

Tugas 3 IOT Giovanka Steviano Harry Premono 71220924

Foto Wiring:

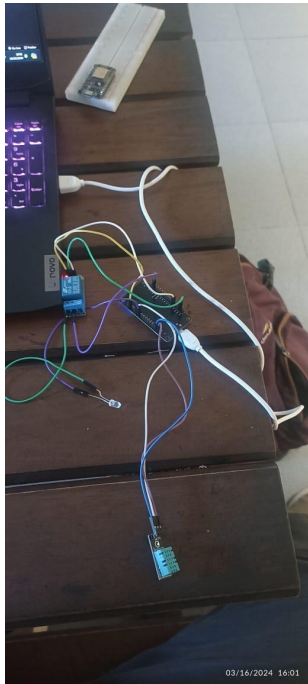


Foto LED mati:

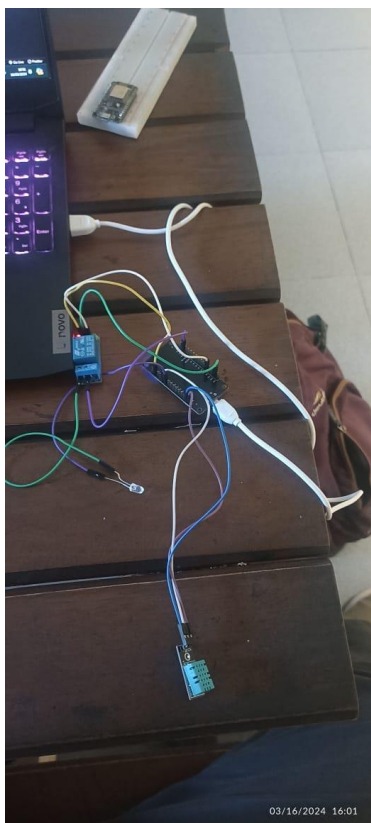
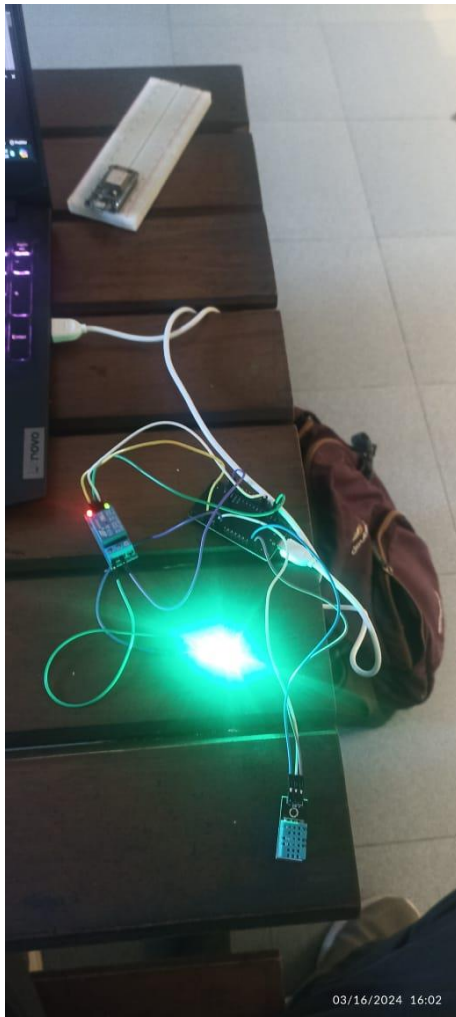
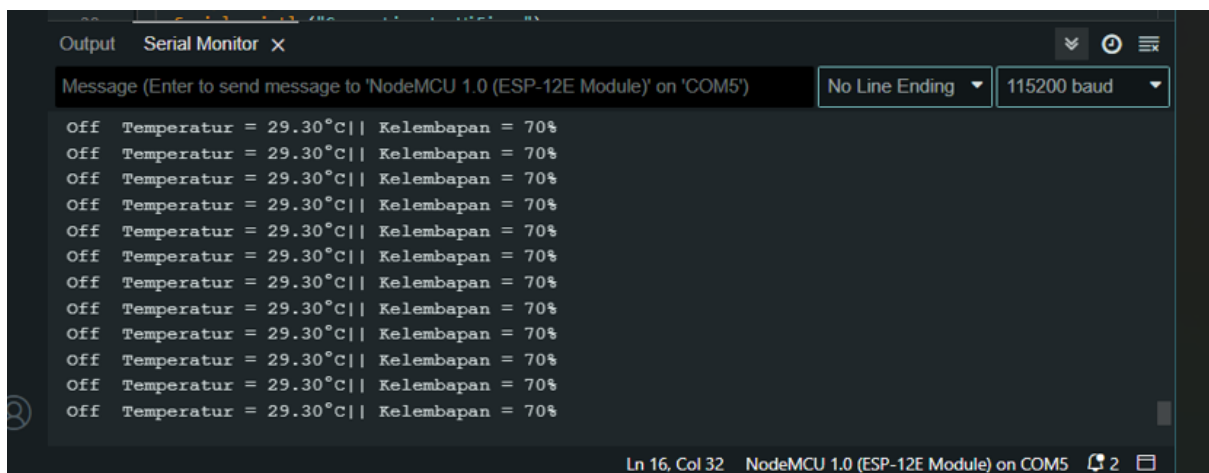


