Documentation

1. ” **Theme:**

„Air Quality in home

2. **Author:**

Petar Krasimirov Stoev email: pkstoev18@codingburgas.bg, ПГКПИ, 9 a class

3. **Consultant**

Krasimir Vatev

4. **Summary:**

4.1 **Objectives (preliminary analysis, brief analysis of necessary and continuous solutions)**

There is a problem of air pollution in large cities. This leads to health problems for people and poor quality of life. The main purpose of the device is to measure home air quality and indication of contaminated air.

4.2 **Main stages in project implementation (main activities, roles of authors)**

-Creating an idea
-Supply of components
- Assembly of the device
-Code creation
-Testing the project
- Presentation

4.3 Level of complexity of the project - main problems in the realization of the set goals

My main problem with designing the project was its power supply since the power supply burned very quickly.

4.4 The project consists of 3 modules, the 1st module is a trolley with a circuit board, the 2nd module is connected to a sensor for the measurement of air pollution, the 3rd module is extracted by a fan sucking air.

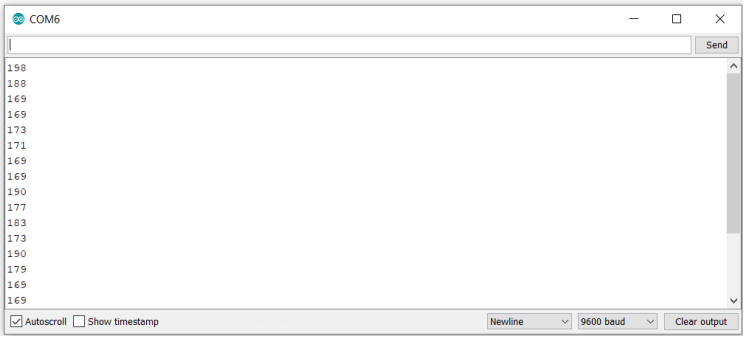
Everything is programmed by Arduino. The MazeSolve library was used to drive the cart and a separate sensor code.

When the sensor reads a contamination value above the allowable diode, a pollution indicator lights up.

The screen shows the extent to which pollution is recorded.

Sensor_Petar

```
int ValHigh = 210;
void setup(){
  Serial.begin(9600);
  pinMode(8,OUTPUT);
  pinMode(A0,INPUT);
}
void loop(){
  Serial.print(analogRead(A0));
  Serial.print('\n');
  delay(500);
  if(analogRead(A0) > ValHigh){
    digitalWrite(8,HIGH);
  }
  else{
    digitalWrite(8,LOW);
  }
}
```

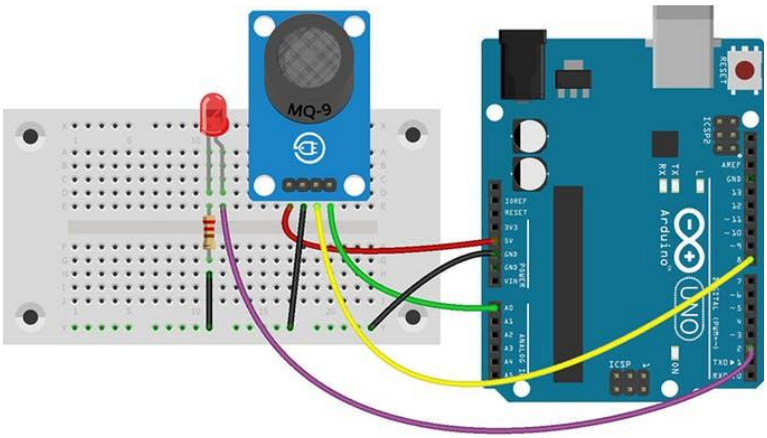


4.5 In the project:

4.5.1.1 A cart compatible with a cart programmed to track black lines.

4.5.1.2 The ardine board is located for a sensor for measuring the purity of the air and the diode programmed which the sensor should be contaminated above the permissible light diode.

4.5.1.3 Fan that draws in air from the outside and outlet air inside the sensor.



4.6 The trolley starts first, it starts the set path and the sensor reads the purity of the air, the fan draws in air, and the computer displays the readings.

4.7 The project has many opportunities for development and improvement:

- Installing an Air Purifier
- Using a Solar module for Arduino for power
- Mobile app control