[嵌入式系統設計](https://flipclass.stust.edu.tw/course/13883)第十四次作業

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1. 題目



1. 程式

#include <WiFi.h>

#include <PubSubClient.h>

#include <ctime>

const char\* ssid = "TP-LINK\_6F46";

const char\* password = "aa3632aa";

const char\* mqttServer = "192.168.0.104";

const int mqttPort = 1883;

const char\* mqttUser = "";

const char\* mqttPassword = "";

WiFiClient espClient;

PubSubClient client(espClient);

void setup() {

Serial.begin(115200);

WiFi.begin(ssid, password);

while (WiFi.status() != WL\_CONNECTED) {

delay(500);

Serial.println(".");

}

Serial.println("連線成功");

client.setServer(mqttServer, mqttPort);

while (!client.connected()) {

Serial.println("Connecting to MQTT...");

if (client.connect("ESP32Client", mqttUser, mqttPassword)) {

Serial.println("connected");

} else {

Serial.print("failed with state ");

Serial.print(client.state());

delay(2000);

}

}

}

void loop() {

srand(time(NULL));

int tmp = rand() % 61 - 10;

int hum = rand() % 71 + 20;

char msg[64] = { 0 };

strcat(msg, String(tmp).c\_str());

strcat(msg, ",");

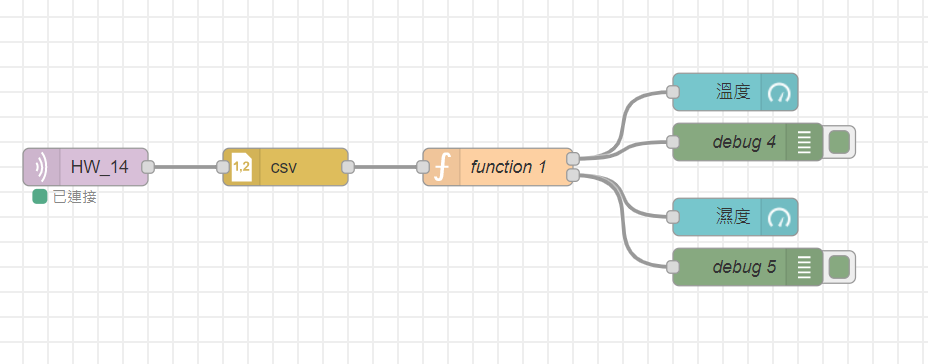
strcat(msg, String(hum).c\_str());

client.publish("HW\_14", msg);

delay(1000);

client.loop();

