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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
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HAZARDOUS GAS LEAK DETECTION USING ARDUINO

BATCH NO-39

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GUIDED BY:
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PROJECT OBJECTIVE

- **The main objective of the work is** designing Arduino based toxic gas detecting, alerting and protecting system**. The hazardous gases like Hydrogen sulfide, and Carbon monoxide are sensed and displayed the status every second in the LCD display.**

- **The purpose of this system is** to detect gas leakage, neutralize it, and prevent the explosion**. Gas leakage could happen due to improper regulator installation or the hose is broken.**

ABSTRACT

- Safety plays a major role in today's world and it is necessary that good safety systems are to be implemented in places of Chemical plant. The main objective of the work is designing Arduino based toxic gas detecting, alerting and protecting system. The hazardous gases like Hydrogen sulfide, Nitrogen dioxide.

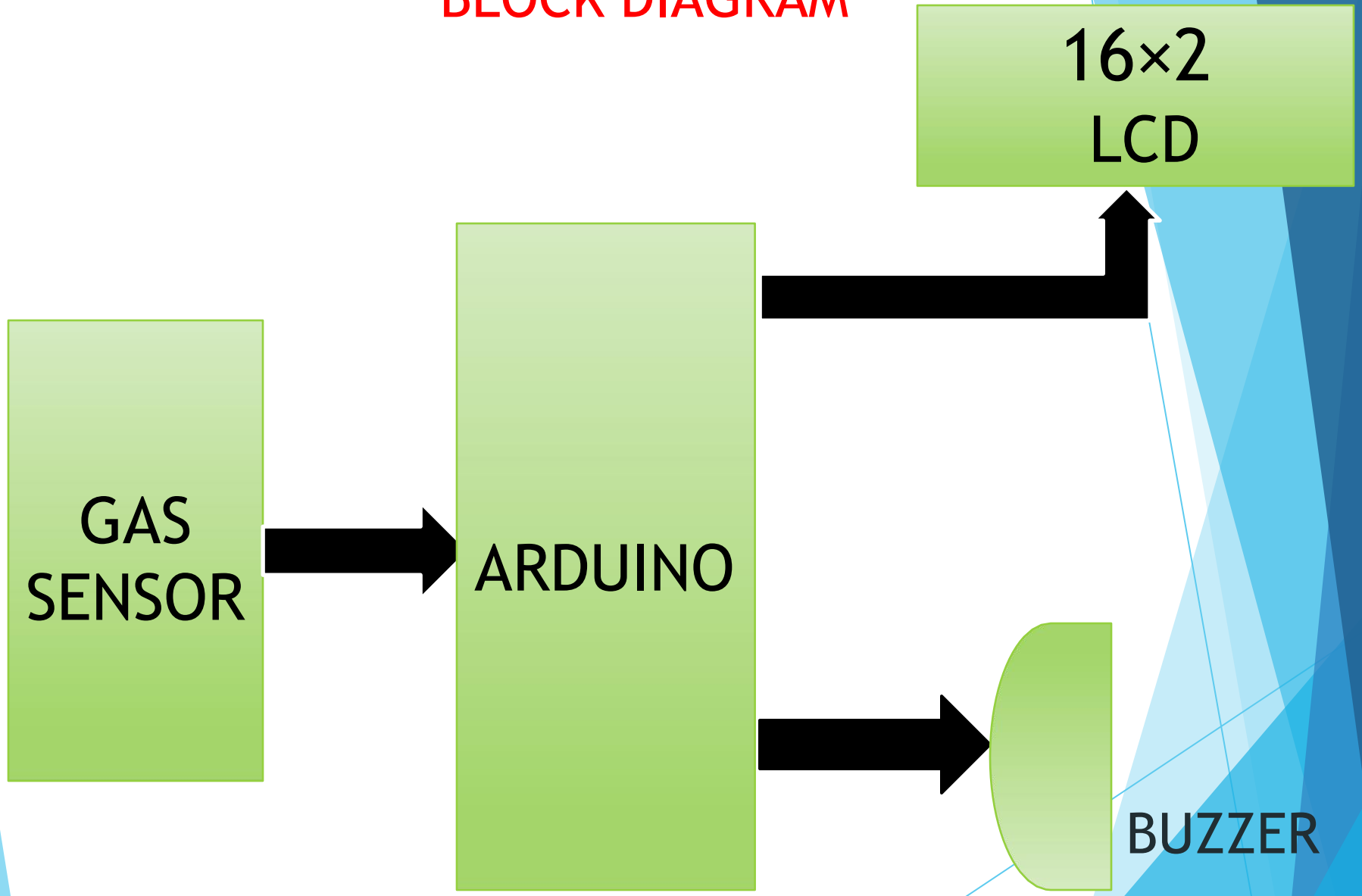
- In this project when the gas sensor senses the emission of hazardous gases like Hydrogen sulfide, Nitrogen dioxide and Carbon monoxide, it will generate the alerting sound and alert everyone.

