

## LAMPIRAN

### Lampiran 1. Surat Keterangan Bebas Plagiat



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Perumahan Koperasi Di Bekasi)  
Penulis : Dwi Pramana Putra  
NIM : 2019230152  
Tgl pemeriksaan : 29 Juli 2025

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### Lampiran 3. Source Code ( Arduino Ide Mikrokontroller)

```
#include "DHT.h"
#include <LiquidCrystal_I2C.h>
#include <MQUnifiedsensor.h>
#include <HTTPClient.h>
#include <UrlEncode.h>
#include <WiFi.h>
#include <PubSubClient.h>
#include <TinyGPS++.h>
#include <HardwareSerial.h>

// Koneksi mikrokontroller ke Wi-Fi
#define SSID "monitor"
#define SSID_PASSWORD "monitor2021"
// koneksi Mqtt untuk mengirim data
const char* mqtt_server = "broker.hivemq.com";
const char* mqtt_topic = "skripsi/ruang1/sensor";
WiFiClient espClient;
PubSubClient client(espClient);

// Sensor Konfigurasi
#define DHTPIN 15
#define KIPAS_PIN 23
#define POMPA_AIR_PIN 18
#define FLAME_SENSOR_PIN 36
#define BUZZER_PIN 19
#define MQ2_PIN 39
#define MQ135_PIN 34
#define DHTTYPE DHT11

// Notifikasi Whatsapp
void sendMessage(String message) {
  Serial.print("Mengirim notifikasi WA: \");
  Serial.print(message); Serial.println("\n");
}
```

```

String url = "https://api.callmebot.com/whatsapp.php?phone=" +
phoneNumber + "&apikey=" + apiKey + "&text=" + urlEncode(message);

HTTPClient http;

http.begin(url);

int httpCode = http.GET();

if (httpCode > 0) {

    Serial.printf("Kode Respon HTTP: %d\n", httpCode);

} else {

    Serial.printf("Gagal mengirim notifikasi, error: %s\n",
http.errorToString(httpCode).c_str());

}

http.end();

}

```

#### Lampiran 4. *Source Code* (Ambil Data Sensor Dari Database)

```

<?php
$host = 'localhost';
$db   = 'db_kebakaran'; // Sesuaikan dengan nama database Anda
$user = 'root';
$pass = '';
$charset = 'utf8mb4';
$dsn = "mysql:host=$host;dbname=$db;charset=$charset";
$options = [
    PDO::ATTR_ERRMODE            => PDO::ERRMODE_EXCEPTION,
    PDO::ATTR_DEFAULT_FETCH_MODE => PDO::FETCH_ASSOC,
    PDO::ATTR_EMULATE_PREPARES  => false,
];
try {
    $pdo = new PDO($dsn, $user, $pass, $options);
} catch (PDOException $e) {
    die("Koneksi database gagal: " . $e->getMessage());
}
?>

```

### Lampiran 5. Source Code (Mengirim Datas Sensor ke Web)

```
const mqtt = require('mqtt');
const mysql = require('mysql2/promise');
console.log("🚀 [SERVER] Memulai skrip listener...");
const MQTT_CONFIG = {
  brokerUrl: 'mqtt://broker.hivemq.com:1883',
  topic: 'skripsi/ruang1/sensor'
};
const DB_CONFIG = {
  host: 'localhost',
  user: 'root',
  password: '',
  database: 'db_kebakaran'
};
```

### Lampiran 6. Source Code (Tampilan Dashboard Web)

```
<?php
require_once 'includes/config.php';
require_once 'includes/header.php';
// Ambil data terbaru dari database
$latest_stmt = $pdo->query("SELECT * FROM sensor_data ORDER BY
waktu DESC LIMIT 1");
$latest = $latest_stmt->fetch(PDO::FETCH_ASSOC);
if (!$latest) {
  $latest = [
    'status_api' => 'Aman',
    'gas' => 0,
    'asap' => 0,
    'suhu' => 0,
    'kipas' => 'OFF',
    'buzzer' => 'OFF',
    'pompa' => 'OFF',
    'waktu' => date('Y-m-d H:i:s'),
```

```
    ];  
}  
// Batas Aman Sensor  
$threshold_gas = 90;  
$threshold_asap = 40;  
$threshold_suhu = 50;  
// Logika Penentuan Batas Bahaya  
$fireDanger = ($latest['status_api'] === 'KEBAKARAN!');  
$gasDanger = $latest['gas'] > $threshold_gas;  
$smokeDanger = $latest['asap'] > $threshold_asap;  
$tempDanger = $latest['suhu'] > $threshold_suhu;  
$isCritical = $fireDanger || $gasDanger || $smokeDanger ||  
$tempDanger;  
?>
```

