

LAMPIRAN

- **NodeMCU**

```
#include <Arduino.h>
#include <SimpleDHT.h>
#include <PubSubClient.h>
#include <ESP8266WiFi.h>
#include <LiquidCrystal_I2C.h>
#include <Wire.h>
#include <RBDDimmer.h>

//DHT
#define pinDHT 2

//RELAY
#define IN1R 10
#define IN2R 3

//L298N
// #define ENA 0
// #define IN1 2
// #define IN2 14
#define ENB 12
#define IN3 15
#define IN4 13

//WIFI
const char* ssid = "skripsi";
const char* password = "bismillah";

// MQTT
const char* mqttServerURL = "44.195.141.13";
const char* humidity_topic = "lembab";
```

```
const char* temperature_topic = "suhu";
const char* clientID = "suhu_inkubator";
const char* humidity_topicR = "realtime/lembab";
const char* temperature_topicR = "realtime/suhu";
const char* Shumidity_topicR = "realtime/statuslembab";
const char* Stemperature_topicR = "realtime/statussuhu";
const char* kipas_topicR = "realtime/kipas";
const char* rp_topicR = "realtime/rp";
const char* hum_topicR = "realtime/humidifier";
const char* token_topic = "token";
String token = "0002";
char message_buff_call[200];
char mtopic[200];
const char* mqttTopicRP = "/manual/rp";
const char* mqttTopicKE = "/manual/ke";
const char* mqttTopicKI = "/manual/ki";
const char* mqttTopicToken = "/manual/token";
const char* mqttTopicPower = "/manual/power";
const char* mqttTopicHumidifier = "/manual/hum";
const char* mqttTopicFuzzyKipas = "/otomatis/kipas";

//DELAY RP
unsigned long period1 = 0;
unsigned long lasttime = 0;
unsigned long lasttime1 = 0;

//VALUE
String manual = "OFF";
int lastKE = 0;
int lastKI = 0;
int lastLampu = 0;
String tokenM = "";
int msss = 0;
```

```
int lampus = 0;
int kipass = 0;
String hums = "OFF";
String RPs = "OFF";
int fuzzykipas = 0;
int fuzzylampu = 0;

//ID
String IPAddress = "";
String statusAlat = "";

WiFiClient espClient;
PubSubClient mqttClient(espClient);
SimpleDHT11 dht(pinDHT);
LiquidCrystal_I2C lcd(0x27, 16, 2);

void setupWifi() {
  delay(100);

  Serial.print("Connecting to: ");
  Serial.println(ssid);

  lcd.setCursor(0,0);
  lcd.print("Connecting to : ");
  lcd.setCursor(0,1);
  lcd.print(ssid);

  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED)
  {
    delay(500);
    Serial.print(".");
  }
}
```

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

lcd.clear();
lcd.setCursor(1,0);
lcd.print("WiFi connected");
lcd.setCursor(1,1);
lcd.print(WiFi.localIP());
IPAddress = WiFi.localIP().toString();

delay(2000);

}

void callback(char* topic, byte* payload, unsigned int length) {

Serial.print("Command from MQTT broker is : ");
Serial.print(topic);
Serial.print(" ");

String topicc = topic;
msss = 0;

int i = 0;

for(i=0; i<length; i++) {
  message_buff_call[i] = payload[i];
}

message_buff_call[i] = '\0';
```

```
String msgString = String(message_buff_call);
Serial.println(msgString);
int val = msgString.toInt();

if (topicc == "/manual/token") {
  if(msgString.equals("0002")) {
    tokenM = "0002";
    Serial.println(tokenM);
  } else {
    tokenM = "-";
    Serial.println(tokenM);
  }
}

if (topicc == "/manual/power") {
  if((msgString.equals("ON")) && (tokenM == "0002")) {
    manual = "ON";
    Serial.println(manual);
    analogWrite(ENB, lastKE);
    digitalWrite(IN3, HIGH);
    digitalWrite(IN4, LOW);
    if(hums == "ON") {
      digitalWrite(IN1R, LOW);
    }else if(hums == "OFF") {
      digitalWrite(IN1R, HIGH);
    }
  } else if ((msgString.equals("OFF")) && (tokenM == "0002")) {
    manual = "OFF";
    Serial.println(manual);
    digitalWrite(IN1R, HIGH);
    digitalWrite(ENB, LOW);
    digitalWrite(IN3, LOW);
    digitalWrite(IN4, LOW);
  }
}
```

```

}
}

if((manual == "ON") && (tokenM == "0002")) {
  if (topicc == "/manual/rp") {
    if(msgString.equals("10")) {
      period1 = 0;
      lasttime1 = 0;
      period1 = 1000*10;
    } else if(msgString.equals("8")) {
      period1 = 0;
      lasttime1 = 0;
      period1 = 1000*60*60*8;
    } else if (msgString.equals("ON")) {
      digitalWrite(IN2R, LOW);
      Serial.println("Rak Penggerak On!");
      period1 = 0;
      lasttime1 = 0;
    } else if (msgString.equals("OFF")) {
      digitalWrite(IN2R, HIGH);
      Serial.println("Rak Penggerak Off!");
      period1 = 0;
      lasttime1 = 0;
    }
  } else if(topicc == "/manual/ke") {
    analogWrite(ENB, val);
    lastKE = val;
    digitalWrite(IN3, HIGH);
    digitalWrite(IN4, LOW);
    kipass = val;
  } else if(topicc == "/manual/ki") {
    // analogWrite(ENA, val);
    // lastKI = val;
  }
}

```

```
// digitalWrite(IN1, HIGH);
// digitalWrite(IN2, LOW);
} else if(topicc == "/manual/hum") {
  if(msgString.equals("ON")){
    hums = "ON";
    digitalWrite(IN1R, LOW);
  } else if(msgString.equals("OFF")) {
    hums = "OFF";
    digitalWrite(IN1R, HIGH);
  }
}

if(topicc == "/otomatis/kipas"){
  fuzzykipas = msgString.toInt();
}

Serial.println();

