LAPORAN

Praaktek system IOT (Jumat 4 Oktober)

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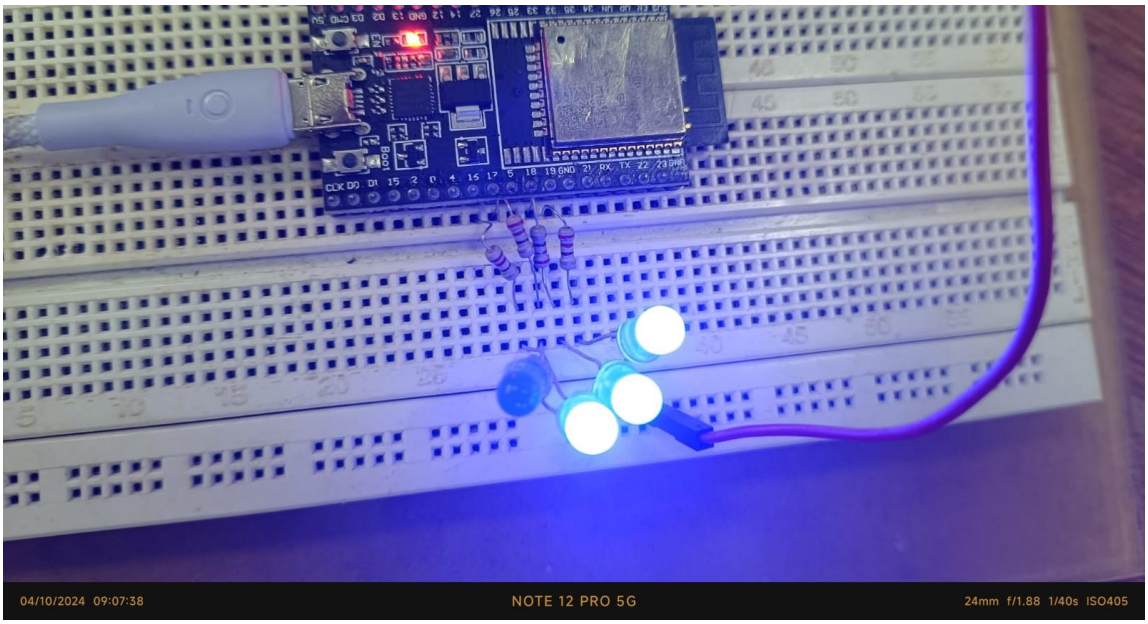
Matkul : Prak system IOT

Teknik Komputer (S1)

PRAKTEK

Praktek 1

- Bentuk rangkaia



Lampu yang paling timur matisoalnya di dalam code lampunya tidak di nyalakan

- Tulis program berikut ini dan upload terus dievaluasi. Coba dari Mqtt.Fix untuk publish sesuai Subcribe pada method reconnect();

```
#include <WiFi.h>
#include <PubSubClient.h>
#define LED1 19
#define LED2 18
#define LED3 5
#define LED4 17
const char* ssid = "RPLA_5";
const char* password = "utdijogja";
const char* mqtt_server = "broker.mqtt-dashboard.com";
WiFiClient espClient;
PubSubClient client(espClient);
```

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```
char msg[50];
String tpk = String(50);

void setup_wifi() {
   delay(10);
   Serial.println();
   Serial.print("Connecting to ");
   Serial.println(ssid);
   WiFi.begin(ssid, password);
   while (WiFi.status() != WL_CONNECTED) {
      delay(500);
      Serial.print(".");
   }
   randomSeed(micros());
   Serial.println("");
   Serial.println("WiFi connected");
   Serial.println("IP address: ");
   Serial.println(WiFi.localIP());
}

void callback(char* topic, byte* payload, unsigned int length) {
   String action;
   tpk = topic;

   if (tpk == "yogya/utara/lampu") {
      switch (char(payload[0])) {
         case '1':
            action = (char(payload[1]) == '1') ? "LED1 ON" : "LED1 OFF";
            digitalWrite(LED1, (char(payload[1]) == '1') ? HIGH : LOW);
            break;
         case '2':
            action = (char(payload[1]) == '1') ? "LED2 ON" : "LED2 OFF";
            digitalWrite(LED2, (char(payload[1]) == '1') ? HIGH : LOW);
            break;
      }
   }

   if (tpk == "225510017/timur/lampu") {
      switch (char(payload[0])) {
         case '1':
            action = (char(payload[1]) == '1') ? "LED3 ON" : "LED3 OFF";
            digitalWrite(LED3, (char(payload[1]) == '1') ? HIGH : LOW);
            break;
         case '2':
            action = (char(payload[1]) == '1') ? "LED4 ON" : "LED4 OFF";
            digitalWrite(LED4, (char(payload[1]) == '1') ? HIGH : LOW);
            break;
      }
   }