Foto LED nyala:



Serial monitor Saat mati:



Serial Monitor saat hidup:

```
Message (Enter to send message to 'NodeMCU 1.0 (ESP-12E Module)' on

Off  Temperatur = nan°C Kelembapan = 2147483647%
Off  Temperatur = nan°C Kelembapan = 2147483647%
On   Temperatur = 34.20°C Kelembapan = 63%
On   Temperatur = 34.20°C Kelembapan = 63%
On   Temperatur = 35.60°C Kelembapan = 56%
On   Temperatur = 35.60°C Kelembapan = 56%
On   Temperatur = 35.60°C Kelembapan = 55%
On   Temperatur = 35.60°C Kelembapan = 55%
On   Temperatur = 35.60°C Kelembapan = 55%
On   Temperatur = 35.20°C Kelembapan = 55%
On   Temperatur = 35.20°C Kelembapan = 55%
```

Screenshoot file txt

The screenshot shows a Visual Studio Code editor with a Python script for an MQTT client and a terminal window displaying the output.

**Python Script (mqtt\_client.py):**

```
14 def connect_mqtt() -> mqtt_client:
41     client = mqtt_client.Client(client_id)
22     client.username_pw_set(username, password)
23     client.on_connect = on_connect
24     client.connect(broker, port)
25     return client
26
27
28 def subscribe(client: mqtt_client):
29     def on_message(client, userdata, msg):
30         with open("output.txt", "a") as f:
31             f.write(f"{msg.payload.decode()} {msg.topic}")
32             print(f"{msg.payload.decode()} {msg.topic}")
33             print("\n")
34
35     client.subscribe(topic)
36     client.on_message = on_message
37
38
39
40 def run():
41     client = connect_mqtt()
42     subscribe(client)
43     client.loop_forever()
44
45
46 if __name__ == '__main__':
47     run()
```

**Output File (output.txt):**

```
1 Suhu: 29.30°C || Kelembapan: 71% 71220924 Giovanka/Sensor suhu dengan relay
2 Suhu: 29.30°C || Kelembapan: 71% 71220924 Giovanka/Sensor suhu dengan relay
3 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
4 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
5 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
6 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
7 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
8 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
9 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
10 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
11 Suhu: 29.30°C || Kelembapan: 70% 71220924 Giovanka/Sensor suhu dengan relay
12
```

**Terminal Output:**

```
Suhu: 29.30°C || Kelembapan: 70%71220924 Giovanka/Sensor suhu dengan relay
Suhu: 29.30°C || Kelembapan: 70%71220924 Giovanka/Sensor suhu dengan relay
```