ESP8266 D1 Mini Servo Control From Anywhere Using Thinger.io Arduino IDE

ESP-8266 D1 mini Servo Control from anywhere using Thinger io Arduino IDE on Windows 10 by Ed Patrick

4.6 out of 5

Language	: English
File size	: 4017 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 66 pages
Lending	: Enabled

The ESP8266 D1 Mini is a popular development board for IoT projects. It is small, inexpensive, and easy to use. One of the many things you can do with an ESP8266 D1 Mini is control a servo motor.

In this tutorial, we will show you how to control a servo motor from anywhere in the world using an ESP8266 D1 Mini and Thinger.io. Thinger.io is a cloud platform that makes it easy to connect and manage IoT devices.

Prerequisites

Before you begin, you will need the following:

* An ESP8266 D1 Mini development board * A servo motor * A breadboard * Jumper wires * A USB cable * A computer with the Arduino IDE installed

Hardware Setup

1. Connect the ESP8266 D1 Mini to the breadboard. 2. Connect the servo motor to the breadboard. 3. Connect the servo motor's ground wire to the ESP8266 D1 Mini's GND pin. 4. Connect the servo motor's power wire to the ESP8266 D1 Mini's 3.3V pin. 5. Connect the servo motor's signal wire to the ESP8266 D1 Mini's D5 pin.

Software Setup

1. Open the Arduino IDE. 2. Click on the "File" menu and select "New." 3. Copy and paste the following code into the Arduino IDE:

#include #include #include

const char* ssid ="your-ssid"; const char* password ="your-password";

// Replace with your Thinger.io device ID and access token const char* deviceId ="your-device-id"; const char* accessToken ="your-access-token";

Servo servo;

void setup(){WiFi.begin(ssid, password); while (WiFi.status() != WL_CONNECTED){delay(500); }

servo.attach(D5);

servo.write(90); }

void loop(){// Make a GET request to Thinger.io to get the servo position HTTPClient http; http.begin("https://api.thinger.io/v3/devices/" + String(deviceId) + "/resources/servo/value?access_token=" +

String(accessToken)); http.addHeader("Content-Type", "application/json"); int httpCode = http.GET();

// If the request was successful, update the servo position if (httpCode == HTTP_CODE_OK){String payload = http.getString(); int position = payload.toInt(); servo.write(position); }}

4. Click on the "Upload" button to upload the code to the ESP8266 D1 Mini.

Testing

Once the code has been uploaded, open a web browser and go to the Thinger.io website. Log in to your account and click on the "Devices" tab. Select the device that you created and click on the "Resources" tab. You should see a resource called "servo." Click on the "Edit" button and set the value of the resource to a number between 0 and 180. Click on the "Save" button.

The servo should now move to the position that you specified. You can control the servo from anywhere in the world by updating the value of the "servo" resource on Thinger.io.

In this tutorial, we showed you how to control a servo motor from anywhere in the world using an ESP8266 D1 Mini and Thinger.io. This is just one example of the many things you can do with an ESP8266 D1 Mini and Thinger.io. With a little creativity, you can use these tools to create a wide variety of IoT projects.

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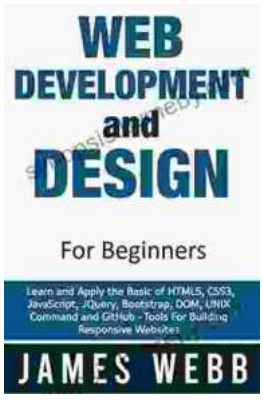

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