Demo

ALCOHOL DETECTOR



COMPONENTS USED:

- ARDUINO UNO BOARD
- MQ-3 SENSOR
- Breadboard
- 5v Buzzer
- LED
- Resistor (180-ohm)
- Jumper Wires



MQ-3 Sensor



- Iron Mesh on the surface, plastic cover on the outside
- Only gaseous elements can travel
- Ceramic containing aluminium oxide and coated with tin dioxide
- Tin dioxides are very sensitive to alcohol

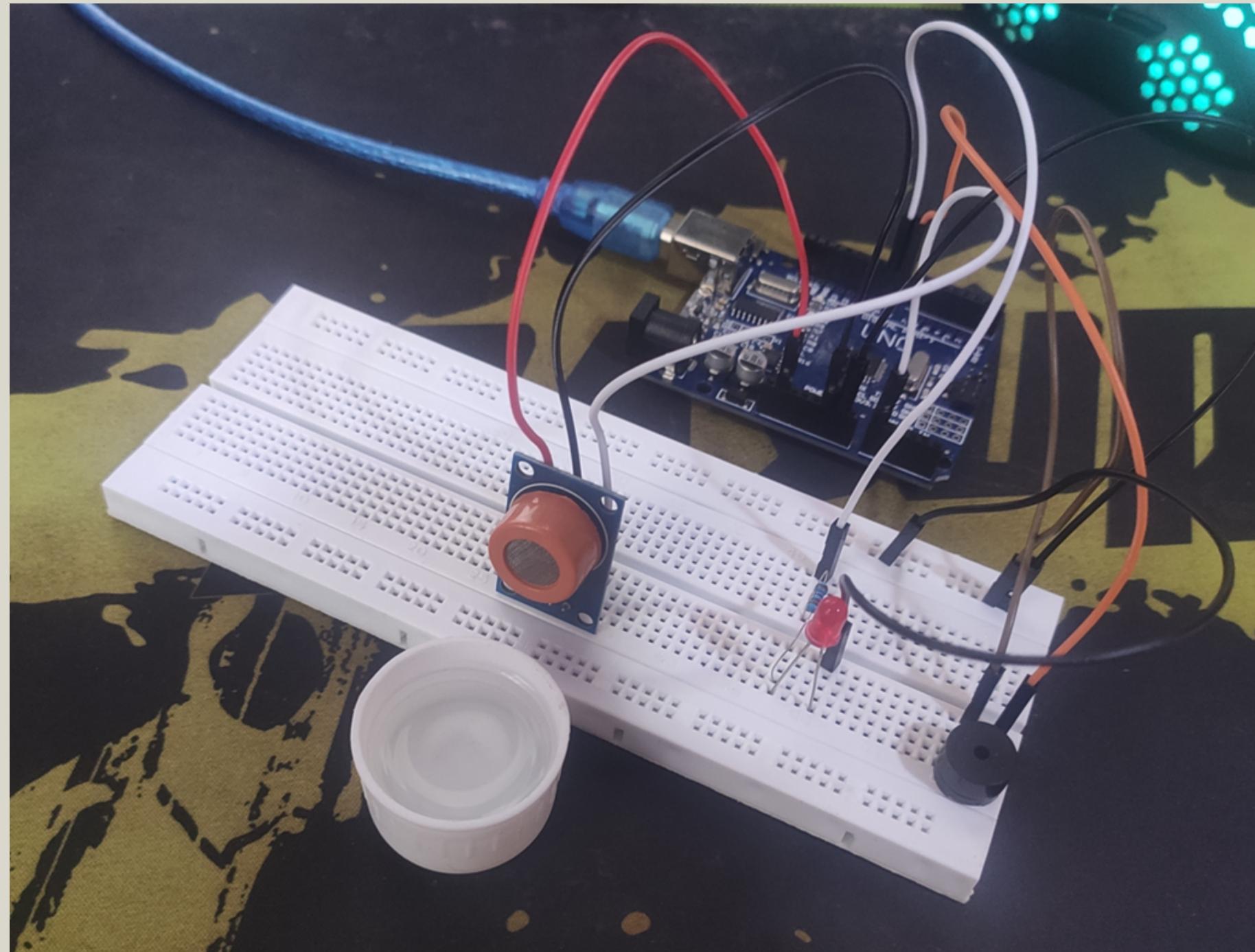
WORKING MECHANISM



- Alcohol comes in contact with the sensor
- Reaction takes place
- Electrons move which means current flows freely
- Current provides electricity for the buzzer and the LED