}

void connectToMQTT() {

while (!mqttClient.connected())
{
  Serial.print("Attempting MQTT connection...");
  String clientId = "ESP8266Client-" + String(random(0xffff), HEX);

  if (mqttClient.connect(clientId.c_str()))
  {
    lcd.clear();
    lcd.setCursor(1,0);
    lcd.print("MQTT Connected!");
  }
}
```

```
Serial.println("MQTT Connected !");
mqttClient.subscribe(mqttTopicRP);
mqttClient.subscribe(mqttTopicKE);
mqttClient.subscribe(mqttTopicKI);
mqttClient.subscribe(mqttTopicToken);
mqttClient.subscribe(mqttTopicPower);
mqttClient.subscribe(mqttTopicHumidifier);
mqttClient.subscribe(mqttTopicFuzzyKipas);
delay(2000);
}
else
{
  lcd.clear();
  lcd.setCursor(2,0);
  lcd.print("MQTT Failed!");
  lcd.setCursor(0,1);
  lcd.print("Try Again in 6 s");
  Serial.print("failed, rc=");
  Serial.print(mqttClient.state());

  Serial.println(" try again in 6 seconds");
  delay(6000);
}
}

void setup() {
  Serial.begin(9600);

  Wire.begin(4, 0);
  lcd.backlight();
  lcd.init();
```



```
setupWifi();

mqttClient.setServer(mqttServerURL, 1883);
mqttClient.setCallback(callback);

// pinMode(ENA, OUTPUT);
// pinMode(IN1, OUTPUT);
// pinMode(IN2, OUTPUT);
pinMode(ENB, OUTPUT);
pinMode(IN3, OUTPUT);
pinMode(IN4, OUTPUT);
pinMode(IN1R, OUTPUT);
pinMode(IN2R, OUTPUT);

// digitalWrite(ENA, LOW);
// digitalWrite(IN1, LOW);
// digitalWrite(IN2, LOW);
digitalWrite(ENB, LOW);
digitalWrite(IN3, LOW);
digitalWrite(IN4, LOW);
digitalWrite(IN1R, LOW);
digitalWrite(IN2R, LOW);

lcd.clear();
lcd.setCursor(4,0);
lcd.print("WELCOME");
lcd.setCursor(1,1);
lcd.print("SMART EGG INC");
delay(3000);
lcd.clear();

}
```

```
void loop() {

  if (!mqttClient.connected())
  {
    connectToMQTT();
  } else {
    byte temperature = 0;
    byte humidity = 0;

    if((dht.read(&temperature, &humidity, NULL)) != SimpleDHTErrSuccess)
    {
      // Serial.print("Pembacaan DHT11 gagal");
      // delay(3000);
      return;
    }

    float t = (float)temperature;
    float h = (float)humidity;
    String statusSuhu = "";
    String statusLembab = "";

    Serial.print("Sample OK: ");
    Serial.print((float)temperature);
    Serial.print(" *C, ");
    Serial.print((float)humidity);
    Serial.println(" H");

    if (t < 36) {
      statusSuhu = "DINGIN";
    } else if (t < 41) {
      statusSuhu = "NORMAL";
    } else if (t > 40) {
```

```
statusSuhu = "PANAS";
}

if (h < 51) {
    statusLembab = "KERING";
} else if (h < 81) {
    statusLembab = "NORMAL";
} else if (h > 80) {
    statusLembab = "BASAH";
}

if(manual == "OFF") {
    //fuzzy
    Serial.println("Automatic! ");
    statusAlat = "OTO";
    analogWrite(ENB, fuzzykipas);
    digitalWrite(IN3, HIGH);
    digitalWrite(IN4, LOW);
    if(lasttime1 > 1000*60*60*8){
        digitalWrite(IN2R, LOW);
        Serial.println("Rak Penggerak On! ");
        RPs = "ON";
        Serial.println(lasttime1);
        Serial.println(10000);
        delay(6000);
        if(lasttime1 >= 1000*60*60*8){
            lasttime1 = 0;
        }
    } else {
        digitalWrite(IN2R, HIGH);
        Serial.println("Rak Penggerak Delay! ");
        RPs = "Delay";
        // Serial.println(period1);
    }
}
```

```
Serial.println(lasttime1);
Serial.println(period1);
lasttime1 += 1000;
}
if(statusLembab == "BASAH" && statusSuhu == "DINGIN") {
    digitalWrite(IN1R, HIGH);
    hums = "OFF";
} else if (statusLembab == "BASAH" && statusSuhu == "NORMAL") {
    digitalWrite(IN1R, HIGH);
    hums = "OFF";
} else if (statusLembab == "BASAH" && statusSuhu == "PANAS") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
} else if (statusLembab == "NORMAL" && statusSuhu == "DINGIN") {
    digitalWrite(IN1R, HIGH);
    hums = "OFF";
} else if (statusLembab == "NORMAL" && statusSuhu == "NORMAL") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
} else if (statusLembab == "NORMAL" && statusSuhu == "PANAS") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
} else if (statusLembab == "KERING" && statusSuhu == "DINGIN") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
} else if (statusLembab == "KERING" && statusSuhu == "NORMAL") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
} else if (statusLembab == "KERING" && statusSuhu == "PANAS") {
    digitalWrite(IN1R, LOW);
    hums = "ON";
}
} else {
```

```
Serial.println("Manual!" );
statusAlat = "MAN";
fuzzykipas = 0;
fuzzylampu = 0;
}

lcd.clear();
byte slot1[8] = {B00100, B01010, B01010, B00100, B00000, B00000, B00000, B00000};
lcd.createChar(1, slot1);
lcd.setCursor(2,0);
lcd.print("T:");
lcd.print((int)temperature);
lcd.write(1);
lcd.print("C");
lcd.print(" ");
lcd.print("H:");
lcd.print((int)humidity);
lcd.print("%");
lcd.print(" ");
lcd.setCursor(2,1);
lcd.print("Token :");
lcd.print(" ");
lcd.print(token);

if(period1 > 0) {
  if(lasttime1 > period1){
    digitalWrite(IN2R, LOW);
    Serial.println("Rak Penggerak On!" );
    RPs = "ON";
    Serial.println(lasttime1);
    Serial.println(period1);
    delay(6000);
    if(lasttime1 >= period1){
```

