1

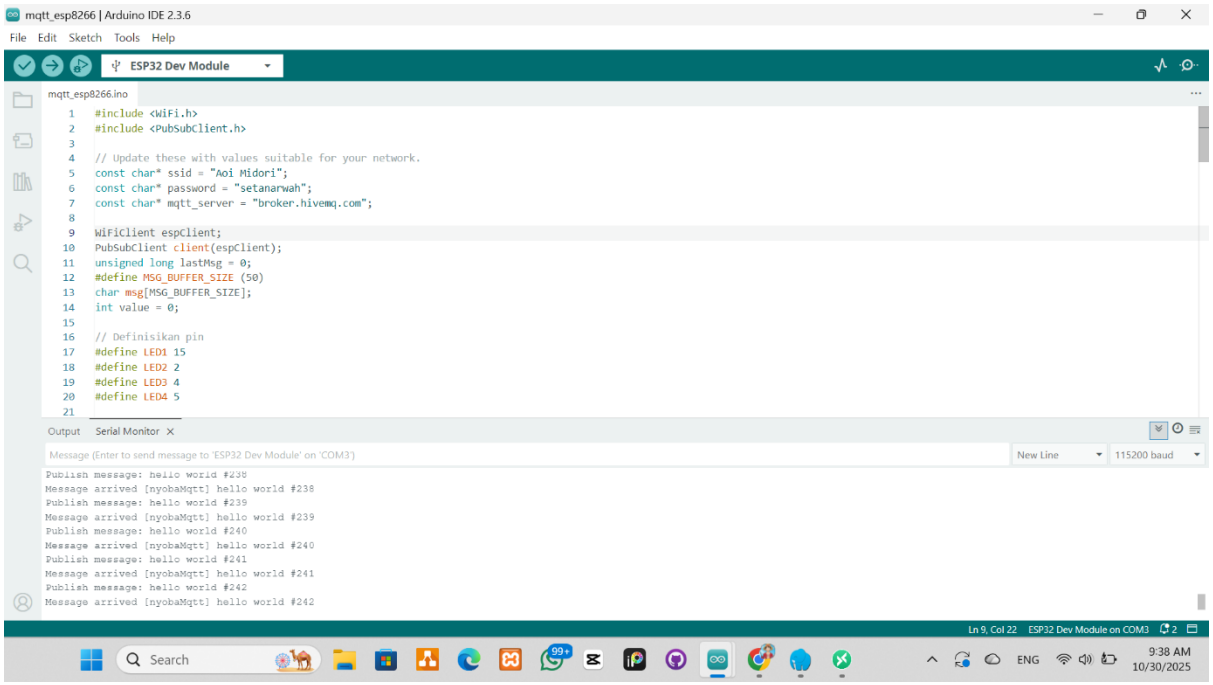
Nama : Siti Sa’adah

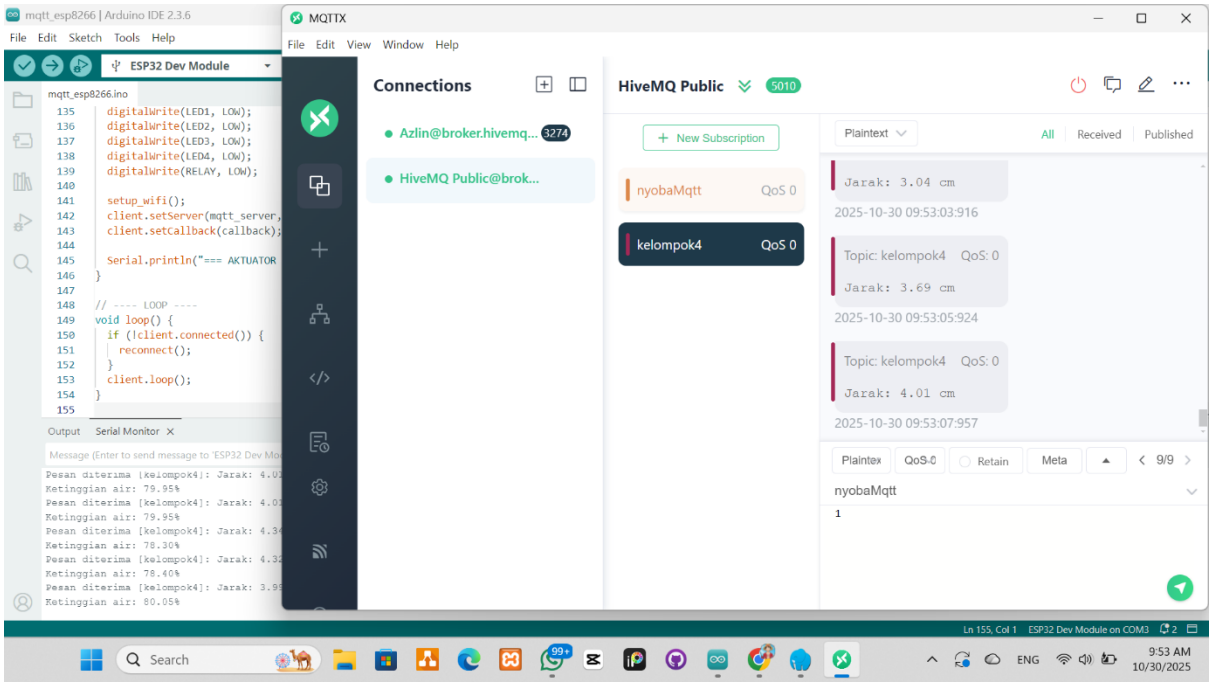
NIM 2403001

Kelas : D3 TI 2A

