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LAMPIRAN

```
#define BLYNK_TEMPLATE_ID "TMPL6-Uo1slZO"
#define BLYNK_TEMPLATE_NAME "Quickstart Template"
#define BLYNK_AUTH_TOKEN "IlbTh_nrr2Eg032ZNGNglG8-zCFapP2a"

#define BLYNK_PRINT Serial
#include <BlynkSimpleEsp32.h>

char auth[] = BLYNK_AUTH_TOKEN;
char ssid[] = "amanah";
char pass[] = "11223344";

#include <HardwareSerial.h>
HardwareSerial SerialPort(1); // use UART1

#include "DHT.h"
#define gas 36
#define flame 39
#define DHTPIN 13
#define buzzer 19
#define pompa 5

#define INTERVAL_MESSAGE1 250
#define INTERVAL_MESSAGE2 1000
unsigned long time_1 = 0;
unsigned long time_2 = 0;

#define DHTTYPE DHT11   // DHT 11
DHT dht(DHTPIN, DHTTYPE);

int val_gas = 0;
int val_flame = 0;
float h;
float t;
bool prestate_gas = false;
bool prestate_flame = false;
bool prestate = false;

float analogValue, VRL, Rs, ppm, ratio;

float m =-0.5;
float b = 1.1;
float Ro = 2.7;
float RL = 10;
```

```
void setup() {
  Serial.begin(9600);
  Blynk.begin(auth, ssid, pass);
  SerialPort.begin(9600, SERIAL_8N1, 4, 2);
  Serial.println("Initializing...");
  delay(1000);

  sendCommand("AT"); // Periksa apakah modul SIM800L responsif
  delay(1000);

  sendCommand("ATE0"); // Matikan echo
  delay(1000);

  Serial.println("");
  Serial.println("WiFi connected.");
  Serial.println("IP address: ");
  Serial.println(WiFi.localIP());

  pinMode(gas, INPUT);
  pinMode(flame, INPUT);
  pinMode(pompa, OUTPUT);
  pinMode(buzzer, OUTPUT);
  dht.begin();
}

void loop() {
  if (millis() > time_1 + INTERVAL_MESSAGE1) {
    time_1 = millis();

   VRL = analogRead(gas)*(3.3/4095.0);
  Rs  = ((3.3*RL)/VRL)-RL;
  ratio = Rs/Ro ;
  ppm = pow (10, ((log10(ratio)-b)/m));
    val_gas = ppm;

    val_flame = analogRead(flame);
    val_flame = map(val_flame, 0, 4095, 100, 0);
    h = dht.readHumidity();
    t = dht.readTemperature();

  }

  if (millis() > time_2 + INTERVAL_MESSAGE2) {
    time_2 = millis();
```

```
        Blynk.run();

        if (val_gas >= 100)
        {
          prestate_gas = true;
          Serial.println("=============== Gas Terdeteksi ============
");
        }
        if (val_flame >= 50)
        {
          prestate_flame = true;
          Serial.println("=============== Api Terdeteksi ============
");
        }

        if ( prestate_flame == true)
        {
          digitalWrite(buzzer, HIGH);
          digitalWrite(pompa, HIGH);
          if (prestate == false)
          {
            prestate = true;
           sendSMS("+6282214475111", "FIRE ALARM ALERT !! TELAH TERJADI
KEBAKARAN RUMAH | Jl. H. Taiman Barat I No. 39, RT4/RW2, Pasar Rebo,
Jakarta Timur, DKI JAKARTA 13760 | Lat : -6.3013, Long : 106.8642 |
https://maps.app.goo.gl/aEL19xL7FLAgYidH8?g_st=iw      |      PEMILIK
RUMAH:082233482819");
          }
          Serial.println("ALARM ALERT !!!");
          delay(2000);
        }
    if ( prestate_gas== true)
        {
          digitalWrite(buzzer, HIGH);
          if (prestate == false)
          {
            prestate = true;
           sendSMS("+6282214475111", "FIRE ALARM ALERT !! TELAH TERJADI
KEBocoran gas | Jl. H. Taiman Barat I No. 39, RT4/RW2, Pasar Rebo,
Jakarta Timur, DKI JAKARTA 13760 | Lat : -6.3013, Long : 106.8642 |
https://maps.app.goo.gl/aEL19xL7FLAgYidH8?g_st=iw      |      PEMILIK
RUMAH:082233482819");
          }
          Serial.println("ALARM ALERT !!!");
          delay(2000);
        }
```

```
      if (val_gas < 100 || val_flame < 50)
      {
        digitalWrite(buzzer, LOW);
        digitalWrite(pompa, LOW);
        prestate_gas = false;
        prestate_flame = false;
        prestate = false;
      }

      Serial.print(val_gas);
      Serial.print('\t');
      Serial.print(val_flame);
      Serial.print('\t');
      Serial.print(t);
      Serial.print('\t');
      Serial.print(h);
      Serial.println('\t');

      Blynk.virtualWrite(V0, t);
      Blynk.virtualWrite(V1, val_gas);
      Blynk.virtualWrite(V2, val_flame);
    }
  }

  void sendCommand(const char* command) {
    SerialPort.println(command);
    while (!SerialPort.available()) {} // Tunggu hingga data tersedia
    while (SerialPort.available()) {
      Serial.write(SerialPort.read());
    }
  }

  void sendSMS(const char* phoneNumber, const char* message) {
    sendCommand("AT+CMGF=1"); // Set mode PDU
    delay(1000);

    char cmd[50];
    sprintf(cmd, "AT+CMGS=\"%s\"", phoneNumber);
    sendCommand(cmd);
    delay(1000);

    SerialPort.print(message);
    delay(1000);

    SerialPort.write(0x1A); // Kirim karakter Ctrl+Z untuk mengakhiri
pesan
    delay(1000);
```

HARDYAN

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