

# **LAMPIRAN**

## Kode Program Mikrokontroler Node MCU

```
#include "DHT.h"

#include <ESP8266WiFi.h>

#include <ESP8266HTTPClient.h>

#include <WiFiClient.h>

#define DHTPIN D1

#define DHTTYPE DHT11

#define device_pin1 D2

#define device_pin2 D3

#define device_pin3 D4

//DHT setup

DHT dht(DHTPIN, DHTTYPE);

float humidityData;

float temperatureData;

//Soil Setup

int soilMoistureValue = 0;

int soilmoisturepercent = 0;

//Wifi Setup

const char *ssid = "Hostpot";

const char *password = "pppp1244";

//WiFiClient client;

String server =
"http://192.168.29.242:8080/WebGreenHouse/data/datasensor.php";

String serverName =
"http://192.168.29.242:8080/WebGreenHouse/data/siramrelay.php";
```

```

String          serverName1          =
"http://192.168.29.242:8080/WebGreenHouse/data/nozzelrelay.php";

String          serverName2          =
"http://192.168.29.242:8080/WebGreenHouse/data/kipasrelay.php";

//Relay setup

int device_status1;

int device_status2;

int device_status3;

void setup()
{
  Serial.begin(115200);

  //Sensor

  pinMode(A0, INPUT);

  dht.begin();

  // Connect to WiFi network

  Serial.println();

  Serial.println();

  Serial.print("Connecting to ");

  Serial.println(ssid);

  WiFi.begin(ssid, password);

  while (WiFi.status() != WL_CONNECTED) {

    delay(500);

    Serial.print(".");

  }

  Serial.println("");
}

```

```

Serial.println("WiFi connected");

// Start the server
// server.begin();

Serial.println("Server started");

Serial.print(WiFi.localIP());

delay(1000);

//pin relay

pinMode(device_pin1, OUTPUT);

pinMode(device_pin2, OUTPUT);

pinMode(device_pin3, OUTPUT);

}

void loop() {

//sensor yang dipakai

soilMoistureValue = analogRead(A0);

Serial.println(soilMoistureValue);

soilmoisturepercent = map(soilMoistureValue, 0, 1023, 0, 100);

humidityData = dht.readHumidity();

temperatureData = dht.readTemperature();

Sending_To_phpmyadmindatabase();

delay(2000); // interval

// kondisi

if (temperatureData >= 33) {

{ digitalWrite(device_pin3, LOW);

delay(1000);

digitalWrite(device_pin2, LOW);

```

```

    delay(1000);
}
}
else if (temperatureData <= 28) {
    { digitalWrite(device_pin2, HIGH);
      delay(1000);
      digitalWrite(device_pin3, HIGH);
      delay(1000);
    }
}
if (soilmoisturepercent > 65) {
    { digitalWrite(device_pin1, LOW);
      delay(1000);
    }
}
else if (soilmoisturepercent < 40) {
    { digitalWrite(device_pin1, HIGH);
      delay(1000);
    }
}
//relay 1
if (WiFi.status() == WL_CONNECTED) { //Check WiFi connection status
    WiFiClient client;
    HTTPClient Http; //Declare an object of class HTTPClient
    Http.begin(client, serverName.c_str());

```

```

int httpCode1 = Http.GET(); //Send the request
if (httpCode1 > 0) { //Check the returning code
    String payload = Http.getString(); //Get the request response payload
    device_status1 = payload.toInt();
    Serial.print("Device 1 Status=");
    Serial.print(device_status1); //Print the response payload
    Serial.println();
}
Http.end();
}
if (device_status1 == 1) {
    digitalWrite(device_pin1, LOW);
    Serial.println("Device 1 ON");
} else if (device_status1 == 0) {
    digitalWrite(device_pin1, HIGH);
    Serial.println("Device 1 OFF");
}
//relay2
if (WiFi.status() == WL_CONNECTED) { //Check WiFi connection status
    WiFiClient client;
    HTTPClient Http; //Declare an object of class HTTPClient
    Http.begin(client, serverName1.c_str());
    int httpCode1 = Http.GET(); //Send the request
    if (httpCode1 > 0) { //Check the returning code
        String payload = Http.getString(); //Get the request response payload

```

```

    device_status2 = payload.toInt();

    Serial.print("Device 1 Status=");

    Serial.print(device_status2); //Print the response payload

    Serial.println();

}

Http.end();

}

if (device_status2 == 1) {

    digitalWrite(device_pin2, LOW);

    Serial.println("Device 1 ON");

} else if (device_status2 == 0) {

    digitalWrite(device_pin2, HIGH);

    Serial.println("Device 1 OFF");

}

//relay3

if (WiFi.status() == WL_CONNECTED) { //Check WiFi connection status

    WiFiClient client;

    HTTPClient Http; //Declare an object of class HTTPClient

    Http.begin(client, serverName2.c_str());

    int httpCode1 = Http.GET(); //Send the request

    if (httpCode1 > 0) { //Check the returning code

        String payload = Http.getString(); //Get the request response payload

        device_status3 = payload.toInt();

        Serial.print("Device 1 Status=");

        Serial.print(device_status3); //Print the response payload