LITERATURE SURVEY

- A gas system is number of device working together to detect and warm people through visual and audio applications.

- In this project when the gas sensor senses the emission of hazardous gases like Hydrogen sulfide, and Carbon monoxide, it will generate the alerting sound and alert everyone and also the electric motors will close the electric gates and control the emission of hazardous gases.

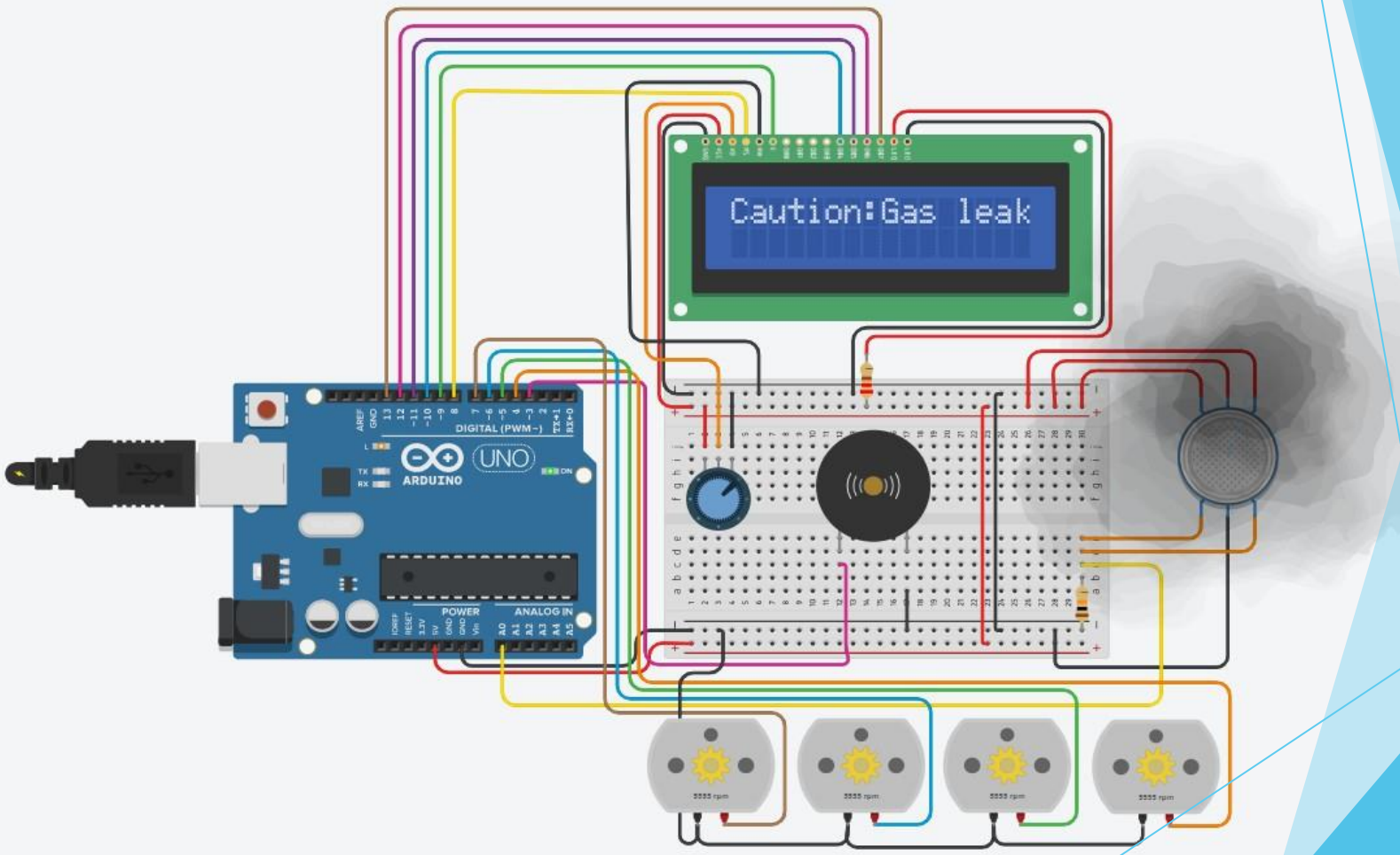
BLOCK DIAGRAM



Components Used:

