

LAMPIRAN

Lampiran 1 Surat Keterangan Turnitin



UNIVERSITAS DARMA PERSADA

UPT PERPUSTAKAAN

Gedung Rektorat Lantai 3,

Jl.Taman Malaka Selatan, Pondok Kelapa – Jakarta Timur 13450

SURAT KETERANGAN HASIL PENGECEKAN TURNITIN

UPT Perpustakaan Universitas Darma Persada menerangkan telah selesai melakukan pemeriksaan duplikasi/*similarity* menggunakan perangkat lunak Turnitin terhadap hasil karya sebagai berikut:

Judul : Implementasi Sistem Pemantauan Kebocoran Gas LPG berbasis
Internet of Things (IoT) untuk Meningkatkan Keamanan di RM Sudirman
Penulis : Nabilah Putri Hisaanah
NIM : 2020230089
Tgl pemeriksaan : 12 Februari 2025

Dengan hasil Tingkat Kesamaan (*similarity index*) 23%

Demikian Surat Keterangan kami buat, untuk dipergunakan sebagaimana mestinya.

Jakarta, 12 Februari 2025

Ka.UPT Perpustakaan Unsada

Yus Rusmiyati, SS., MM

Batas maksimal similarity 30% untuk Fakultas Sastra dan Ekonomi

Batas maksimal similarity 25% untuk Fakultas Teknik, Kelautan
dan Pasca Sarjana

Lampiran 2 Hasil Turnitin



Page 2 of 56 - Integrity Overview

Submission ID trnoid::1:3153229939

23% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Top Sources

21%  Internet sources
6%  Publications
0%  Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.



Page 2 of 56 - Integrity Overview

Submission ID trnoid::1:3153229939

Top Sources

21% Internet sources
6% Publications
0% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	docplayer.info	3%
2	Internet	123dok.com	1%
3	Internet	repository.its.ac.id	1%
4	Internet	ejournal.raharja.ac.id	<1%
5	Internet	ejournal-binainsani.ac.id	<1%
6	Internet	openlibrarypublications.telkomuniversity.ac.id	<1%
7	Internet	digilib.esaunggul.ac.id	<1%
8	Internet	vdocuments.pub	<1%
9	Internet	www.researchgate.net	<1%
10	Internet	docobook.com	<1%
11	Internet	ejournal.unisbablitar.ac.id	<1%

12	Internet	repo.darmajaya.ac.id	<1%
13	Internet	id.123dok.com	<1%
14	Publication	Ahmad Hambali, Ishlahuddin Abdullah, "Complaint Analysis of LPG Gas Checking ...	<1%
15	Internet	repository.uhamka.ac.id	<1%
16	Internet	www.scribd.com	<1%
17	Internet	prosiding.sentimeter.nusaputra.ac.id	<1%
18	Internet	repository.uin-suska.ac.id	<1%
19	Internet	ejurnal.provisi.ac.id	<1%
20	Internet	etheses.uin-malang.ac.id	<1%
21	Internet	repositori.usu.ac.id	<1%
22	Internet	repositori.umsu.ac.id	<1%
23	Internet	tkmindexample.wordpress.com	<1%
24	Internet	journal.umpr.ac.id	<1%
25	Internet	elib.pnc.ac.id	<1%

26	Internet	eprints.umm.ac.id	<1%
27	Internet	journal.um-surabaya.ac.id	<1%
28	Internet	repository.unama.ac.id	<1%
29	Internet	digilib.uin-suka.ac.id	<1%
30	Publication	Tundo, Anisah Nurul Azhar, Kiki Setiawan, Raisah Fajri Aula. "Penerapan IoT dala...	<1%
31	Internet	dspace.uui.ac.id	<1%
32	Internet	perpusteknik.com	<1%
33	Publication	Indriani Indriani, Nur Fatimah, Rahmania Rahmania, Adriani Adriani. "RANCANG ...	<1%
34	Internet	eprints.ums.ac.id	<1%
35	Publication	Bagas Pratama, Slamet Riyanto. "Perancangan Aplikasi Gerbang Absensi Siswa B...	<1%
36	Internet	core.ac.uk	<1%
37	Internet	digilib.uinsby.ac.id	<1%
38	Internet	ejurnal.itenas.ac.id	<1%
39	Internet	jurnal.untan.ac.id	<1%

