#include <ESP8266WiFi.h>

#include "Adafruit\_MQTT.h"

#include "Adafruit\_MQTT\_Client.h"

#define WLAN\_SSID "Cloud\_Wifi"

#define WLAN\_PASS "12345678"

#define AIO\_SERVER "io.adafruit.com"

#define AIO\_SERVERPORT 1883

#define AIO\_USERNAME "Cloud\_Project"

#define AIO\_KEY "8d2a67ad16564fb49b5ccaf7bc045a2f"

WiFiClient client;

Adafruit\_MQTT\_Client mqtt(&client, AIO\_SERVER, AIO\_SERVERPORT, AIO\_USERNAME, AIO\_KEY);

Adafruit\_MQTT\_Publish ecgclient = Adafruit\_MQTT\_Publish(&mqtt, AIO\_USERNAME"/feeds/ECG Data");

void MQTT\_connect();

void setup() {

Serial.begin(115200);

delay(10);

pinMode(D5,INPUT);

pinMode(D6,INPUT);

Serial.println(F("Adafruit MQTT demo"));

// Connect to WiFi access point.

Serial.println(); Serial.println();

Serial.print("Connecting to ");

Serial.println(WLAN\_SSID);

WiFi.begin(WLAN\_SSID, WLAN\_PASS);

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

delay(500);

Serial.print(".");

}

Serial.println();

Serial.println("WiFi connected");

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

}

void loop() {

MQTT\_connect();

int ecgval;

if((digitalRead(D5)==1)||(digitalRead(D6)==1))

{

Serial.println('!');

}

else

{

ecgval=analogRead(A0);

}

Serial.print(F("\nSending ECG Value "));

Serial.print(ecgval);

Serial.print("...");

if (! ecgclient.publish(ecgval)) {

Serial.println(F("Failed"));

} else {

Serial.println(F("OK!"));

}

delay(1000);

if(! mqtt.ping()) {

mqtt.disconnect();

}

delay(1000);

}

void MQTT\_connect() {

int8\_t ret;

if (mqtt.connected()) {

return;

}

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

uint8\_t retries = 3;

while ((ret = mqtt.connect()) != 0) { // connect will return 0 for connected

Serial.println(mqtt.connectErrorString(ret));

Serial.println("Retrying MQTT connection in 5 seconds...");

mqtt.disconnect();

delay(5000);

retries--;

if (retries == 0) {

while (1);

}

}

Serial.println("MQTT Connected!");

}