```

//    period1 = 0;
    lasttime1 = 0;
}
} else {
    digitalWrite(IN2R, HIGH);
    Serial.println("Rak Penggerak Delay!" );
    RPs = "Delay";
    // Serial.println(period1);
    Serial.println(lasttime1);
    Serial.println(period1);
    lasttime1 += 1000;
}
}

if      (mqttClient.publish(temperature_topicR,      String(t).c_str())      &&
mqttClient.publish(humidity_topicR, String(h).c_str())
    &&      mqttClient.publish(token_topic,      String(token).c_str())      &&
mqttClient.publish(Stemperature_topicR, String(statusSuhu).c_str())
    &&      mqttClient.publish(Shumidity_topicR,      String(statusLembab).c_str())      &&
mqttClient.publish(kipas_topicR, String(fuzzykipas).c_str())
    &&      mqttClient.publish(rp_topicR,      String(RPs).c_str())      &&
mqttClient.publish(hum_topicR, String(hums).c_str())) {
    Serial.println("Realtime sent!");
} else {
    Serial.println("Realtime temperature and humidity failed to send. Reconnecting to
MQTT Broker and trying again");
    mqttClient.connect(clientID);
    delay(10);
    mqttClient.publish(temperature_topicR,      String(t).c_str())      &&
mqttClient.publish(humidity_topicR, String(h).c_str())
    &&      mqttClient.publish(token_topic,      String(token).c_str())      &&
mqttClient.publish(Stemperature_topicR, String(statusSuhu).c_str())

```

```

    && mqttClient.publish(Shumidity_topicR, String(statusLembab).c_str()) &&
mqttClient.publish(kipas_topicR, String(fuzzykipas).c_str())
    && mqttClient.publish(rp_topicR, String(RPs).c_str()) &&
mqttClient.publish(hum_topicR, String(hums).c_str());
}

long now = millis();

if(now - lasttime > 1000*5){
    lasttime = now;
    if (mqttClient.publish(temperature_topic, String(t).c_str()) &&
mqttClient.publish(humidity_topic, String(h).c_str())) {
        Serial.println("History data sent!");
    } else {
        Serial.println("History temperature and humidity failed to send. Reconnecting to MQTT
Broker and trying again");
        mqttClient.connect(clientID);
        delay(10);
        mqttClient.publish(temperature_topic, String(t).c_str()) &&
mqttClient.publish(humidity_topic, String(h).c_str());
    }
}
}

mqttClient.loop();
}

```

- **index.php**

```

<?php

include "include/koneksi.php";
include "fuzzy.php";

```

```

session_start();

if(!isset($_SESSION['login']))
{
    header('location: login.php');
    exit;
}

$username = $_SESSION['username'];
$nama = $_SESSION['nama'];
$hakakses = $_SESSION['hakakses'];

$dataPerangkat = mysqli_query($koneksi, "SELECT * FROM perangkat WHERE
statusVerif = 1");

$dataPerangkat1 = mysqli_query($koneksi, "SELECT * FROM perangkat WHERE dipilih
= 1 AND koneksi = 1");
$rows = mysqli_num_rows($dataPerangkat1);

$schedule = mysqli_query($koneksi, "SELECT * FROM scheduletelur");
$schedule1 = mysqli_fetch_array($schedule);

$notifikasi = mysqli_query($koneksi, "SELECT * FROM notifikasi");

$myDate = date('d-m-Y');

foreach($schedule as $s):
    if($s['telurOut'] == $myDate){
        $cek = mysqli_query($koneksi, "SELECT notif FROM notifikasi WHERE tanggal =
'$myDate'");
        $rows1 = mysqli_num_rows($cek);
        $kalimat = "[Saatnya mengecek telur] ]Hari ini adalah 21 hari setelah anda memasang
jadwal pada tanggal " . $s['telurIn'] . ".";
    }

```



```
if($rows1 > 0) {

} else {
    mysqli_query($koneksi, "INSERT INTO notifikasi (tanggal, notif, dilihat)
    VALUES ('$myDate', '$kalimat', 0)");
}
}
endforeach;

$jumlahNotif = mysqli_query($koneksi, "SELECT count(*) as total from notifikasi
WHERE dilihat = 0");
$dataaaa=mysqli_fetch_assoc($jumlahNotif);

?>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>SEI | Dashboard</title>

    <!-- Google Font: Source Sans Pro -->
    <link rel="stylesheet"

href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,400i,700&displa
y=fallback">
    <!-- Font Awesome -->
    <link rel="stylesheet" href="plugins/fontawesome-free/css/all.min.css">
    <!-- Ionicons -->
```

```
<link rel="stylesheet"
href="https://code.ionicframework.com/ionicons/2.0.1/css/ionicons.min.css">
<!-- Tempusdominus Bootstrap 4 -->
<link rel="stylesheet" href="plugins/tempusdominus-bootstrap-4/css/tempusdominus-
bootstrap-4.min.css">
<!-- iCheck -->
<link rel="stylesheet" href="plugins/ichex-bootstrap/ichex-bootstrap.min.css">
<!-- JQVMap -->
<link rel="stylesheet" href="plugins/jqvmap/jqvmap.min.css">
<!-- Theme style -->
<link rel="stylesheet" href="dist/css/adminlte.min.css">
<!-- overlayScrollbars -->
<link rel="stylesheet" href="plugins/overlayScrollbars/css/OverlayScrollbars.min.css">
<!-- Daterange picker -->
<link rel="stylesheet" href="plugins/daterangepicker/daterangepicker.css">
<!-- summernote -->
<link rel="stylesheet" href="plugins/summernote/summernote-bs4.min.css">

<script type="text/javascript"
src="https://ajax.googleapis.com/ajax/libs/jquery/1.8.2/jquery.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/paho-mqtt/1.0.1/mqttws31.js"
type="text/javascript"></script>
<!-- <script src="include/mqtt.js" type="text/javascript"></script> -->

<link href="https://cdnjs.cloudflare.com/ajax/libs/bootstrap-
switch/3.3.4/css/bootstrap3/bootstrap-switch.min.css" rel="stylesheet">
<script src="https://cdnjs.cloudflare.com/ajax/libs/bootstrap-switch/3.3.4/js/bootstrap-
switch.min.js"></script>