   Serial.print("Message arrived [");
   Serial.print(topic);
   Serial.print("] Payload: ");
   for (int i = 0; i < length; i++) {
      Serial.print((char)payload[i]);
```

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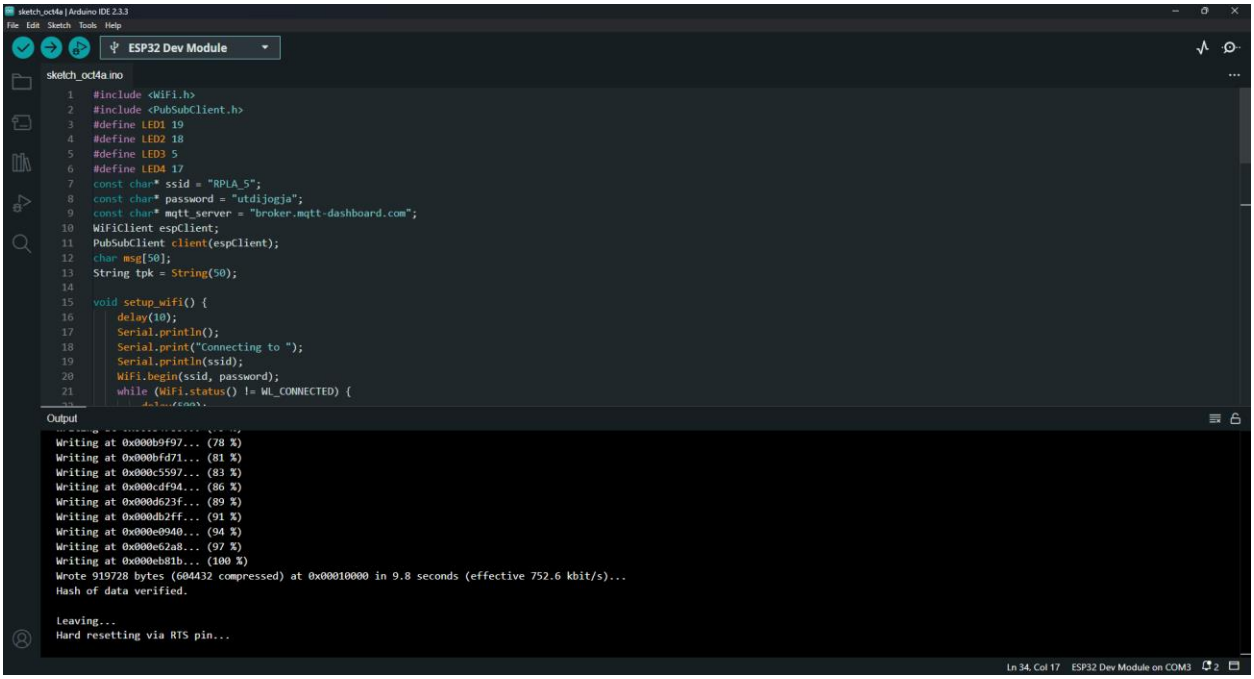
```
    }
    Serial.print(" Action: ");
    Serial.println(action);
}

void setup() {
    Serial.begin(115200);
    pinMode(LED1, OUTPUT);
    pinMode(LED2, OUTPUT);
    pinMode(LED3, OUTPUT);
    pinMode(LED4, OUTPUT);
    setup_wifi();
    client.setServer(mqtt_server, 1883);
    client.setCallback(callback);
}