40	Internet	www.coursehero.com	<1%
41	Publication	Nurhapsari Nurhapsari, Solmin Paembonan, Rinto Suppa. "RANCANG BANGUN SI...	<1%
42	Internet	adoc.pub	<1%
43	Internet	anzdoc.com	<1%
44	Internet	docslide.us	<1%
45	Internet	repository.poliupg.ac.id	<1%
46	Internet	text-id.123dok.com	<1%
47	Internet	wirebiru.blogspot.com	<1%
48	Publication	Diah Ayu Kurnia, Muhammad Ariandi. "Robot Mobile Autopilot Untuk Mendeteksi...	<1%
49	Publication	Hadian Mandala Putra, 'Alimuddin, Suhartini, Wahyu Rizki. "Pengembangan Sist...	<1%
50	Publication	Maghfira Rizki Maulani, Rudi Susanto, Nurohman Nurohman. "Pengembangan Si...	<1%
51	Internet	begawe.unram.ac.id	<1%
52	Internet	e-jurnal.lppmunsera.org	<1%
53	Internet	eprints.iain-surakarta.ac.id	<1%

54	Internet	geograf.id	<1%
55	Internet	pps.unud.ac.id	<1%
56	Internet	pt.scribd.com	<1%
57	Internet	rofiquislam123.blogspot.com	<1%
58	Internet	styjun.blogspot.com	<1%
59	Internet	eprints.walisongo.ac.id	<1%
60	Internet	indeksprestasi.blogspot.com	<1%
61	Internet	ejournal.uika-bogor.ac.id	<1%
62	Internet	jurnal.uisu.ac.id	<1%
63	Internet	media.neliti.com	<1%

Lampiran 3 Source Code

```
#define BLYNK_AUTH_TOKEN "BKSq_OMUkCzY28_XCSKNLmew3BntKTc"
#define BLYNK_TEMPLATE_ID "TMPL6vctpSahk"
#define BLYNK_TEMPLATE_NAME "SISTEM MONITORING PENDETEKSI KEBAKARAN"
#include <WiFi.h>
#include <WebServer.h>
#include <WiFiClient.h>
#include <BlynkSimpleEsp32.h>
#include "HTTPClient.h"
#include <DHT.h>

// Pin untuk Flame Sensor
#define FLAME_SENSOR_PIN 34

// Pin dan tipe untuk DHT Sensor
#define DHTPIN 32 // Pin DHT (sesuaikan dengan pin yang digunakan)
#define DHTTYPE DHT11 // Ganti ke DHT22 jika menggunakan DHT22

// Pin untuk MQ6 Sensor
#define MQ6_PIN 35 // Pin untuk MQ6 gas sensor

// Pin untuk Buzzer
#define BUZZER_PIN 4 // Pin buzzer (sesuaikan dengan pin yang digunakan)

// Pin untuk Relay
#define RELAY1_PIN 22 // Pin untuk Relay 1 (air)
#define RELAY2_PIN 23 // Pin untuk Relay 2 (kipas)
#define RELAY3_PIN 21 // Button

// Wi-Fi Configuration
const char* ssid = "Bibbib";
const char* pass = "1dua3456";

// Alamat IP komputer server
// atur sesuai ip yang di laptop
const char* IPAddr = "iotmon.site";

WiFiClient NodeMCU;

// Blynk Configuration
char auth[] = BLYNK_AUTH_TOKEN;

BlynkTimer timer;

// Threshold untuk MQ6 sensor
#define GAS_THRESHOLD 2000 // Threshold untuk MQ6 (nilai contoh)

DHT dht(DHTPIN, DHTTYPE);

// Fungsi untuk mengontrol Relay 3 menggunakan Button di Blynk
```

```

BLYNK_WRITE(V4) { // Virtual Pin V4
  int buttonState = param.asInt(); // Membaca status button dari
  aplikasi Blynk
  if (buttonState == 1) {
    digitalWrite(RELAY3_PIN, LOW); // Menyalakan relay (aktif
  LOW)
    Serial.println("Relay 3 ON");
  } else {
    digitalWrite(RELAY3_PIN, HIGH); // Mematikan relay
    Serial.println("Relay 3 OFF");
  }
}

// untuk mengkonversikan nilai
String urlEncode(const char* msg) {
  const char *hex = "0123456789ABCDEF";
  String encodedMsg = "";
  while (*msg) {
    if (('a' <= *msg && *msg <= 'z') ||
        ('A' <= *msg && *msg <= 'Z') ||
        ('0' <= *msg && *msg <= '9') ||
        (*msg == '-' || *msg == '_' || *msg == '.' || *msg ==
  '~')) {
      encodedMsg += *msg;
    } else {
      encodedMsg += '%';
      encodedMsg += hex[*msg >> 4];
      encodedMsg += hex[*msg & 15];
    }
    msg++;
  }
  return encodedMsg;
}

void setup() {
  Serial.begin(115200); // Memulai komunikasi Serial
  pinMode(FLAME_SENSOR_PIN, INPUT); // Atur pin flame sensor
  sebagai input
  pinMode(MQ6_PIN, INPUT); // Set MQ6 pin sebagai input
  pinMode(BUZZER_PIN, OUTPUT); // Set pin buzzer sebagai output
  // Set pin relay sebagai output
  pinMode(RELAY1_PIN, OUTPUT);
  pinMode(RELAY2_PIN, OUTPUT);
  pinMode(RELAY3_PIN, OUTPUT);
  // Ensure Relay is off at startup
  digitalWrite(RELAY1_PIN, HIGH);
  digitalWrite(RELAY2_PIN, HIGH);
  digitalWrite(RELAY3_PIN, HIGH);
  digitalWrite(BUZZER_PIN, LOW);
  dht.begin(); // Inisialisasi DHT sensor

  // Connect to Wi-Fi
  Serial.print("Connecting to WiFi");
  WiFi.begin(ssid, pass);
}

