#include <LiquidCrystal.h> //Header file for LCD

const int rs=12, en=11, d4=5, d5=4, d6=3, d7=2; //pins of LCD connected to Arduino

LiquidCrystal lcd(rs,en,d4,d5,d6,d7); //lcd function from LiquidCrystal

int buz = 8; //buzzer connected to pin 8

int led = 9; //led connected to pin 9

const int aqsensor = A0; //output of mq135 connected to A0 pin of Arduino

int threshold = 250; //Threshold level for Air Quality

void setup() {

pinMode (buz,OUTPUT); // buzzer is connected as Output from Arduino

pinMode (led,OUTPUT); // led is connected as output from Arduino

pinMode (aqsensor,INPUT); // MQ135 is connected as INPUT to arduino

Serial.begin (9600); //begin serial communication with baud rate of 9600

lcd.clear(); // clear lcd

lcd.begin (16,2); // consider 16,2 lcd

}

void loop() {

int ppm = analogRead(aqsensor); //read MQ135 analog outputs at A0 and store it in ppm

Serial.print("Air Quality: "); //print message in serail monitor

Serial.println(ppm); //print value of ppm in serial monitor

lcd.setCursor(0,0); // set cursor of lcd to 1st row and 1st column

lcd.print("Air Qualit: "); // print message on lcd

lcd.print(ppm); // print value of MQ135

if (ppm > threshold) // check is ppm is greater than threshold or not

{

lcd.setCursor(1,1); //jump here if ppm is greater than threshold

lcd.print("AQ Level HIGH");

Serial.println("AQ Level HIGH");

tone(led,1000,200); //blink led with turn on time 1000mS, turn off time 200mS

digitalWrite(buz,HIGH); //Turn ON Buzzer

}

else

{

digitalWrite(led,LOW); //jump here if ppm is not greater than threshold and turn off LED

digitalWrite(buz,LOW); //Turn off Buzzer

lcd.setCursor(1,1);

lcd.print ("AQ Level Good");

Serial.println("AQ Level Good");

}

delay (500);

}