

APPENDIX

CODE CONNECTION TO KONEKSI PHP

```
<?php
require ("koneksi.php") ;
?>
```

CODE TO DISPLAY DATA PHPMYADMIN

```
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="refresh" content="5">
</head>
<body>
<style>
#wntable {
    border-collapse: collapse;
    width: 50%;
}

#wntable td, #wntable th {
    border: 1px solid #ddd;
    padding: 8px;
}

#wntable tr:nth-child(even){background-color: #f2f2f2;}

#wntable tr:hover {background-color: #ddd;}

#wntable th {
    padding-top: 12px;
    padding-bottom: 12px;
    text-align: left;
    background-color: #00A8A9;
    color: white;
}
}
```

```

</style>
<div id="cards" class="cards" align="center">
    <h1> Data Sensor Gas</h1>
    <table id="wntable">
        <tr>
            <th>No</th>
            <th>Date/Time</th>
            <th>Persentase Gas</th>
            <th>Gas PPM</th>
        </tr>
        <?php
            $sql = mysqli_query($koneksi, "SELECT * FROM feeds ORDER
            BY id ASC");

            if(mysqli_num_rows($sql) == 0){
                echo '<tr><td colspan="14">Data Tidak Ada.</td></tr>'; //
                jika tidak ada entri di database maka tampilkan 'Data Tidak A
                da.'
            }else{ // jika terdapat entri maka tampilkan datanya
                $no = 1; // mewakili data dari nomor 1
                while($row = mysqli_fetch_assoc($sql)){ // fetch query ya
                ng sesuai ke dalam array
                    echo '
                    <tr>
                        <td>'.$row['id'].'</td>
                        <td>'.$row['Date_time'].'</td>
                        <td>'.$row['gas_persen'].'</td>
                        <td>'.$row['gas_ppm'].'</td>
                    </tr>
                    ';
                }
            }
        <?>
    </table>

<div id="cards" class="cards" align="center">

```

```

<h1> Fuzzy Logic Algorithm</h1>
  <table id="wntable">
    <tr>
      <th>Gas PPM</th>
      <th>Status</th>
    </tr>
    <?php
      $gas = mysqli_query($koneksi, "SELECT gas_ppm, case
when gas_ppm >= 50      and      gas_ppm      <=299 then 'Safe'
when gas_ppm > 300 and gas_ppm <= 799 then 'Leaks'
when gas_ppm > 800 then 'Danger'
end as Status FROM feeds");
      $gasarr = array();

      while($row = mysqli_fetch_assoc($gas)){
        $gasarr[] = $row;
        echo '
<tr>
  <td>' . $row['gas_ppm'] . '</td>
  <td>' . $row['Status'] . '</td>
</tr>
';

      } // fetch query yang sesuai ke dalam array
    ?>
  </table>
</div>
</body>
</html>

```

CODE TO DATABASE CONNECTION

```

<?php

//Variabel database

$servername = "localhost";
$username = "root";
$password = "";
$dbname = "dbSensorGas";

    $koneksi = mysqli_connect($servername, $username, $password, $dbname); // menggunakan mysqli_connect

    if(mysqli_connect_errno()){ // mengecek apakah koneksi database error
        echo 'Gagal melakukan koneksi ke Database : '.mysqli_connect_error(); // pesan ketika koneksi database error
    }
?>

```

CODE ARDUINO IDE

```

#include <ESP8266WiFi.h>
#include <UniversalTelegramBot.h>
#include <WiFiClientSecure.h>
CODE TO DECLARATION OF VARIABLE
const char *apiKey = "F688STUHKV9FG0YP"; // Enter your Write API key from ThingSpeak
const char *ssid = "realme 5i"; // replace with your wifi ssid and wpa2 key
const char *pass = "alvido061298";
const char *resource = "/update?api_key=";
const char* server = "api.thingspeak.com";
const String sendNumber = "";
const char BotToken[] =
"1170607343:AAGk4PY9QkAkHHG1Hd81S8148Yg-W8tU1rs"; // your Bot Token (Get from Botfather)
#define admin_id "1097071057" // Chat ID of where you want the message to go (You can use MyIdBot to get the chat ID)

// SSL client needed for both libraries
WiFiClientSecure client;

UniversalTelegramBot bot(BotToken, client);