- Arduino Pro Mini
- Gas sensor
- Buzzer BC 547 Transistor
- 16x2 LCD
- 1K Resistor
- Bread board
- 9 volt battery
- Connecting wires

CIRCUIT DIAGRAM



Circuit design Hazardous Gas Le

tinkercad.com/things/jfXj7Rc1LIm-hazardous-gas-leak-detection-using-arduino/editel

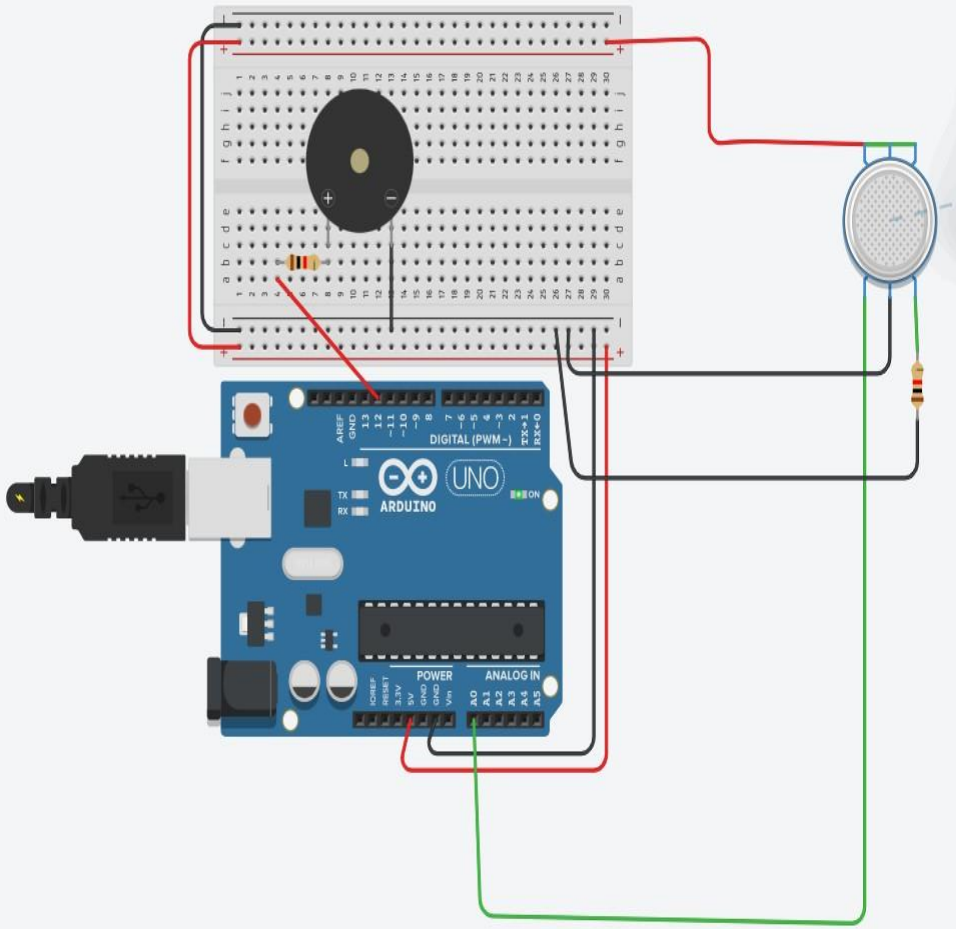
Hazardous Gas Leak Detection Using Arduino