</head>

<body class="hold-transition sidebar-mini layout-fixed">
<div class="wrapper">
```

```

<div class="preloader flex-column justify-content-center align-items-center">
  
</div>

<!-- Navbar -->
<nav class="main-header navbar navbar-expand navbar-white navbar-light">
  <!-- Left navbar links -->
  <ul class="navbar-nav">
    <li class="nav-item">
      <a class="nav-link" data-widget="pushmenu" href="#" role="button"><i class="fas fa-
bars"></i></a>
    </li>
  </ul>
  <!-- Right navbar links -->
  <ul class="navbar-nav ml-auto">
    <li class="nav-item dropdown">
      <a class="nav-link" data-toggle="dropdown" href="#" onclick="myAjax();">
        <i class="far fa-bell"></i>
        <?php if($dataaa['total'] > 0) { ?>
          <span      class="badge      badge-warning      navbar-badge"><?php      echo
$dataaa['total']?></span>
        <?php } ?>
      </a>
      <div class="dropdown-menu dropdown-menu-lg dropdown-menu-right">
        <span      class="dropdown-item      dropdown-header"><?php      echo      $dataaa['total']?>
Notifications</span>
        <?php      foreach($notifikasi as $notif): ?>
          <div class="dropdown-divider"></div>
          <a href="#" class="dropdown-item">
            <i class="fas fa-envelope mr-2"><?php      echo      $notif['notif']; ?></i>
          </a>
        <?php      endforeach;?>

```

```

</li>
<li class="nav-item">
  <a class="nav-link" data-widget="fullscreen" href="#" role="button">
    <i class="fas fa-expand-arrows-alt"></i>
  </a>
</li>
</ul>
</nav>

<!-- Main Sidebar Container -->
<aside class="main-sidebar sidebar-dark-primary elevation-4">

  <!-- Brand Logo -->
  <a href="index.php" class="brand-link">
    <center>
      <span class="brand-text font-weight-light">Kandang Ayam Pintar</span>
    </center>
  </a>

  <!-- Sidebar -->
  <div class="sidebar">

    <!-- Sidebar user panel (optional) -->
    <div class="user-panel mt-3 pb-3 mb-3 d-flex">
      <div class="image">
        
      </div>
      <div class="info">
        <a class="d-block"><?php echo $username ?></a>
      </div>
    </div>
  </div>

```

```
<!-- Sidebar Menu -->
<nav class="mt-2">
  <ul class="nav nav-pills nav-sidebar flex-column" data-widget="treeview"
role="menu" data-accordion="false">
    <li class="nav-item">
      <a href="/index.php" class="nav-link">
        <i class="nav-icon fas fa-tachometer-alt"></i>
        <p>
          Dashboard
        </p>
      </a>
    </li>
    <li class="nav-item">
      <a href="/schedule.php" class="nav-link">
        <i class="nav-icon fas fa-clock"></i>
        <p>
          Schedule
        </p>
      </a>
    </li>
    <li class="nav-item">
      <a href="history.php" class="nav-link">
        <i class="nav-icon fas fa-table"></i>
        <p>
          History
        </p>
      </a>
    </li>
    <?php
if($hakakses == "super" || $hakakses == "vice") { ?>
    <li class="nav-item">
      <a href="uManager.php" class="nav-link">
        <i class="nav-icon fas fa-user-alt"></i>
```

```

    <p>
      User manager
    </p>
  </a>
</li>
<?php } ?>
<li class="nav-item">
  <a href="dManager.php" class="nav-link">
    <i class="nav-icon fas fa-list"></i>
    <p>
      Device manager
    </p>
  </a>
</li>
<li class="nav-item">
  <a href="include/logout.php" class="nav-link">
    <i class="nav-icon fas fa-sign-out-alt"></i>
    <p>
      Logout
    </p>
  </a>
</li>
</ul>
</nav>
</div>
</aside>

<!-- Content Wrapper. Contains page content -->
<div class="content-wrapper">
  <!-- Content Header (Page header) -->
  <div class="content-header">
    <div class="container-fluid">
      <div class="row mb-2">

```

```

<div class="col-sm-6">
  <!-- nama dashboard -->
  <?php
    $namaPerangkat = mysqli_query($koneksi, "SELECT * FROM perangkat WHERE
dipilih = 1 AND koneksi = 1");
    $dataPerangkatAktif = mysqli_fetch_array($namaPerangkat);
    if (mysqli_num_rows($namaPerangkat) == 0){
  ?>
  <h1 class="m-0">Dashboard -</h1>
  <?php } else { ?>
  <h1 class="m-0">Dashboard <?php echo $dataPerangkatAktif['namaPerangkat'];
?></h1>
  <?php }
  ?>
</div>
<div class="col-sm-6">
  <div class="form-group">
    <form action="include/perangkatFungsi.php" method="POST">
      <select class="form-control" name="perangkat" id="perangkat" required
onchange="enableButton(">
        <option selected="selected" disabled>-</option>
        <?php
          foreach($dataPerangkat as $dp):
            if($dp["dipilih"] == 1 && $dp["koneksi"] == 1) { ?>
              <option value="<?= $dp["tokenPerangkat"]; ?>" selected><?=
$dp["namaPerangkat"]; ?></option>
              <?php } else if ($dp["dipilih"] == 0 && $dp["koneksi"] == 1) { ?>
                <option value="<?= $dp["tokenPerangkat"]; ?>"><?= $dp["namaPerangkat"];
?></option>
              <?php } ?>
            <?php endforeach;?>
          </select>
        <br>

```

```

        <div class="row justify-content-end">
            <div class="col-2">
                <button type="submit" class="btn btn-block bg-gradient-success btn-lg"
name="submit" id="tombol"
                disabled>Apply</button>
            </div>
        </div>
    </form>
</div>
</div>
</div>
</div>
</div>
</div>
</div>
</div>
</div>

