



TEKNOLOGI INFORMASI
UNIVERSITAS DARMA PERSADA

LAMPIRAN

Kodingan pada *Arduino Uno*

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1. #include <AccelStepper.h>
2. #define motorPin1 8
3. #define motorPin2 9
4. #define motorPin3 10
5. #define motorPin4 11
6. #define MotorInterfaceType 8
7. int suhu = A0;
8. int air = A1;
9. int cahaya = A2;
10. AccelStepper stepper = AccelStepper(MotorInterfaceType,
11. motorPin1, motorPin3, motorPin2, motorPin4);
12. void setup() {
13. stepper.setMaxSpeed(2000);
14. stepper.setAcceleration(900);
15. Serial.begin(9600);
16. }
17. void loop() {
18. int data_air=analogRead(air);
19. int data=analogRead(cahaya);
20. int data_suhu=analogRead(suhu);
21. if((data<=200)&&(data_air>=900))
22. { stepper.runToNewPosition(35250); }
23. else
24. { stepper.runToNewPosition(0); }
25. String minta = "";
26. while(Serial.available(>0)
27. {
28. minta += char(Serial.read());
29. }
30. minta.trim();
31. if(minta == "Ya")
32. {
33. kirimdata();
34. }
35. minta = "";
36. delay(1000);
37. }
38. void kirimdata() {
39. int data_air=analogRead(air);
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40. int data=analogRead(cahaya);
41. int data_suhu=analogRead(suhu);
42. String datakirim = String(data_air) + "#" + String(data) + "#" + String(data_suhu);
43. Serial.println(datakirim);
44. }

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Kodingan pada *NodeMCU* ESP8266

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1. #include <SoftwareSerial.h>
2. #include <ThingESP8266.h>
3. #include <ESP8266WiFi.h>
4. #include <ThingSpeak.h>
5. //variable softwareserial (RX, TX)
6. SoftwareSerial DataSerial(12, 13);
7. //millis pengganti delay
8. unsigned long previousMillis = 0;
9. const long interval = 3000 ;
10. //variable array untuk data parsing
11. String arrData[4];
12. //konfigurasi Thingier.Io
13. #define USERNAME "Faisal12"
14. #define DEVICE_ID "Serial_ThingierIO"
15. #define DEVICE_CREDENTIAL "X-JokJEzsSaFT$oG"
16. //Variable Pin LED
17. #define LED_PIN 4
18. //Variable untuk thingierio
19. ThingierESP8266 thing(USERNAME, DEVICE_ID, DEVICE_CREDENTIAL);
20. //konfigurasi Wifi
21. const char* ssid = "Faisal";
22. const char* password = "12345677";
23. //variable untuk menampilkan nilai sensor
24. int suhu;
25. int air;
26. int cahaya;
27. int relay=D0;
28. void setup() {
29. Serial.begin(9600);
30. Serial.begin(115200);
31. DataSerial.begin(9600);
32. pinMode(LED_PIN, OUTPUT);
33. pinMode(relay, OUTPUT);
34. //konfigurasi wifi

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35. WiFi.begin(ssid, password);
36. //cek koneksi
37. while(WiFi.status() != WL_CONNECTED)
38. {
39. delay(500);
40. digitalWrite(LED_PIN, LOW);
41. }
42. digitalWrite(LED_PIN, HIGH);
43. //Hubungkan Nodemcu ke Thingerio
44. thing.add_wifi(ssid, password);
45. //data yang akan dikirim
46. thing["relay"] << digitalPin(D0);
47. thing["Dataku"] >> [(pson & out)
48. {
49. out["suhu"] = suhu;
50. out["air"] = air;
51. out["cahaya"] = cahaya;
52. out["relay"] = D0;
53. };
54. }
55. void loop() {
56. //konfigurasi millis
57. unsigned long currentMillis = millis(); // baca waktu millis saat ini
58. if(currentMillis - previousMillis >= interval)
59. {
60. //update previousMillis
61. previousMillis = currentMillis;
62. //prioritas pembacaan data dari arduino uno
63. //baca data serial
64. String data = "";
65. while(DataSerial.available()>0)
66. {
67. data += char(DataSerial.read());
68. }
69. //buang spasi data
70. data.trim();
71. //uji data
72. if(data != "")
73. {
74. //format data ""
75. //parsing data (pecah data)
76. int index = 0;
77. for(int i=0; i<= data.length(); i++)