All changes saved

Simulator time: 00:00:04

Code

Stop Simulation



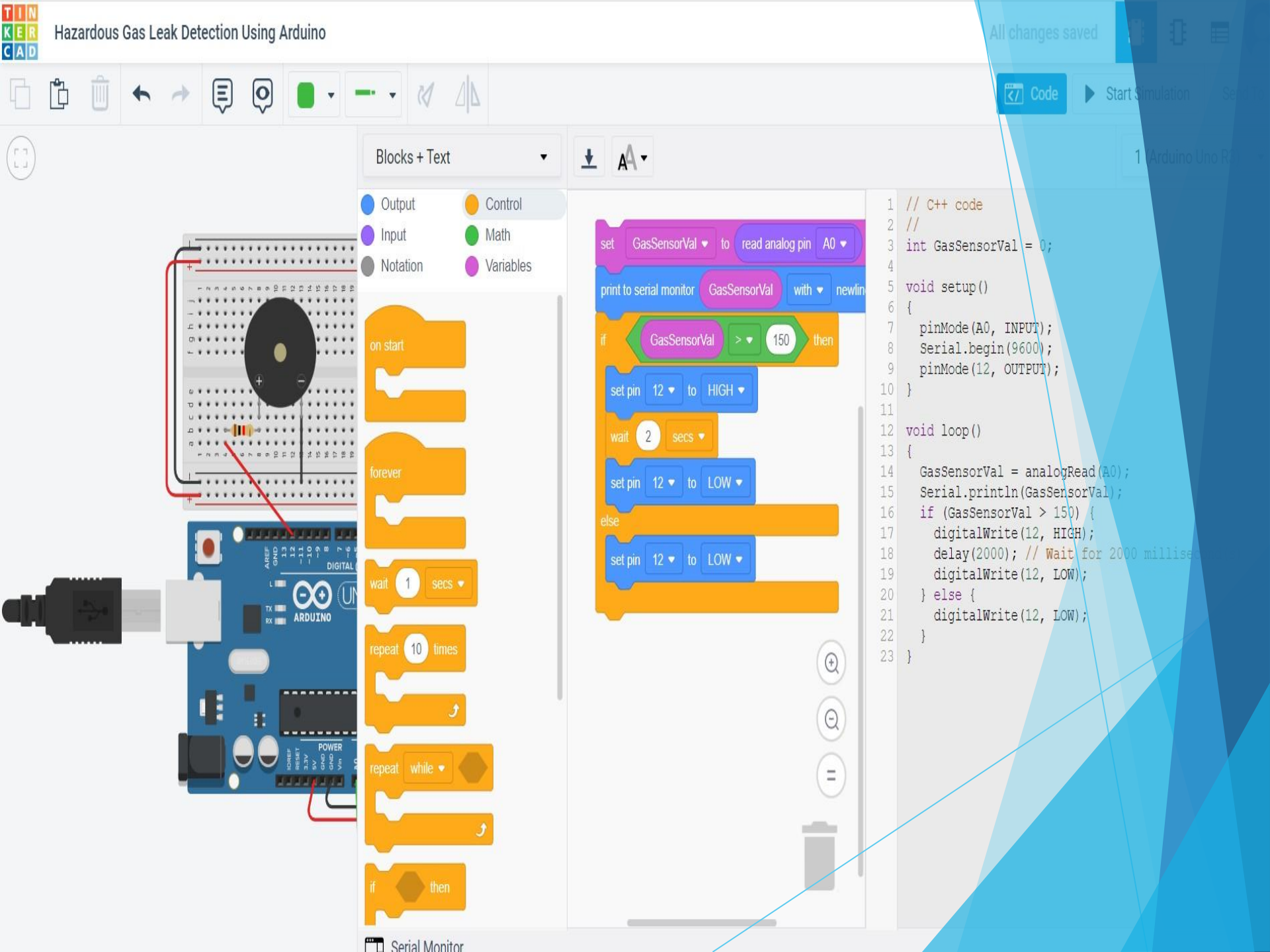
Components
Basic

Search

Resistor
LED
Potentiometer
Capacitor
9V Battery
Coin Cell 3V Battery
Breadboard Small
micro:bit

27°C Cloudy

Hazardous Gas Leak Detection Using Arduino



BENEFITS

- A gas detector is one of the easiest and low cost.
- Most of industries use it ,because it works fast to protect and most effective.
- In future the use of gas detection will increase.
- The primary aim of the work is to design arduino based hazardous gas detecting system using gas sensors. The toxic gases like butane, methane and carbon monoxide are sensed and displayed on the LCD display.

APPLICATIONS

- They are used in gas leakage detection equipment in family and industries.
- It is suitable for detecting of natural gas, town gas.
- Most of industries use it, because it works fast to protect and most effective.
- Avoid the noise of alcohol and cooking fumes cigarette.

Thank
you