#include<LiquidCrystal.h>

#include<DHT.h>

#include <SoftwareSerial.h> //Software Serial library

//int measurePin = A2;

int led =4;

int buzz=7;

//int gas\_Value;

//int mq\_135= A5;

int gas\_value;

int gas\_sensor=A0;

int light=A1;

int light\_value;

int temp\_value;

#define DHTPIN 2 //Connect Out pin to D2 in NODE MCU

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

int RS=13;

int EN=12;

int D4=11;

int D5=10;

int D6=9;

int D7=8;

bool flag=0;

LiquidCrystal lcd(RS,EN,D4,D5,D6,D7);

void setup()

{

Serial.begin(9600);

lcd.begin(16,2);

dht.begin();

pinMode(led,OUTPUT);

pinMode(buzz,OUTPUT);

pinMode(gas\_sensor,INPUT);

pinMode(light,INPUT);

digitalWrite(led,LOW);

digitalWrite(buzz,LOW);

}

void loop()

{

float t = dht.readTemperature();

float h = dht.readHumidity();

if (isnan(t) || isnan(h)) {

Serial.println("Failed to read from DHT sensor!");

}

gas\_value=analogRead(gas\_sensor);

light\_value=analogRead(light);

lcd.clear();

lcd.setCursor(0,0);

lcd.print("FOOD SPOILAGE");

lcd.setCursor(3,1);

lcd.print("DETECTION");

delay(1000);

Serial.print("AirQua=");

Serial.println(" PPM");

//Serial.print("Dust Density:");

//Serial.println(dustDensity);

//Serial.print("Gas Value:");

Serial.println(gas\_value);

Serial.println(light\_value);

Serial.println(t);

Serial.println(h);

lcd.setCursor(0,0);

lcd.print("Methane Value=");

lcd.print(gas\_value);

lcd.setCursor(9,0);

lcd.setCursor(10,1);

lcd.print("PPM");

delay(2000);

lcd.clear();

lcd.setCursor(0,0);

lcd.print("UPLOADING...");

lcd.setCursor(0,1);

lcd.print("UPLOADED");

delay(2000);

if (gas\_value>100 || light\_value>800 || t>35 || h<50)

{

lcd.clear();

lcd.setCursor(0,0);

lcd.print("ALERT..!");

//lcd.print("DARK");

lcd.setCursor(0,1);

Serial.println("FOOD SPOILED");

//digitalWrite(led,HIGH);

//digitalWrite(buzz,HIGH);

//delay(5000);

//SendMessage();

//delay(1000);

digitalWrite(led,LOW);

digitalWrite(buzz,LOW);

SendMessage();

}

//delay(500);

else

{

Serial.println("FOOD IS FRESH");

lcd.clear();

lcd.setCursor(0,0);

lcd.print("FOOD IS");

lcd.setCursor(3,1);

lcd.print("FRESH");

delay(1000);

Serial.println("AT+CMGF=1");

delay(500); // Delay of 1000 milli seconds or 1 second

delay(100);

Serial.println("AT+CMGS=\"+919014600709\"\r");

delay(500);

Serial.print("Methane Value= ");

Serial.println(gas\_value);

//Serial.print("Dust Density= ");

Serial.print("FOOD IS FRESH");

//Serial.println("Air Pollution Monitoring:: ");

//Serial.print("Air Quality= ");

delay(100);

Serial.println((char)26);// ASCII code of CTRL+Z

//Serial.println(sensor\_val);

delay(1000);

}

}

void SendMessage()

{

if (flag==0)

{

lcd.clear();

lcd.setCursor(0,0);

lcd.print("Sending Msg....");

Serial.println("AT+CMGF=1");

delay(500); // Delay of 1000 milli seconds or 1 second

delay(100);

Serial.println("AT+CMGS=\"+919014600709\"\r");

delay(500);

Serial.print("Methane Value= ");

Serial.println(gas\_value);

//Serial.print("Dust Density= ");

Serial.print("FOOD SPOIL DETECTED");

//Serial.println("Air Pollution Monitoring:: ");

//Serial.print("Air Quality= ");

delay(100);

Serial.println((char)26);// ASCII code of CTRL+Z

digitalWrite(led,HIGH);

digitalWrite(buzz,HIGH);

delay(1000);

digitalWrite(led,LOW);

digitalWrite(buzz,LOW);

//Serial.println(sensor\_val);

delay(1000);

lcd.setCursor(0,1);

lcd.print("FOOD SPOILED");

delay(1000);

flag=1;

}

}