void loop() {
    if (!client.connected()) {
        // Reconnect logic
    }
    client.loop();
}
```



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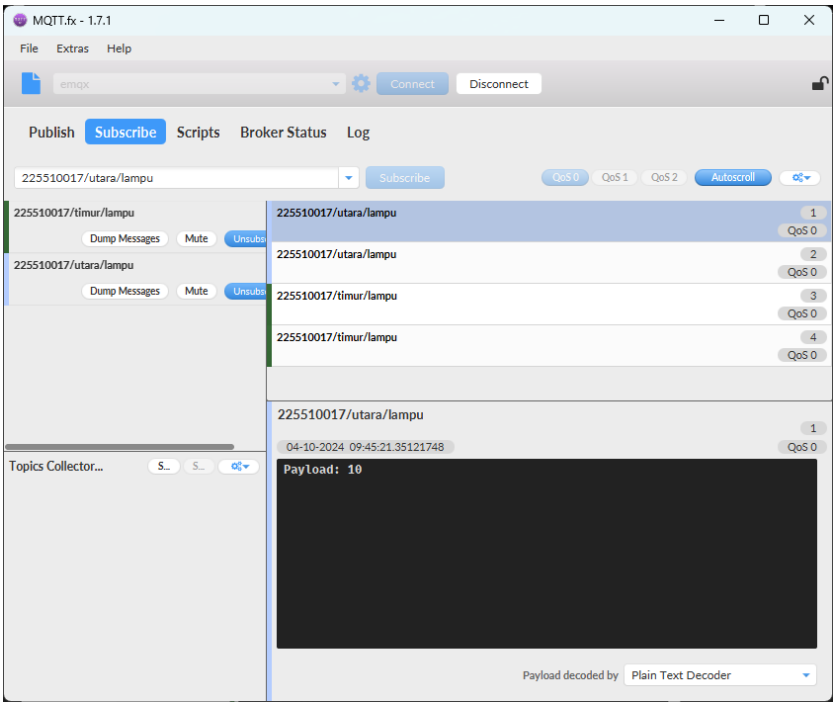
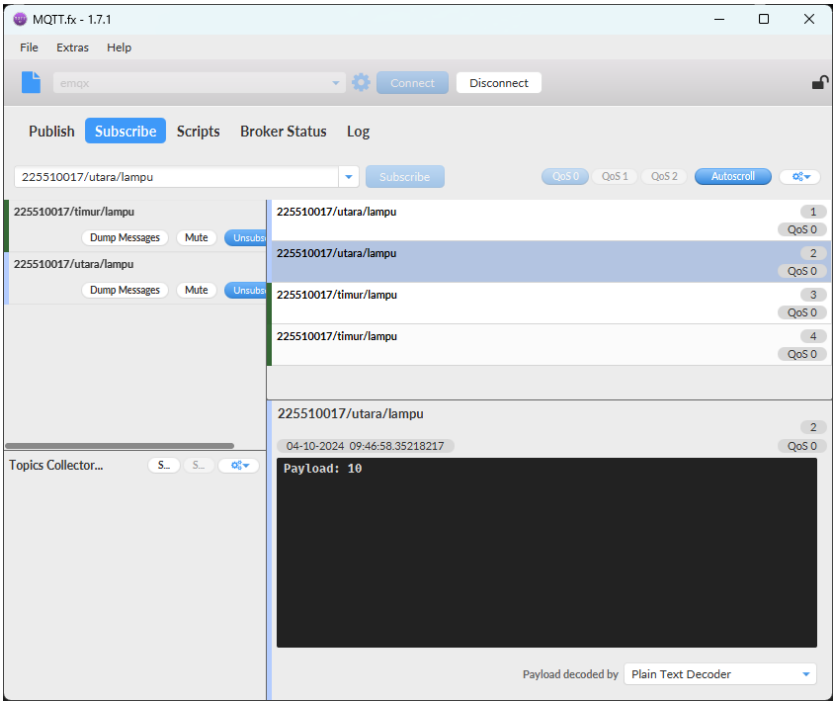
- Keluaran di MQTT

Saat lampu menyala