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78. {
79. char delimiter = '#';
80. if(data[i] != delimiter)
81. arrData[index] += data[i];
82. else
83. index++; // variable bertambah 1
84. }
85. //cek data yang dikirim lengkap
86. if(index == 2)
87. {
88. //tampilkan nilai sensor ke serial monitor
89. Serial.println("Hujan :" + arrData[0]);
90. Serial.println("Cahaya :" + arrData[1]);
91. Serial.println("Suhu :" + arrData[2]);
92. Serial.println("Relay :" + arrData[3]);
93. Serial.println();
94. }
95. //isi variable yang akan dikirim
96. air = arrData[0] .toInt();
97. cahaya = arrData[1] .toInt();
98. suhu = arrData[2] .toInt();
99. relay = arrData[3] .toInt();
100. //picu pengiriman data ke tingerio
101. thing.handle();
102. arrData[0] = "";
103. arrData[1] = "";
104. arrData[2] = "";
105. arrData[3] = "";
106. }
107. // minta data ke arduino uno
108. DataSerial.println("Ya");
109. }
110. }

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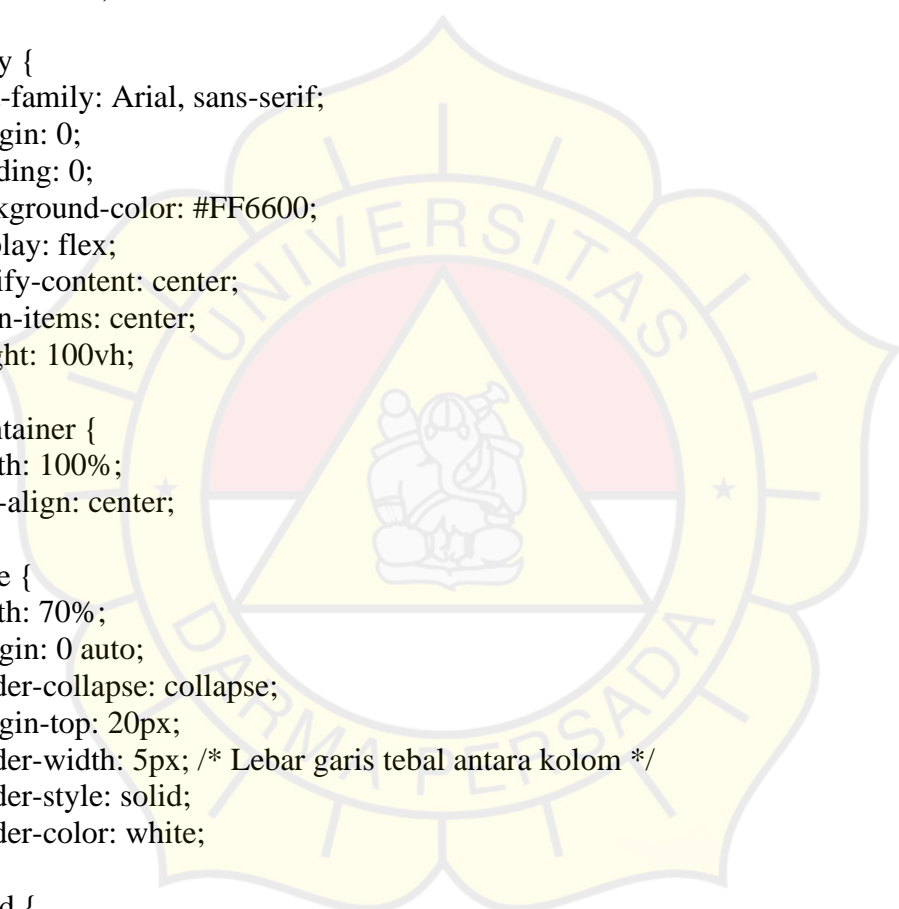
Koding data API

1. <?php
2. // Ganti dengan API Key Anda
3. \$apiKey =
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJqdGkiOiJlYXNoYm9hcmRfSmVtdXJhb19PdG9tYXRpcyIsInN2ciI6ImFwLXNvdXRoZWZdC5hd3MudGhpbmdlci5pbyIsInVzciI6IkZhaXNhbDEyIn0.tl6U7PwAndEiDZNz5MvazPTmHW_w9GzVY5bBLrGosLo";
4. // URL endpoint API Thinger.io
5. \$apiUrl =
"https://backend.thinger.io/v3/users/Faisal12/devices/Serial_ThingerIO/resources/Dataku";
6. // Set up cURL
7. \$ch = curl_init();
8. curl_setopt(\$ch, CURLOPT_URL, \$apiUrl);
9. curl_setopt(\$ch, CURLOPT_RETURNTRANSFER, true);
10. curl_setopt(\$ch, CURLOPT_HTTPHEADER, array(
11. 'Authorization: Bearer ' . \$apiKey
12.));
13. // Lakukan permintaan API
14. \$response = curl_exec(\$ch);
15. // Tutup koneksi cURL
16. curl_close(\$ch);
17. // Parse respon JSON
18. \$data = json_decode(\$response, true);
19. ?>
20. <!DOCTYPE html>
21. <html>
22. <head>
23. <title>Jemuran Otomatis</title>
24. <style>
25. /* Styling for the navbar */
26. .navbar {
27. overflow: hidden;
28. background-color: #333;
29. position: fixed;
30. display: flex;
31. width: 100%;
32. top: 0;
33. left: 0;
34. right: 0;
35. z-index: 1000;
36. }
37. .navbar a {