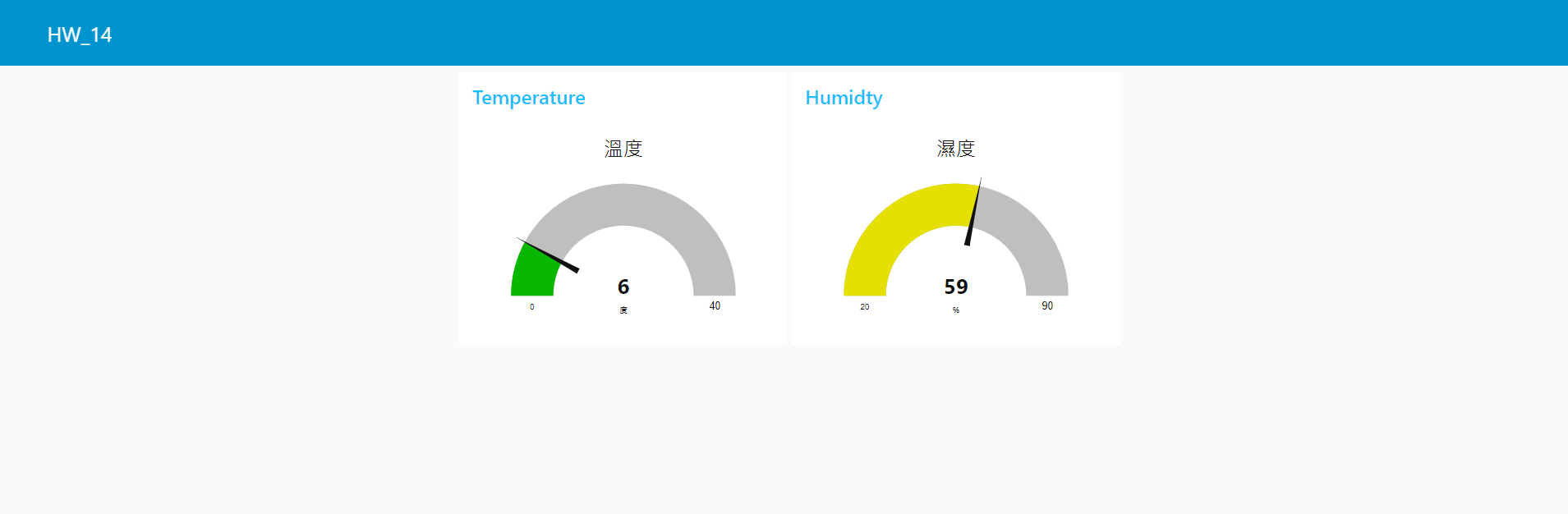
}

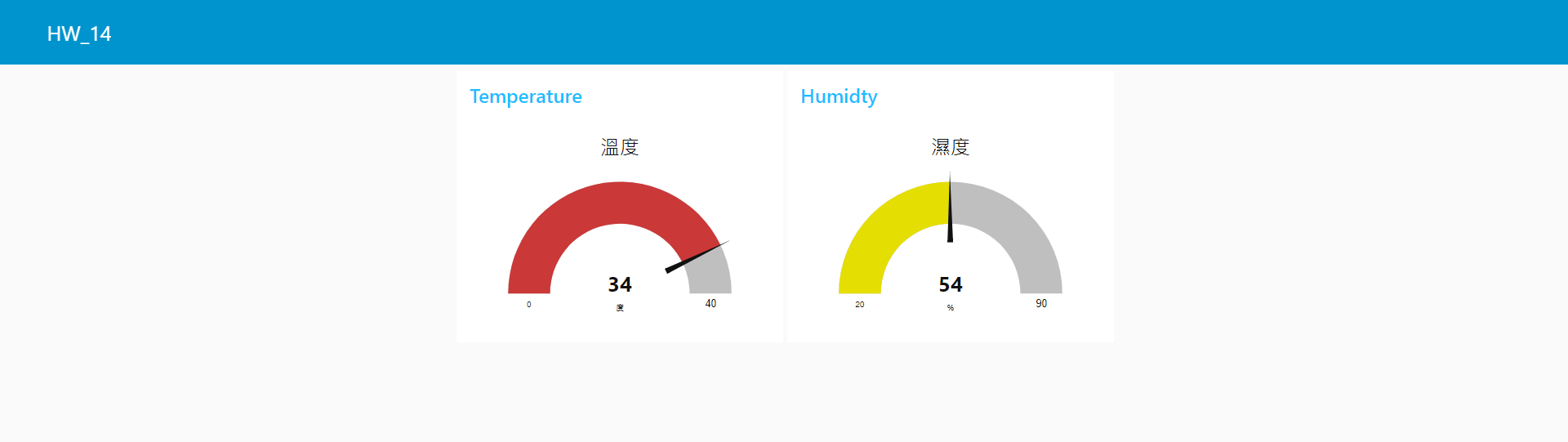


1. 程式說明

透過ESP32將溫度、適度的資料傳送到自己架設的MQTT server，並透過Node-Red dashboard方式設計一組網頁可以即時顯示溫度與濕度的量測值。

1. 執行結果





影片連結： <https://youtu.be/JXmaY7RjyA8>