```

```

int buzzPin = D10;
int led1 = D8;
int led2 = D9;
int fanPin = D6;
const int gas = A0;
float gas_ppm; //nilai satuan Gas dikonversi kedalam 'ppm'
float persen_gas; //nilai satuan Gas dalam 'Persentase'
const int maks_gas = 299; //nilai maksimum Persentase Gas
int count;
String gasStat;

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  pinMode(gas, INPUT);
  pinMode(fanPin, OUTPUT);
  pinMode(buzzPin, OUTPUT);
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  Serial.begin(115200);
  delay(10);
  //fungsi untuk mengkoneksikan nodemcu ke wifi
  initWifi();

  //fungsi untuk komunikasi ke thingspeak
  makeHTTPRequest();
}

// the loop routine runs over and over again forever:
void loop() {
  gas_ppm = map(analogRead(gas), 0, 1023, 0, 1000); //0-10000
  Serial.print("Gas Value: ");
  Serial.println(gas_ppm);

  if(count >= 300) //setiap 5 menit upload data ke thingspeak
  {
    //fungsi untuk mengkoneksikan wemos d1 ke wifi
    //  initWifi();

    //fungsi untuk komunikasi ke thingspeak
    makeHTTPRequest();

    count = 0;
  }
  else{
  if(gas_ppm > maks_gas)
  {
    digitalWrite(fanPin, HIGH);

```

```

digitalWrite(led1, HIGH);
digitalWrite(led2, HIGH);
tone(buzzPin, 2000, 1000);
Serial.println(gas_ppm);
Serial.println("Gas Bocor");
String gas = "Nilai Gas : ";
gas += int(gas_ppm);
gas += " PPM\n";
gas += "gas Bocor maksimal gaes!\n";
bot.sendMessage(admin_id, gas, "");
}
else
{
digitalWrite(fanPin, LOW);
digitalWrite(led1, LOW);
digitalWrite(led2, LOW);
noTone(buzzPin);
}
delay(1000);
count = count+1;
}
Serial.print(count);
}

```

CODE FUNCTION TO CONNECT WIFI

```

void initWifi() {
Serial.print("Connecting to: ");
Serial.print(ssid);
WiFi.begin(ssid, pass);

while(WiFi.status() != WL_CONNECTED ) {
delay(500);
Serial.print(".");
}

client.setInsecure();

Serial.print("Wifi sukses terkoneksi: ");
Serial.print(millis());
Serial.print(", IP addr : ");
Serial.println(WiFi.localIP());
}

```

CODE FUNCTION TO CONNECT TO THINGSPEAK WEBSITE

```

void makeHttpRequest() {
//mengubah nilai pembacaan dari tegangan menjadi data bit
dan menjadi data persen, ppm, interval
persen_gas = map(analogRead(gas), 0, 1023, 0, 100); //range 0-
100
gas_ppm = map(analogRead(gas), 0, 1023, 0, 1000); //0-10000

//menuliskan data di serial monitor

```



```

// Serial.print (persen_gas ); Serial.println (" %");
// Serial.print (gas_ppm,00); Serial.println (" ppm");

if (isnan(gas_ppm) || isnan(persen_gas))
{
Serial.println("Failed to read from MQ-5 sensor!");
return;
}
else {
Serial.print("Gas PPM : ");
Serial.print(gas_ppm);
Serial.print("Gas Persentase : ");
Serial.print(persen_gas);
}

Serial.print("Connecting to ");
Serial.print(server);

WiFiClient client;

while(!!!client.connect(server, 80)) {
Serial.print(".");
}
Serial.println();
if(!!!client.connected()) {
Serial.println("gagal terkoneksi, ke mode sleep");
}

Serial.print("Permintaan sumber: ");
Serial.println(resource);
//kunci dalam pengiriman data ke thingspeak
client.print(String("GET ") + resource + apiKey + "&field1="
+ persen_gas + "&field2=" + gas_ppm +
" HTTP/1.1\r\n" +
"Host: " + server + "\r\n" +
"Connection: close\r\n\r\n");

while(!!!client.available()){
delay(100);
}
if(!!!client.available()) {
Serial.println("Tidak ada response, going back to
sleep");
}
while(client.available()){
Serial.write(client.read());
}

Serial.println("\nclosing connection");
client.stop();
}

```


8.7% PLAGIARISM
APPROXIMATELY

0.15% IN QUOTES

Report #11013160

Introduction Background LPG gas has a major role in a stove that is used for household needs. In Indonesia there are many cases of house fires or explosions caused by human negligence by underestimating the condition of LPG gas that is leaking. Gas leaks can seep into waterways, electrical installations, or under carpets that will be difficult to detect by the sense of smell. Seeing the conditions in this country experienced a lot of explosions originating from LPG gas, so many authors who made the design of a gas detector that leaked. This is very important because it can prevent an explosion or fire caused by a leak in the LPG gas itself. Various methods used by other writers. Other authors create a gas detector with MQ-6 sensor with Mamdani fuzzy logic algorithm, Tsukamoto Fuzzy Logic and are processed with Real-Time Operating System. Problem Formulation 1. Does this tool function properly and accurately? 2. Can the values of sensor send data periodically? 3. Can the battery be a power source from Arduino? 4. Can the telegram send SMS Notification when alerted? Scope 1.3.1. This tool can function properly 1.3.2. It can monitoring value of gas sensor from thingspeak website 1.3.3. Sending SMS notification when there was a gas leak via telegram 1.2.4. Sending value of gas sensor to thingspeak website periodically. 1.2.5. This tool uses a battery as a power source. Objective The first