```

```

while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
}
Serial.println();
Serial.println("WiFi connected");
Serial.print("IP address: ");
Serial.println(WiFi.localIP());

// Connect to Blynk
Blynk.begin(auth, ssid, pass);
while (Blynk.connect() == false) {
    // Wait until connected to Blynk
}
Serial.println("Blynk connected");
Serial.println("Sistem Flame, DHT, dan MQ6 siap.");
}

void loop() {
    Blynk.run(); // Run Blynk in the loop
    timer.run(); // Run timer for Blynk tasks

    // Membaca nilai Flame Sensor
    int flameValue = digitalRead(FLAME_SENSOR_PIN);
    String flameStatus = (flameValue == 0) ? "Ada Api" : "Tidak Ada
Api";

    // Membaca nilai dari DHT Sensor
    float temperature = dht.readTemperature(); // Membaca suhu
dalam Celsius
    float humidity = dht.readHumidity(); // Membaca
kelembapan

    // Periksa jika pembacaan DHT gagal
    if (isnan(temperature) || isnan(humidity)) {
        Serial.println("Gagal membaca data dari sensor DHT!");
        delay(2000); // Tunggu sebelum mencoba membaca ulang
        return;
    }

    // Membaca nilai dari MQ6 Gas Sensor
    int mq6_value = analogRead(MQ6_PIN); // Membaca nilai MQ6
    String status_gas = (mq6_value > GAS_THRESHOLD) ? "Ada Gas" :
"Tidak Ada Gas";

    // Mengecek apakah ada gas terdeteksi berdasarkan nilai sensor
    bool gasDetected = false;
    float coPpm = (mq6_value / 1023.0) * 200; // Contoh konversi
untuk CO (ppm)
    if (mq6_value > GAS_THRESHOLD) {

        gasDetected = true;
    }
}