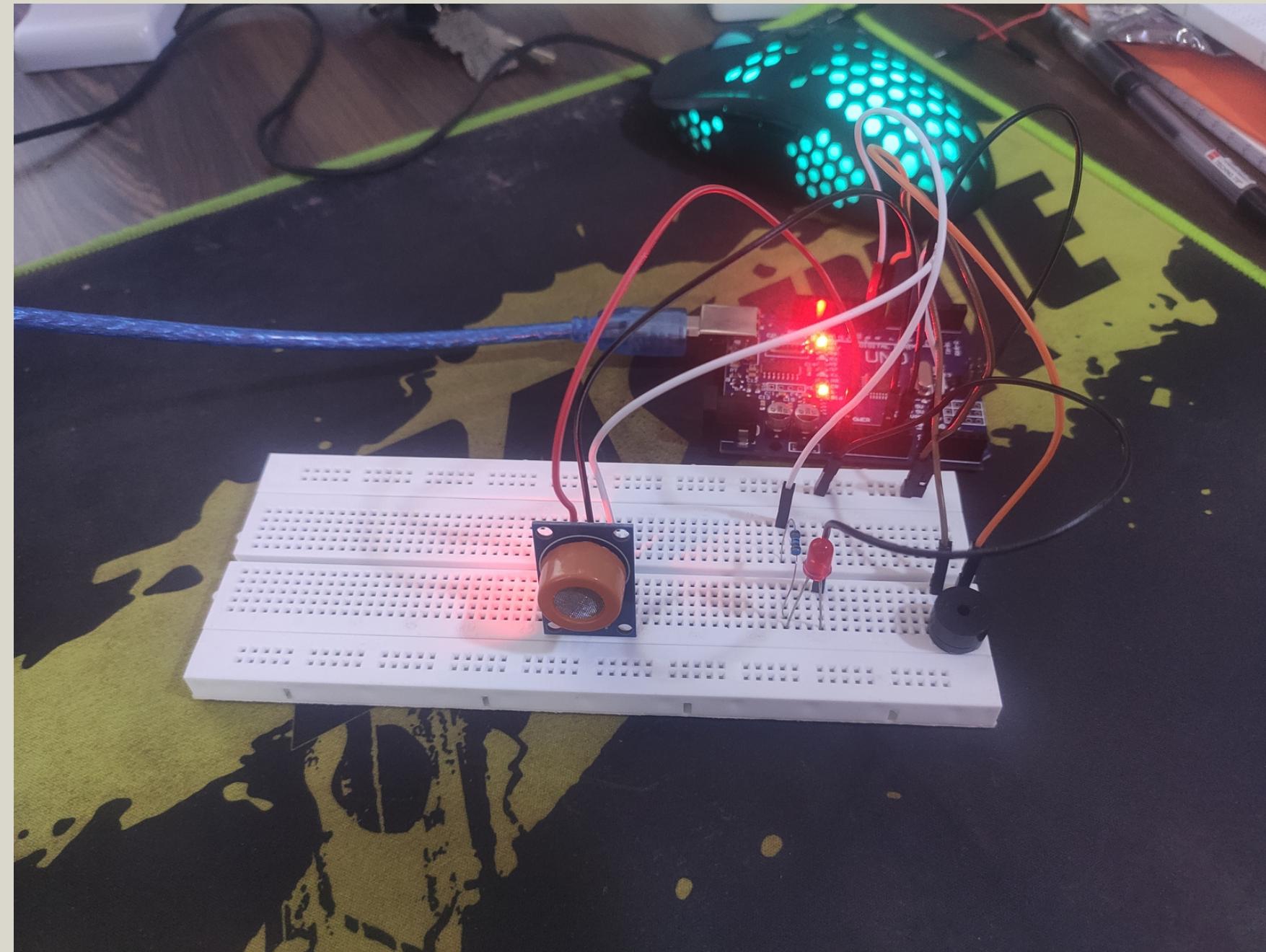
OUTPUT

- OFF STATE



OUTPUT

- IDLE STATE

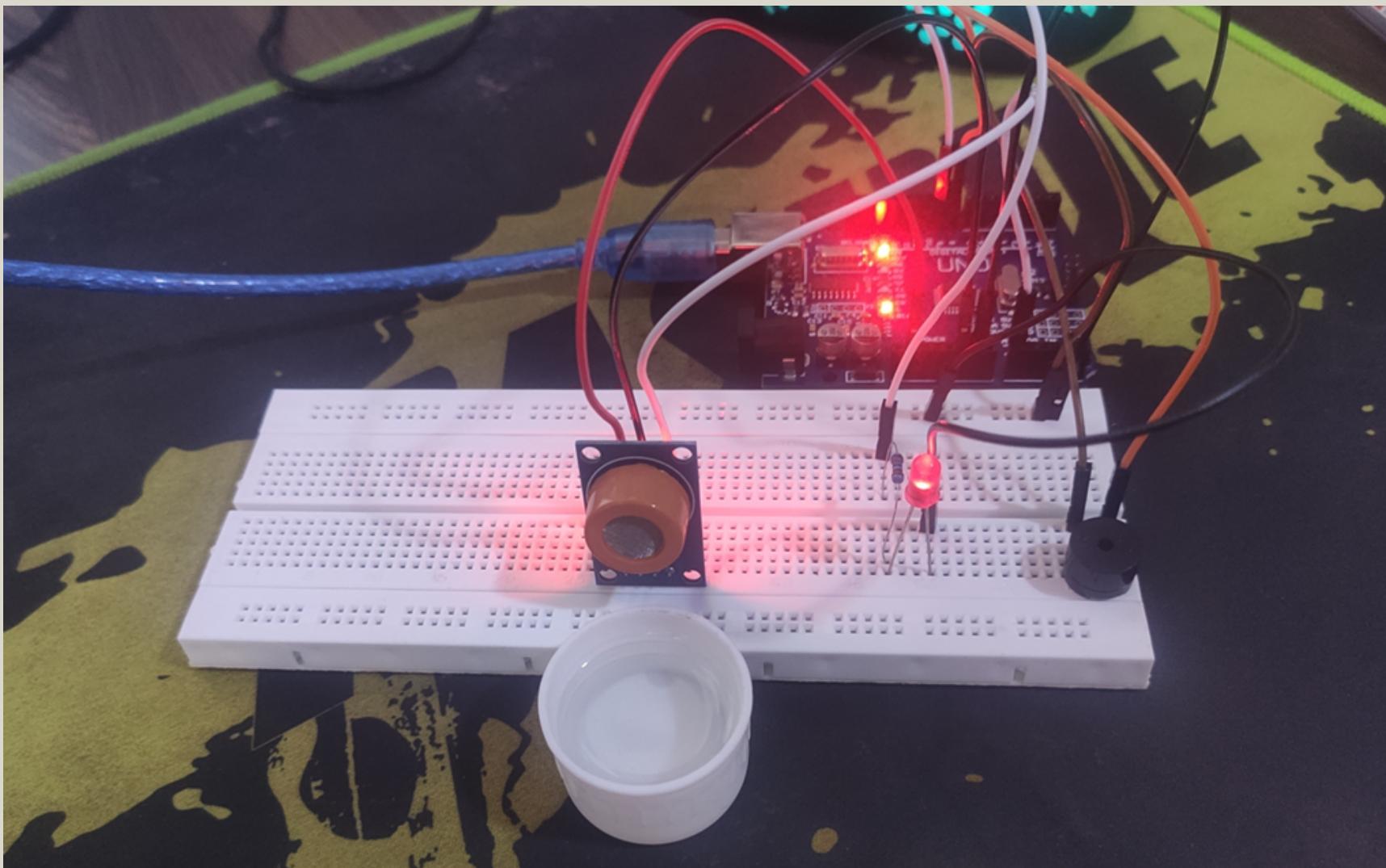


A screenshot of a terminal window titled "COM3". The window shows a series of numerical values being printed one at a time. The values are: 178, 177, 176, 175, 175, 174, 173, 172, 172, 172, 171, 171, 172, 170, and 170. The terminal interface includes standard controls like "Send", "Autoscroll", and "Clear output".

178
177
176
175
175
174
173
172
172
172
171
171
172
170
170

OUTPUT

- ON STATE



A screenshot of a serial monitor window titled "COM3". The window displays a list of numerical values, likely sensor readings, which fluctuate between 693 and 746. The window includes standard controls for baud rate (9600), line endings (Newline), and timestamp visibility.

Value
746
726
713
714
703
695
679
655
645
656
677
737
725
698
693

CONCLUSION

- Successfully developed and tested
- All the hardware components used
- Each components placement is thoughtfully arranged and placed
- Embedded System Programming is a fun