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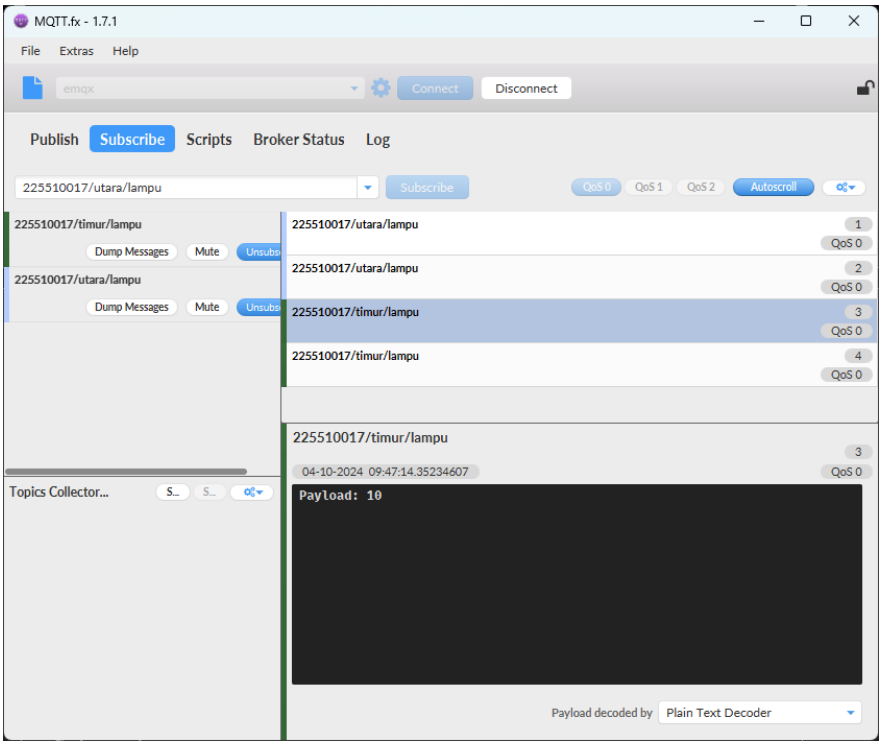
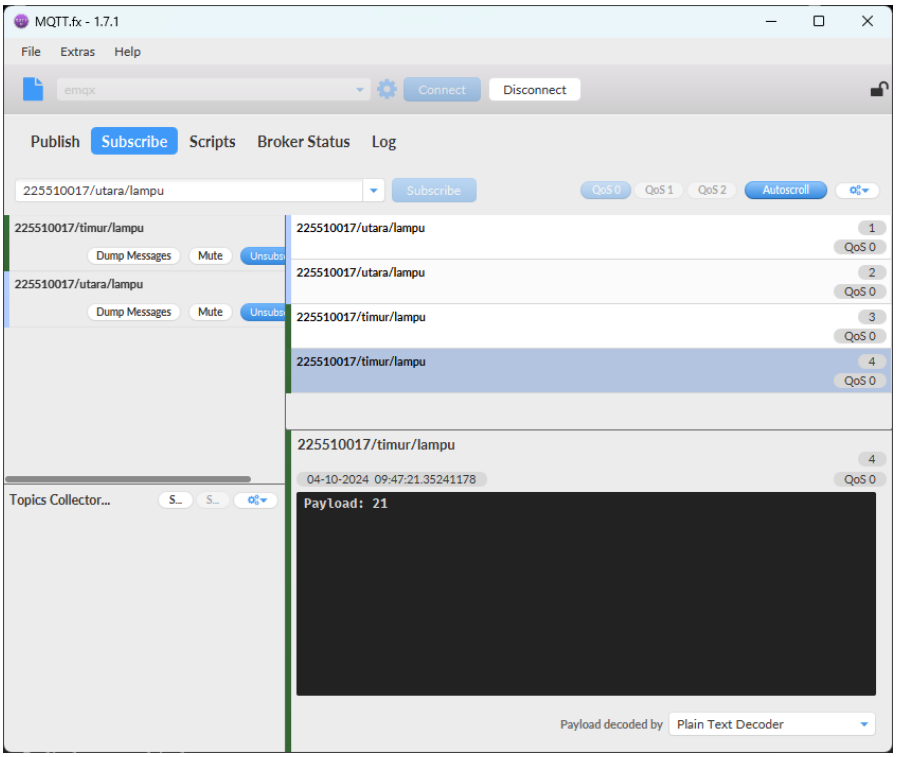


Saat memasukan Perintah untuk mematikan Lampu



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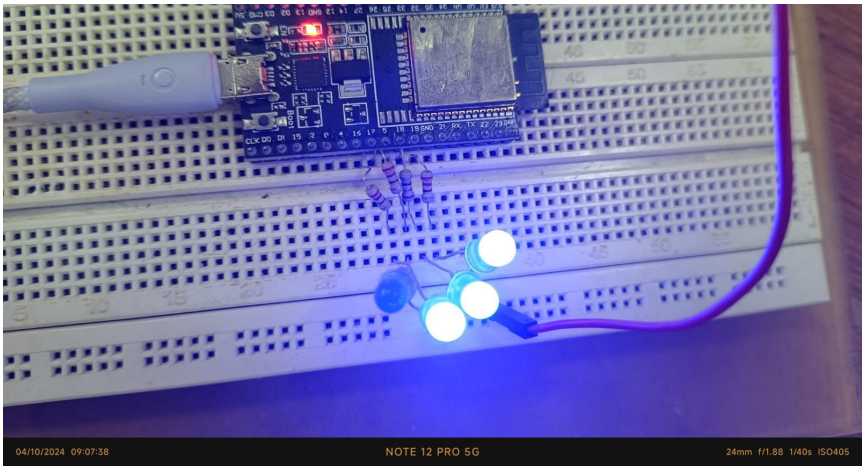

Lampu bagian kiri mati

LATIHAN

Latihan 1

TUGAS

Tugas