CS203 PROJECT REPORT

AIR POLLUTION DETECTOR

SUBMITTED BY:-

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AIM OF THE PROJECT

The aim of this project is to make a arduino based air pollution detector which acts as a pollution indicator.

WHAT IS THE PROBLEM?

In today's world pollution has increased rapidly and it is causing a lot of health problem to the people. Generally common people are not aware of the air around them. So they do not take measures to reduce pollution.

WHY IS SOLVING THIS PROBLEM IS NECESSARY?

Generally pollution is measured at zonal level but not at household level. So informing people regarding the pollution in the air around them will make the more aware and conscious about air pollution and make them take certain steps to reduce it. And also our project will be helpful in creating

HOW HAVE OTHER PEOPLE TRIED TO SOLVE IT AND THEIR LIMITATIONS?

It is a common project which is taken up at different levels. Generally a pollution level indicator is used in different parts of cities indicating the pollution level. They are generally advanced giving data on all prospects of air pollution with detailed analysis hence so they are costly and not common to household or even street level.

OUR IDEA ABOUT THE SOLUTION

Our idea is that we have made a project which is cheap and informs about increased air pollution (in general CO2, NO2, smoke, etc) above threshold level by an arduino based circuit using MQ2 sensor. Basically air pollution detector detects whether air quality is good or not and notify the information to the user through buzzer and led.

COMPONENTS REQUIRED

Seeed Grove - Gas Sensor(MQ2)

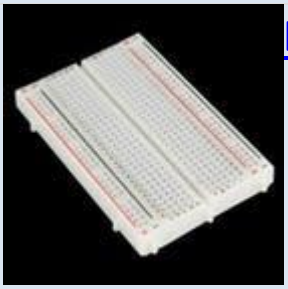
× 1

Arduino UNO & Genuino UNO

× 1

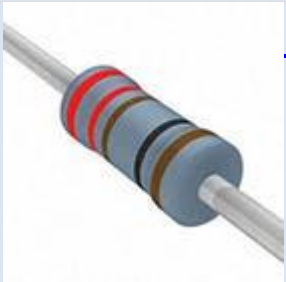
Buzzer

× 1



Breadboard (generic)