<!-- cek jika tidak ada device yang dipilih -->
<?php if($rows !== 0) { ?>
<section class="content">
    <div class="container-fluid">
        <div class="row">
            <div class="col-lg-3 col-6">
                <div class="small-box bg-info">
                    <div class="inner">
                        <h3 id="suhu"><sup style="font-size: 20px">°C</sup></h3>
                        <p>Suhu</p>
                    </div>
                    <div class="icon">
                        <!-- <i class="ion ion-bag"></i> -->
                        <i class="ion"><img src='images/icon/thermometer.png' width="50px"
height="50px"></i>
                    </div>
                </div>
            </div>
        </div>
    </div>
</div>
</div>
</div>
</div>

```



```

<div class="small-box bg-info">
  <div class="inner">
    <h3 id="ssuhu">-</h3>
    <p>Status suhu</p>
  </div>
  <div class="icon">
    <i class="ion"><img src='images/icon/qm.png' width="50px"
height="50px"></i>
  </div>
</div>
</div>
<div class="col-lg-3 col-6">
  <div class="small-box bg-info">
    <div class="inner">
      <h3 id="lembab"><sup style="font-size: 20px">%</sup></h3>
      <p>Kelembaban</p>
    </div>
    <div class="icon">
      <i class="ion"><img src='images/icon/humidity.png' width="50px"
height="50px"></i>
    </div>
  </div>
</div>
<div class="col-lg-3 col-6">
  <div class="small-box bg-info">
    <div class="inner">
      <h3 id="slembab">-</h3>
      <p>Status kelembaban</p>
    </div>
    <div class="icon">
      <i class="ion"><img src='images/icon/qm.png' width="50px"
height="50px"></i>
    </div>
  </div>
</div>

```

```

</div>
</div>
</div>

<div class="row">
  <div class="col-12">

    <div class="card card-primary card-outline">
      <div class="card-header">
        <h3 class="card-title">
          <i class="far fa-chart-bar"></i>
          Grafik realtime
        </h3>
      </div>
      <div class="card-body">
        <?php if (mysqli_num_rows($namaPerangkat) == 0){
?>
        <body>
          <div id="container"></div>
        </body>
        <?php } else { ?>
        <?php
          $namaP = $dataPerangkatAktif['namaPerangkat'];
          $statusPerangkat = mysqli_query($koneksi, "SELECT * FROM perangkat
WHERE namaPerangkat = '$namaP'");
          $statusPerangkatAktif = mysqli_fetch_array($statusPerangkat);
          if ($statusPerangkatAktif['status'] == 0){
?>
        <body>
          <div id="container"></div>
        </body>
        <?php } else { ?>
        <body>

```

```

<div class="row">
  <div class="col-md-6">
    <canvas id="myChart"></canvas>
  </div>
  <div class="col-md-6">
    <canvas id="myChart1"></canvas>
  </div>
</div>
</div>
</body>
<?php }
?>
<?php }
?>
</div>
</div>
</div>
</div>
</div>

<div class="row">
  <div class="col-lg-3 col-6">
    <div class="small-box bg-info">
      <div class="inner">
        <?php
          $script1 = mysqli_query($koneksi, "SELECT * FROM manual WHERE
perangkat = '$namaP'");
          $statusManual1 = mysqli_fetch_array($script1);
          $status1 = $statusManual1['statusManual'];
          if($status1 == "OFF") {
            ?><h3 id="lampufuzzy">0.00</h3><?php
          } else if($status1 == "ON"){
            ?> <h3><?php echo "<span id='lampu'>"; ?></span><sup style="font-size:
20px">%</sup></h3> <?php
          } ?>

```

```

        <p>Status lampu</p>
    </div>
    <div class="icon">
        <i class="ion"><img src='images/icon/lamp.png' width="50px"
height="50px"></i>
    </div>
</div>
</div>
<div class="col-lg-3 col-6">
    <div class="small-box bg-info">
        <div class="inner">
            <?php
                $script = mysqli_query($koneksi, "SELECT * FROM manual WHERE perangkat
= '$namaP'");
                $statusManual = mysqli_fetch_array($script);
                $status = $statusManual['statusManual'];
                if($status == "OFF") {
                    ?><h3 id="kipasFuzzy">0.00</h3><?php
                } else if($status == "ON"){
                    ?> <h3><?php echo "<span id='kipasExhaust'>"; ?></span><sup style="font-
size: 20px">%</sup></h3> <?php
                } ?>

            <!-- <p>Status kipas exhaust</p> -->
            <p>Status kipas intake</p>
        </div>
    <div class="icon">
        <i class="ion"><img src='images/icon/big-electric-fan.png' width="50px"
height="50px"></i>
    </div>
</div>
</div>

```

```

<div class="col-lg-3 col-6">
  <div class="small-box bg-info">
    <div class="inner">
      <?php
        $script2 = mysqli_query($koneksi, "SELECT * FROM manual WHERE
perangkat = '$namaP'");
        $statusManual2 = mysqli_fetch_array($script2);
        $status2 = $statusManual2['statusManual'];
        if($status2 == "OFF") {
          ?><h3 id="rprealtime">-</h3><?php
        } else if($status2 == "ON"){
          ?> <h3><?php echo "<span id='RP'>"; ?></sup>-</h3> <?php
        } ?>

        <p>Status rak penggerak</p>
      </div>
      <div class="icon">
        <i class="ion"><img src='images/icon/setting.png' width="50px"
height="50px"></i>
      </div>
    </div>
  </div>
</div>
<div class="col-lg-3 col-6">
  <div class="small-box bg-info">
    <div class="inner">
      <?php
        $script3 = mysqli_query($koneksi, "SELECT * FROM manual WHERE
perangkat = '$namaP'");
        $statusManual3 = mysqli_fetch_array($script3);
        $status3 = $statusManual3['statusManual'];
        if($status3 == "OFF") {
          ?><h3 id="humrealtime">-</h3><?php
        } else if($status3 == "ON"){

```