```

```

// Menyalakan buzzer dan relay1 jika ada api
if (flameValue == 0) {
    digitalWrite(BUZZER_PIN, HIGH); // Aktifkan buzzer
    digitalWrite(RELAY1_PIN, LOW); // Aktifkan relay 1
    Serial.println("Api terdeteksi! Buzzer dan Relay1 menyala.");

    // Kirim notifikasi ke Blynk
    Blynk.logEvent("notif_api", "Peringatan!, Api terdeteksi
berbahaya!");
} else {
    digitalWrite(BUZZER_PIN, LOW); // Matikan buzzer
    digitalWrite(RELAY1_PIN, HIGH); // Matikan relay 1
    Serial.println("Tidak ada api. Buzzer dan Relay1 mati.");
}

// Mematikan kipas (relay2) jika tidak ada api
if (flameValue == 1) {
    digitalWrite(RELAY2_PIN, HIGH); // Matikan kipas
    Serial.println("Relay2 (kipas) mati karena tidak ada api.");
}

// Menyalakan relay 2 jika ada gas atau suhu > 34
if (gasDetected || temperature > 34) {
    digitalWrite(RELAY2_PIN, LOW); // Aktifkan relay 2

    // Kirim notifikasi ke Blynk jika ada gas atau suhu tinggi
    if (gasDetected) {
        digitalWrite(BUZZER_PIN, HIGH); // Matikan buzzer
        Blynk.logEvent("notif_gas", "Gas terdeteksi diatas 2000,
mohon di cek!");
    }
    if (temperature > 34) {
        Blynk.logEvent("notif_suhu", "Suhu diatas 34 derajat, kipas
menyala!");
    }
} else {
    digitalWrite(RELAY2_PIN, HIGH); // Matikan relay 2
}

// Menampilkan hasil di Serial Monitor
Serial.println("=== Pembacaan Sensor ===");
Serial.print("Flame Value: ");
Serial.print(flameValue);
Serial.print(" | Status: ");
Serial.println(flameStatus);

Serial.print("Suhu: ");
Serial.print(temperature);
Serial.println(" °C");

Serial.print("Kelembapan: ");
Serial.print(humidity);
Serial.println(" %");

```

```

Serial.print("MQ6 Sensor: ");
Serial.print(mq6_value);
if (gasDetected) {
    Serial.println(" = Ada Gas!");
} else {
    Serial.println(" = Tidak Ada Gas.");
}

// Update Blynk virtual pins
Blynk.virtualWrite(V1, mq6_value);
Blynk.virtualWrite(V2, flameValue);
Blynk.virtualWrite(V3, temperature);
Blynk.virtualWrite(V0, humidity); // Send humidity data to
Blynk

// Connect to Server
if (!NodeMCU.connect(IPAddr, 80)) {
    Serial.println("Gagal koneksi ke webserver");
    return;
}

// Construct URLs with Status Parameters
String url1 = "http://" + String(IPAddr) +
"/apilinta/kirimdata_history.php?" +
    "sensor_api=" + String(flameValue) +
    "&status_api=" + urlEncode(flameStatus.c_str()) +
    "&sensor_gas=" + String(mq6_value) +
    "&status_gas=" + urlEncode(status_gas.c_str()) +
    "&sensor_suhu=" + String(temperature) +
    "&sensor_kelembapan=" + String(humidity);

String url2 = "http://" + String(IPAddr) +
"/apilinta/kirimdata.php?sensor_api=" + String(flameValue) +
"&sensor_gas=" + String(mq6_value) + "&sensor_suhu=" +
String(temperature) + "&sensor_kelembapan=" + String(humidity);

HTTPClient http;

// Send to First URL
http.begin(url1);
int httpCode1 = http.GET();
if (httpCode1 > 0) {
    String payload1 = http.getString();
    Serial.println("Response from first URL: " + payload1);
} else {
    Serial.print("Error on first HTTP request: ");
    Serial.println(httpCode1);
}
http.end();

// Send to Second URL
http.begin(url2);
int httpCode2 = http.GET();
if (httpCode2 > 0) {

```

```
String payload2 = http.getString();
Serial.println("Response from second URL: " + payload2);
} else {
    Serial.print("Error on second HTTP request: ");
    Serial.println(httpCode2);
}
http.end();

Serial.println("=====");

delay(1000); // Delay 2 detik sebelum pembacaan berikutnya
}
```