× 1

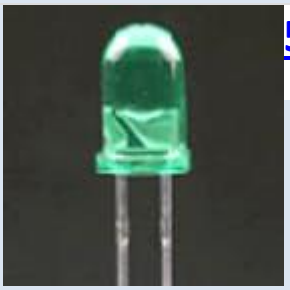


Resistor 221 ohm

× 2

5 mm LED: Red

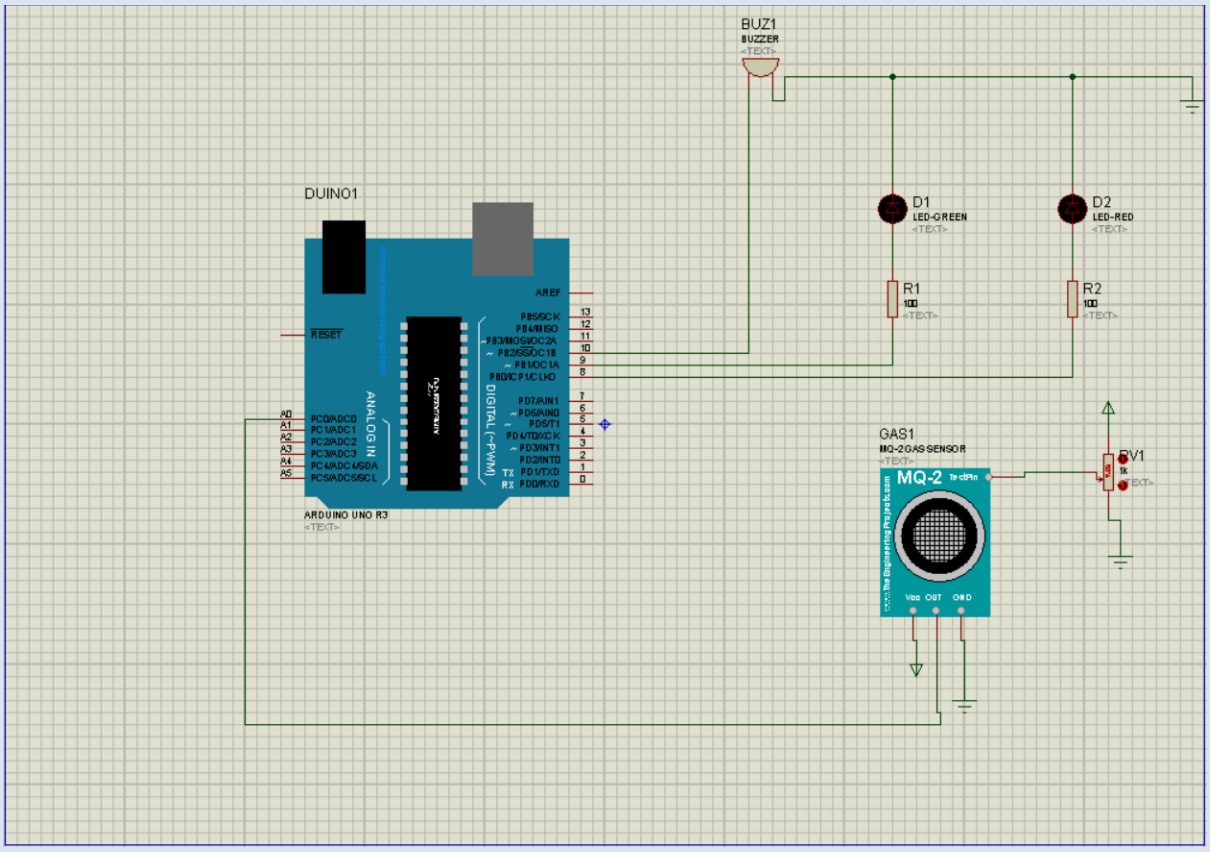
× 1



5 mm LED: Green

× 1

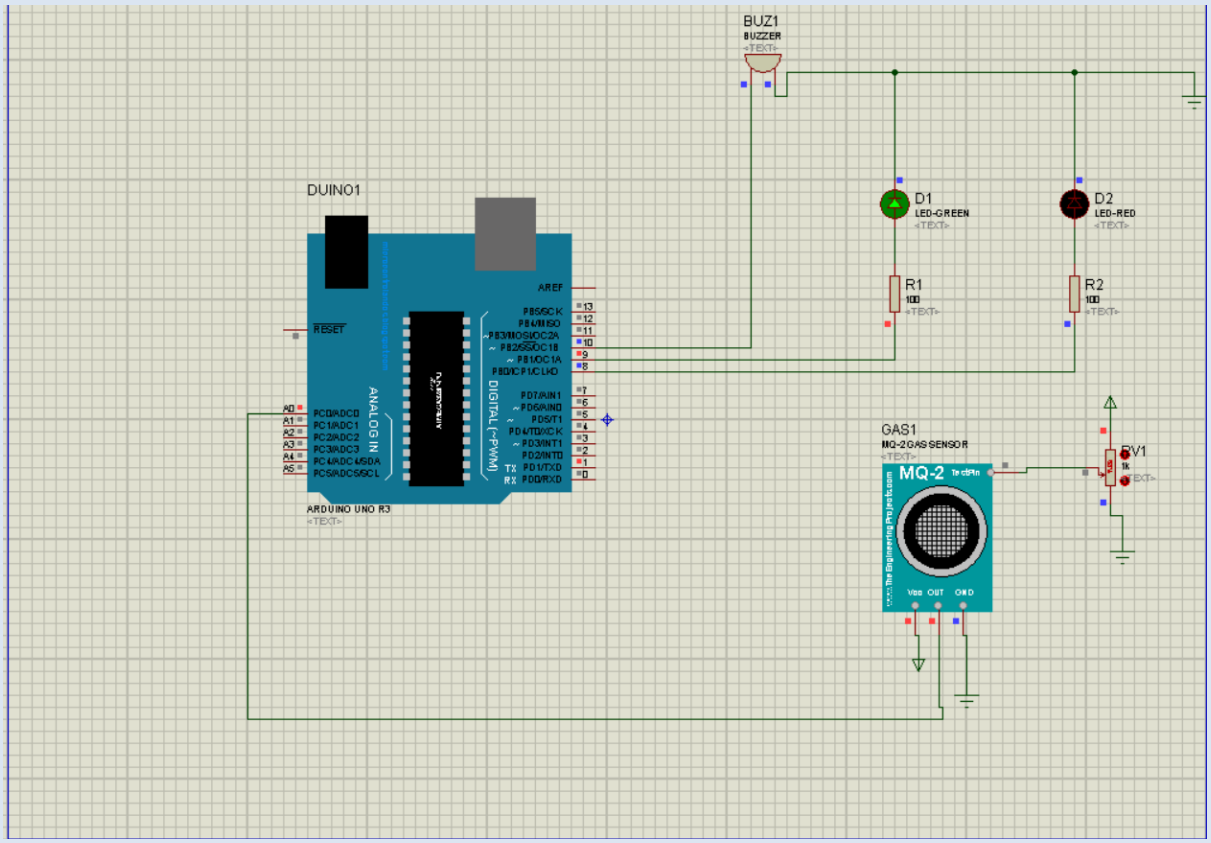
SCHEMATIC DIAGRAM

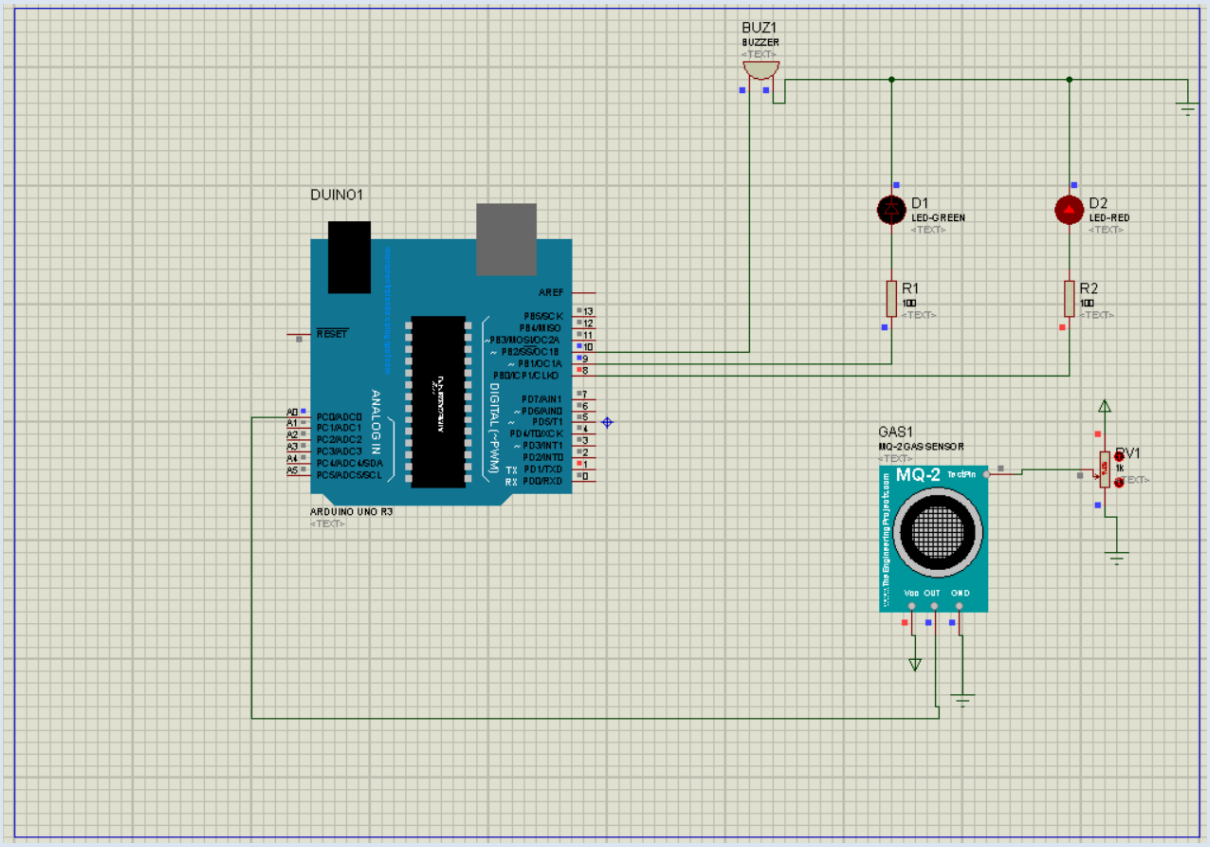


PROCEDURE

1. Arduino's digital 10 pin is connected with buzzer.
2. Digital 9 pin and Digital 8 pin connected with LED green and LED red respectively with 100 ohm resistor.
3. Buzzer and Both LEDs are grounded.
4. Analog A0 is connected with gas-sensor's OUT and VCC connected with 5V and GND is grounded.

SIMULATION RESLUTS





CONCLUSION

The air pollution detector works fine giving a red signal and a buzzer alarm when subjected to high air pollution environment and green signal with no alarm when subjected to air pollution level below threshold.

REFERENCES

https://www.elprocus.com/an-introduction-to-mq2-gas-sensor

https://www.arduino.cc/en/Guide/Guide

https://www.arduino.cc/reference/en