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38. float: left;
39. display: block;
40. color: white;
41. text-align: center;
42. padding: 14px 16px;
43. text-decoration: none;
44. }
45. .navbar a:hover {
46. background-color: #ddd;
47. color: black;
48. }
49. body {
50. font-family: Arial, sans-serif;
51. margin: 0;
52. padding: 0;
53. background-color: #FF6600;
54. display: flex;
55. justify-content: center;
56. align-items: center;
57. height: 100vh;
58. }
59. .container {
60. width: 100%;
61. text-align: center;
62. }
63. table {
64. width: 70%;
65. margin: 0 auto;
66. border-collapse: collapse;
67. margin-top: 20px;
68. border-width: 5px; /* Lebar garis tebal antara kolom */
69. border-style: solid;
70. border-color: white;
71. }
72. th, td {
73. width: 30%;
74. padding: 10px;
75. border: 5px solid #ccc;
76. }
77. th {
78. width: 30%;
79. background-color: #f2f2f2;
80. font-weight: bold;

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81. text-shadow: 0px 4px 6px rgba(0, 0, 0, 0.10);
82. border: 5px solid #ccc;
83. }
84. h1 {
85. margin-top: 0;
86. font-size: 60px;
87. font-weight: bold;
88. text-shadow: 0px 4px 6px rgba(0, 0, 0, 0.10);
89. text-align: center;
90. color: white;
91. }
92. .sensor-value {
93. font-size: 60px;
94. font-weight: bold;
95. text-shadow: 0px 4px 6px rgba(0, 0, 0, 0.10);
96. text-align: center;
97. color: white;
98. }
99. </style>
100. </head>
101. <body>
102. <div class="navbar">
103. <a href="#home">Home</a>
104. <a href="#about">About</a>
105. <a href="#services">Services</a>
106. <a href="#contact">Contact</a>
107. </div>
108. <div class="container">
109. <h1>Monitoring Jemuran Otomatis</h1>
110. <table>
111. <tr>
112. <th>Parameter Kering/Basah Pakaian<br>(Nilai Kurang Dari 950 Sama Dengan
    Basah)</th>
113. <th>Intensitas Cahaya<br>(Nilai Lebih Dari 200 Jemuran Terbuka)</th>
114. <th>Intensitas Hujan<br>(Nilai Kurang Dari 900 Jemuran Tertutup)</th>
115. </tr>
116. <tr>
117. <td class="sensor-value" id="sensorData1">
118. <!-- Data dari API akan diperbarui di sini -->
119. </td>
120. <td class="sensor-value" id="sensorData2">
121. <!-- Data dari API akan diperbarui di sini -->
122. </td>

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123. <td class="sensor-value" id="sensorData3">
124. <!-- Data dari API akan diperbarui di sini -->
125. </td>
126. </tr>
127. </table>
128. </div>
129. <script>
130. function updateSensorData() {
131.   fetch('<?=$apiUrl ?>', {
132.     headers: {
133.       'Authorization': 'Bearer <?=$apiKey ?>'
134.     }
135.   })
136.   .then(response => response.json())
137.   .then(data => {
138.     var sensorDiv1 = document.getElementById('sensorData1');
139.     var sensorDiv2 = document.getElementById('sensorData2');
140.     var sensorDiv3 = document.getElementById('sensorData3');
141.     sensorDiv1.innerHTML = " + data['suhu'];
142.     sensorDiv2.innerHTML = " + data['Nilai Lebih dai 200 sama dengan Terik'];
143.     sensorDiv3.innerHTML = " + data['Nilai Kurang Dari 900 sama dengan Hujan'];
144.   })
145.   .catch(error => console.error('Gagal mendapatkan data:', error));
146. }
147. setInterval(updateSensorData, 5000); // Ambil data setiap 5 detik
148. updateSensorData(); // Panggil saat halaman pertama kali dimuat
149. </script>
150. </body>
151. </html>
```