```

```

        Serial.println();
    }

    Http.end();
}

if (device_status3 == 1) {
    digitalWrite(device_pin3, LOW);
    Serial.println("Device 1 ON");
} else if (device_status3 == 0) {
    digitalWrite(device_pin3, HIGH);
    Serial.println("Device 1 OFF");
}
}

void Sending_To_phpmyadmindatabase() {
    WiFiClient client;
    HTTPClient http;

    String serverPath1 = server + "?temperature=" + temperatureData +
"&humidity=" + humidityData + "&moisture=" + soilmoisturepercent;

    // Your Domain name with URL path or IP address with path
    http.begin(client, serverPath1);

    // Send HTTP GET request
    int httpResponseCode = http.GET();

    Serial.print("HTTP Response code: ");

    Serial.println(httpResponseCode);

    String payload = http.getString();

    Serial.println(payload);
}

```



```
    http.end();  
}
```

### **Kode Program HTML**

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
    <meta charset="UTF-8">  
    <meta http-equiv="X-UA-Compatible" content="IE=edge">  
    <meta name="viewport" content="width=device-width, initial-scale=1.0">  
    <title>Smart Farm Zikry</title>  
    <link rel="stylesheet" href="Monitoring/tampilan.css">  
    <link rel="icon" href="images/logo.svg" type="image/icon type">  
</head>  
    <div class="header">  
        <h1>Sistem Monitoring dan Kontroling Suhu Ideal Strawberry</h1>  
    </div>  
    <div class="dashboard">  
        <!-- mainboard -->  
        <div class="devices">  
            <div class="row1">  
                <div class="box1">  
                    <h2>Temperature</h2>  
                    <div class="temp">  
                        <div class="Humidity">
```

```
        <strong id="SensorSuhu">30</strong><sup>°C</sup>
        <p>Temperature</p>
    </div>
</div>
</div>
</div>
<div class="box1">
    <h2>Humidity</h2>
    <div class="temp">
        <div class="Humidity">
            <strong id="SensorHumidity">78</strong><sup>%</sup>
            <p>Humidity</p>
        </div>
    </div>
</div>
</div>
<div class="box1">
    <h2>Moisture</h2>
    <div class="temp">
        <div class="Moisture">
            <strong id="SensorMoisture">60</strong><sup>%</sup>
            <p>Moisture</p>
        </div>
    </div>
</div>
</div>
</div>
</div>
<div class="row2">
```

```

<div class="box1">
  <align><p><b>Manual Penyiraman</b></p></align>
  <img src="" alt="" id="fan1">
  <label class="switch">
    <input type="checkbox" id="fanswitch1" onchange="fanrotate1()">
    <span class="slider round"></span>
  </label>
</div>
<div class="box1">
  <align><p><b>Manual Nozzel Kabut</b></p></align>
  <img src="" alt="" id="fan2">
  <label class="switch">
    <input type="checkbox" id="fanswitch2" onchange="fanrotate2()" >
    <span class="slider round"></span>
  </label>
</div>
<div class="box1">
  <align><p><b>Manual Kipas</b></p></align>
  <img src="" alt="" id="fan3">
  <label class="switch">
    <input type="checkbox" id="fanswitch3" onchange="fanrotate3()" >
    <span class="slider round"></span>
  </label>
</div>
</div>

```

```

    </div>

</div>

<div class="box3">

    <style type="text/css">

        .contoh4 { font-size: 20px; line-height: 0px;}

    </style>

    <p class = "contoh4"><b>INFO TANAMAN : </b></p>

    <p class = "contoh4"><b>1. Stroberi adalah tanaman yang tumbuh pada iklim subtropis yang memiliki suhu dan kelembaban yang rendah,baik</b></p>

    <p class = "contoh4"><b>&nbsp; &nbsp; dataran tinggi tropis yang memiliki temperatur 20 - 28°C. </b></p>

    <p class = "contoh4"><b>2.</b></p>

    <p class = "contoh4"><b>3. </b></p>

</div>

<script src="./Monitoring/javaweb.js"></script>

</body>

</html>

```

### **Kode Program Update Data Sensor To Data Base**

```

<?php

class dht11{

    public $link="";

    function __construct($temperature, $humidity){

        $this->connect();

        $this->storeInDB($temperature, $humidity);

    }
}

```

```

function connect(){
    $this->link = mysqli_connect('localhost','root','') or die('Cannot connect to the
DB');

    mysqli_select_db($this->link,'strawberygh') or die('Cannot select the DB');
}

function storeInDB($temperature, $humidity){
    $query = "UPDATE `dht11` SET
`humidity`='".$humidity."',`temperature`='".$temperature.'" WHERE 1";
    $result = mysqli_query($this->link,$query) or die('Errant query: '.$query);
    echo($result);
}
}

if(isset($_GET['temperature']) and isset($_GET['humidity'])){
    $dht11=new dht11($_GET['temperature'],$_GET['humidity']);
}

class soil{
    public $link="";

    function __construct($moisture){
        $this->connect();
        $this->storeInDB($moisture);
    }

    function connect(){
        $this->link = mysqli_connect('localhost','root','') or die('Cannot connect to the
DB');

        mysqli_select_db($this->link,'strawberygh') or die('Cannot select the DB');
    }
}

```

```

    }
    function storeInDB($moisture){
        $query = "UPDATE `soil` SET `moisture`='". $moisture.'" WHERE 1";
        $result = mysqli_query($this->link,$query) or die('Errant query: ' . $query);
    }
}
if(isset($_GET['moisture'])){
    $soil=new soil($_GET['moisture']);
}
?>

```

### **Kode Program Data Sensor Data Base To Web**

```

<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "strawberygh";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT * FROM `dht11`";

```

```
$result = $conn->query($sql)->fetch_assoc();  
$data = ($result['humidity']);  
echo($data);  
$conn->close();  
?>
```