```

<form action="include/manual.php" method="POST">
<div class="row">

<div class="col-sm-12">
  <div class="form-group">
    <label>Rak penggerak</label>
    <select class="custom-select" id="rodapenggerak" name="rodapenggerak"
onchange="mySubmit(this.form)">
      <?php if($datamanualaktif['rodaPenggerak'] == 10) {
        echo "<option value='10' selected>Tes (10 Detik)</option>
        <option value='8'>8 Jam</option>
        <option value='ON'>ON</option>
        <option value='OFF'>OFF</option>";
      } else if($datamanualaktif['rodaPenggerak'] == 8) {
        echo "<option value='10'>Tes (10 Detik)</option>
        <option value='8' selected>8 Jam</option>
        <option value='ON'>ON</option>
        <option value='OFF'>OFF</option>";
      } else if ($datamanualaktif['rodaPenggerak'] == "OFF") {
        echo "<option value='10'>Tes (10 Detik)</option>
        <option value='8'>8 Jam</option>
        <option value='ON'>ON</option>
        <option value='OFF' selected>OFF</option>";
      } else if ($datamanualaktif['rodaPenggerak'] == "ON") {
        echo "<option value='10'>Tes (10 Detik)</option>
        <option value='8'>8 Jam</option>
        <option value='ON' selected>ON</option>
        <option value='OFF'>OFF</option>";
      }
    ?>
  </select>
</div>
<div class="form-group">

```



```

        <label>Humidifier</label>
        <select      class="custom-select"      id="humidifier"      name="humidifier"
onchange="mySubmit(this.form)">
        <?php if($datamanualaktif['humidifier'] == "ON") {
            echo "<option value='ON' selected>ON</option>
            <option value='OFF'>OFF</option>";
        } else if($datamanualaktif['humidifier'] == "OFF") {
            echo "<option value='ON'>ON</option>
            <option value='OFF' selected>OFF</option>";
        }
        ?>
        </select>
    </div>
</div>
</div>

<input type="hidden" id="perangkat" name="perangkat"
value="<?php      echo      $dataPerangkatAktif['namaPerangkat'];      ?>"
onchange="mySubmit(this.form)">
<input type="hidden" id="tokenPerangkat" name="tokenPerangkat"
value="<?php      echo      $datamanualaktif['tokenPerangkat'];      ?>"
onchange="mySubmit(this.form)">
<input type="hidden" id="sm" name="sm"
value="<?php      echo      $datamanualaktif['statusManual'];      ?>"
onchange="mySubmit(this.form)">
<div class="form-group">
    <label for="lampurange">Lampu</label>
    <input type="range" class="custom-range" id="lampurange" name="lampurange"
min="0" max="100"
value="<?php      echo      $datamanualaktif['lampu'];      ?>"
onchange="mySubmit(this.form)">
    <p>Value: <span id="lampuu"></span></p>
</div>

```

```

<div class="form-group">
  <label for="KErange">Kipas exhaust</label>
  <input type="range" class="custom-range" id="KErange" name="KErange" min="0"
max="1000"
  value="<?php      echo      $datamanualaktif['kipasExhaust'];      ?>"
onchange="mySubmit(this.form)">
  <p>Value: <span id="ke"></span></p>
</div>
</form>
</div>
</div>
</section>
<?php } else { ?>
<?php } ?>
</div>

<footer class="main-footer">
  <strong>Copyright &copy; Kandang Ayam Pintar Polinema 2021</strong>
</footer>

<aside class="control-sidebar control-sidebar-dark">
</aside>
</div>

<!-- jQuery -->
<script src="plugins/jquery/jquery.min.js"></script>
<!-- jQuery UI 1.11.4 -->
<script src="plugins/jquery-ui/jquery-ui.min.js"></script>
<!-- Resolve conflict in jQuery UI tooltip with Bootstrap tooltip -->
<script>
  $.widget.bridge('uibutton', $.ui.button)
</script>
<!-- Bootstrap 4 -->

```

```
<script src="plugins/bootstrap/js/bootstrap.bundle.min.js"></script>
<!-- ChartJS -->
<script src="plugins/chart.js/Chart.min.js"></script>
<!-- Sparkline -->
<script src="plugins/sparklines/sparkline.js"></script>
<!-- JQVMap -->
<script src="plugins/jqvmap/jquery.vmap.min.js"></script>
<script src="plugins/jqvmap/maps/jquery.vmap.usa.js"></script>
<!-- jQuery Knob Chart -->
<script src="plugins/jquery-knob/jquery.knob.min.js"></script>
<!-- daterangepicker -->
<script src="plugins/moment/moment.min.js"></script>
<script src="plugins/daterangepicker/daterangepicker.js"></script>
<!-- Tempusdominus Bootstrap 4 -->
<script src="plugins/tempusdominus-bootstrap-4/js/tempusdominus-bootstrap-4.min.js"></script>
<!-- Summernote -->
<script src="plugins/summernote/summernote-bs4.min.js"></script>
<!-- overlayScrollbars -->
<script src="plugins/overlayScrollbars/js/jquery.overlayScrollbars.min.js"></script>
<!-- AdminLTE App -->
<script src="dist/js/adminlte.js"></script>
<!-- AdminLTE for demo purposes -->
<script src="dist/js/demo.js"></script>
<!-- AdminLTE dashboard demo (This is only for demo purposes) -->
<script src="dist/js/pages/dashboard.js"></script>
<!-- FLOT CHARTS -->
<script src="plugins/flot/jquery.flot.js"></script>
<!-- FLOT RESIZE PLUGIN - allows the chart to redraw when the window is resized -->
<script src="plugins/flot/plugins/jquery.flot.resize.js"></script>
<!-- FLOT PIE PLUGIN - also used to draw donut charts -->
<script src="plugins/flot/plugins/jquery.flot.pie.js"></script>
</body>
```

```

<script src="dist/js/highchart.js"></script>
<script src="https://code.highcharts.com/stock/modules/exporting.js"></script>
<script src="https://code.highcharts.com/stock/highstock.js"></script>

<script src="https://cdn.jsdelivr.net/npm/moment@2.24.0/min/moment.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/chart.js@2.8.0"></script>
<script src="https://cdn.jsdelivr.net/npm/chartjs-plugin-streaming@1.8.0"></script>

<!-- untuk menampilkan data realtime -->
<script type="text/javascript">
$(document).ready(function () {
    setInterval(function () {
        $("#kipasIntake").load('include/viewAngkaKipasIntake.php');
    }, 1000);
    setInterval(function () {
        $("#kipasExhaust").load('include/viewAngkaKipasExhaust.php');
    }, 1000);
    setInterval(function () {
        $("#lampu").load('include/viewAngkaLampu.php');
    }, 1000);
    setInterval(function () {
        $("#RP").load('include/viewStatusRP.php');
    }, 1000);
    setInterval(function () {
        $("#hum").load('include/viewStatusHum.php');
    }, 1000);
});

setInterval(function() {
    publishToMQTT_fuzzyKipas("<?php echo $hasildefuzikipas; ?>"),
    publishToMQTT_fuzzyLampu("<?php echo $hasildeufuzilampu; ?>")
}, 10000);

```

```
function enableButton() {
    var selectelem = document.getElementById('perangkat');
    var btnelem = document.getElementById('tombol');
    btnelem.disabled = !selectelem.value;
}
</script>
```

```
<script>
var lampu = document.getElementById("lampurange");
var outputlampu = document.getElementById("lampuu");

var KE = document.getElementById("KErange");
var outputKE = document.getElementById("ke");

outputlampu.innerHTML = lampu.value;
outputKE.innerHTML = KE.value;

lampu.oninput = function () {
    outputlampu.innerHTML = this.value;
}
KE.oninput = function () {
    outputKE.innerHTML = this.value;
}
</script>
```

```
<script>
function mySubmit(theForm) {
    $.ajax({ // create an AJAX call...
        data: $(theForm).serialize(), // get the form data
        type: $(theForm).attr('method'), // GET or POST
        url: $(theForm).attr('action') // the file to call
```

```
});  
}  
</script>  
  
<script>  
const hostName = "44.195.141.13";  
const clientId = "IoTApp" + new Date().getTime();  
const TOPIC_EVENT = "/manual/rp";  
const TOPIC_EVENT1 = "/manual/lampu";  
const TOPIC_EVENT2 = "/manual/ke";  
const TOPIC_EVENT3 = "/manual/ki";  
const TOPIC_EVENT4 = "/manual/token";  
const TOPIC_EVENT5 = "/manual/power";  
const TOPIC_EVENT6 = "/manual/hum";  
const TOPIC_EVENT7 = "/otomatis/kipas";  
const TOPIC_EVENT8 = "/otomatis/lampu";  
  
const suhu = "realtime/suhu";  
const lembab = "realtime/lembab";  
const ssuhu = "realtime/statussuhu";  
const slembab = "realtime/statuslembab";  
const kipasR = "realtime/kipas";  
const lampuR = "realtime/lampu";  
const rpR = "realtime/rp";  
const humR = "realtime/humidifier";  
const tokenn = "token";  
  
var suhuInt = 0;  
var lembabInt = 0;  
  
var mqttClient = new Paho.MQTT.Client(hostName, 9095, clientId);  
  
mqttClient.onConnectionLost = onConnectionLost;  
mqttClient.onMessageArrived = onMessageArrived;
```

```
mqttClient.connect({
    // timeout: 3,
    // keepAliveInterval: 60,
    // cleanSession: true,
    // useSSL: true,
    onSuccess: onConnect,
    onFailure: function (message) {
        console.log("Connection failed: " + message.errorMessage);
    },
});
```

```
function onConnect() {
    console.log("Connected to MQTT Broker");
    mqttClient.subscribe(suhu, { qos: 1 });
    mqttClient.subscribe(lembab, { qos: 1 });
    mqttClient.subscribe(slembab, { qos: 1 });
    mqttClient.subscribe(ssuhu, { qos: 1 });
    mqttClient.subscribe(tokenn, { qos: 1 });
    mqttClient.subscribe(kipasR, { qos: 1 });
    mqttClient.subscribe(lampuR, { qos: 1 });
    mqttClient.subscribe(rpR, { qos: 1 });
    mqttClient.subscribe(humR, { qos: 1 });
}
```

```
function onConnectionLost(responseObject) {
    if (responseObject.errorCode !== 0) {
        console.log("onConnectionLost:" + responseObject.errorMessage);
    }
}
```

```
<?php
```

```
$query = mysqli_query($koneksi, "SELECT * FROM perangkat WHERE dipilih = 1");
```

```

$query1 = mysqli_fetch_array($query);
$nilaiii = $query1['tokenPerangkat'];
$script11 = mysqli_query($koneksi, "SELECT * FROM manual WHERE tokenPerangkat
= '$nilaiii'");
$statusManual11 = mysqli_fetch_array($script11);
$status11 = $statusManual11['statusManual'];
?>

var tokeeeeeeeeeeeen;
var tokendipilihpilih = "<?php echo $nilaiii; ?>";

function onMessageArrived(message) {
    console.log("Pesan dari ESP8266:" + message.payloadString);
    var topic = message.destinationName;

    if(topic == tokenn) {
        tokeeeeeeeeeeeen = message.payloadString;
    }

    if(tokeeeeeeeeeeeen == tokendipilihpilih) {
        if (topic == suhu) {
            document.getElementById("suhu").innerHTML = '<span>' +message.payloadString +
'</span>' + '<sup style="font-size: 20px">°C</sup>';
            suhuint = message.payloadString;
            console.log("suhu : " + suhuint);
        } else if (topic == lembab) {
            document.getElementById("lembab").innerHTML = '<span>' +message.payloadString
+ '</span>' + '<sup style="font-size: 20px">%</sup>';
            lembabint = message.payloadString;
            console.log("lembab : " + lembabint);
        } else if (topic == ssuhu) {
            document.getElementById("ssuhu").innerHTML = '<span>' +message.payloadString +'
</span>';

```



```

    } else if (topic == slembab) {
        document.getElementById("slembab").innerHTML = '<span>' +message.payloadString
+ '</span>';
    } else if (topic == tokenn) {
        console.log("token : " + message.payloadString);
    }

<?php if($status11 == "OFF") { ?>
    if (topic == kipasR) {
        document.getElementById("kipasFuzzy").innerHTML          =          '<span>'
+message.payloadString;
    } else if (topic == lampuR) {
        document.getElementById("lampufuzzy").innerHTML          =          '<span>'
+message.payloadString + '</span>' + '<sup style="font-size: 20px">%</sup>';
    } else if (topic == rpR) {
        document.getElementById("rprealtime").innerHTML          =          '<span>'
+message.payloadString;
    } else if (topic == humR) {
        document.getElementById("humrealtime").innerHTML          =          '<span>'
+message.payloadString;
    }
    <?php } ?>
}
}

function publishToMQTT_RP(message) {
    message = new Paho.MQTT.Message(message);
    message.destinationName = TOPIC_EVENT;
    mqttClient.send(message);
}

function publishToMQTT_lampu(message) {
    message = new Paho.MQTT.Message(message);

```

```
message.destinationName = TOPIC_EVENT1;
mqttClient.send(message);
}

function publishToMQTT_KE(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT2;
  mqttClient.send(message);
}

function publishToMQTT_Token(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT4;
  mqttClient.send(message);
}

function publishToMQTT_Power(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT5;
  mqttClient.send(message);
}

function publishToMQTT_H(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT6;
  mqttClient.send(message);
}

function publishToMQTT_fuzzyKipas(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT7;
  mqttClient.send(message);
  console.log("fuzzy kipas");
}
```

```
}

function publishToMQTT_fuzzyLampu(message) {
  message = new Paho.MQTT.Message(message);
  message.destinationName = TOPIC_EVENT8;
  mqttClient.send(message);
  console.log("fuzzy lampu");
}

$(document).ready(function () {
  $('#buttonManual').on('click', function () {
    publishToMQTT_Token($('#tokenPerangkat').val());
    publishToMQTT_Power($('#status').val());
  });
  $('#tombol').on('click', function () {
    publishToMQTT_Token($('#perangkat option:selected').val());
  });
  $('#rodapenggerak').change(function () {
    publishToMQTT_RP($('#rodapenggerak option:selected').val());
  });
  $('#humidifier').change(function () {
    publishToMQTT_H($('#humidifier option:selected').val());
  });
  $('#lampurange').change(function () {
    publishToMQTT_lampu($('#lampurange').val());
  });
  $('#KErange').change(function () {
    publishToMQTT_KE($('#KErange').val());
  });
});
</script>

<script>
```

```
function myAjax() {
    $.ajax({
        url: 'include/notifikasi.php'
    });
}
</script>

<script>
var chartColors = {
    red: 'rgb(255, 99, 132)',
    orange: 'rgb(255, 159, 64)',
    yellow: 'rgb(255, 205, 86)',
    green: 'rgb(75, 192, 192)',
    blue: 'rgb(54, 162, 235)',
    purple: 'rgb(153, 102, 255)',
    grey: 'rgb(201, 203, 207)'
};

function suhuRefresh(chart) {
    chart.config.data.datasets.forEach(function(dataset) {
        dataset.data.push({
            x: Date.now(),
            y: suhuint
        });
    });
}

function lembabRefresh(chart) {
    chart.config.data.datasets.forEach(function(dataset) {
        dataset.data.push({
            x: Date.now(),
            y: lembabint
        });
    });
}
```

```
});  
}  
  
var color = Chart.helpers.color;  
var config = {  
  type: 'line',  
  data: {  
    datasets: [{  
      label: 'Suhu',  
      backgroundColor: color(chartColors.red).alpha(0.5).rgbString(),  
      borderColor: chartColors.red,  
      fill: false,  
      lineTension: 0,  
      borderDash: [8, 4],  
      data: []  
    }]  
  },  
  options: {  
    scales: {  
      xAxes: [{  
        type: 'realtime',  
        realtime: {  
          duration: 20000,  
          refresh: 1000,  
          delay: 2000,  
          onRefresh: suhuRefresh,  
        }  
      }],  
      yAxes: [{  
        scaleLabel: {  
          display: true,  
          labelString: 'value'  
        }  
      }  
    }  
  }  
}
```

```
    ]]  
  },  
  tooltips: {  
    mode: 'nearest',  
    intersect: false  
  },  
  hover: {  
    mode: 'nearest',  
    intersect: false  
  }  
}  
};  
  
var config2 = {  
  type: 'line',  
  data: {  
    datasets: [{  
      label: 'Kelembapan',  
      backgroundColor: color(chartColors.blue).alpha(0.5).rgbString(),  
      borderColor: chartColors.blue,  
      fill: false,  
      lineTension: 0,  
      borderDash: [8, 4],  
      data: []  
    }]  
  },  
  options: {  
    scales: {  
      xAxes: [{  
        type: 'realtime',  
        realtime: {  
          duration: 20000,  
          refresh: 1000,  
        }  
      }]  
    }  
  }  
};
```

```
        delay: 2000,
        onRefresh: lembabRefresh
    }
}],
yAxes: [{
    scaleLabel: {
        display: true,
        labelString: 'value'
    }
}]
},
tooltips: {
    mode: 'nearest',
    intersect: false
},
hover: {
    mode: 'nearest',
    intersect: false
}
};

window.onload = function() {
    var ctx = document.getElementById('myChart').getContext('2d');
    window.myChart = new Chart(ctx, config);

    var ctx2 = document.getElementById('myChart1').getContext('2d');
    window.myChart1 = new Chart(myChart1, config2);
};
</script>

</html>
```

- **Verifikasi Abstrak Bahasa Inggris dan Tata Tulis Buku Laporan Skripsi**



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN
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POLITEKNIK NEGERI MALANG
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No. Skripsi : 735

FORM VERIFIKASI

ABSTRAK BAHASA INGGRIS DAN TATA TULIS BUKU LAPORAN SKRIPSI

Nama Mahasiswa : Zaky Maula Luthfansa **NIM** : 1741720014
Tanggal Ujian : 20 Agustus 2021
Judul : PERANCANGAN APLIKASI PENGENDALIAN DAN MONITORING
 KANDANG AYAM BERBASIS IOT

NO	BAGIAN YANG DIVERIFIKASI	NAMA VERIFIKATOR	TANGGAL VERIFIKASI	TTD
1	Abstrak Berbahasa Inggris	Atiqah Nurul Asri, S.Pd., M.Pd	07-10-2021	
2	Tata Tulis Buku Laporan Skripsi	Ade Ismail, S.Kom., M.TI	07-10-2021	