Mata Kuliah : Internet of Things

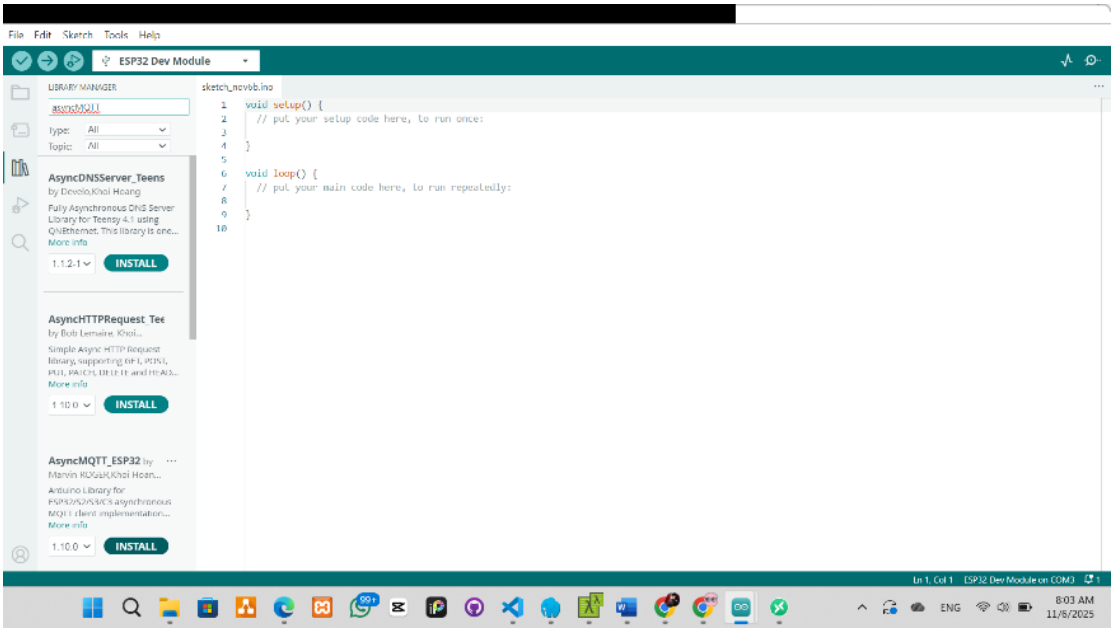
TUGAS PRAKTIKUM
30 Oktober 2025

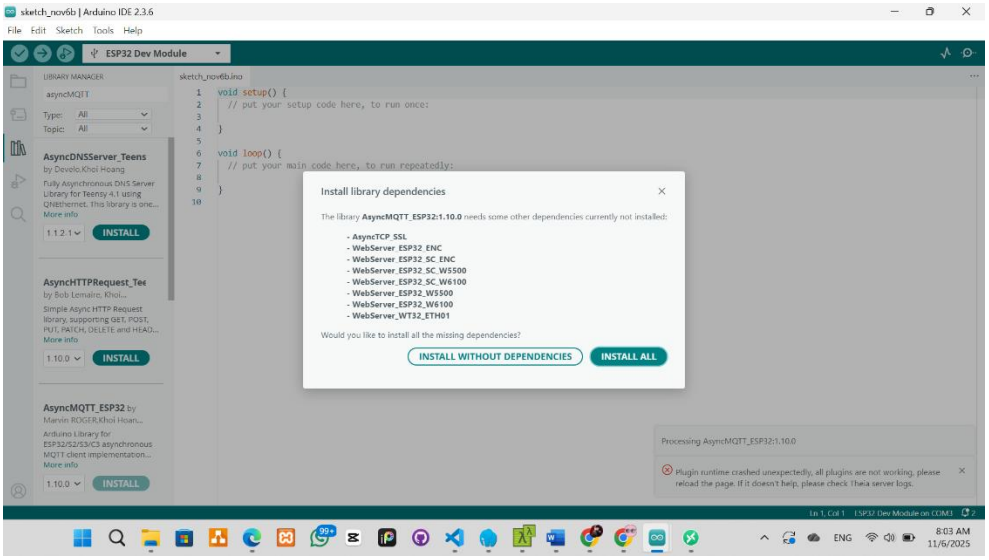


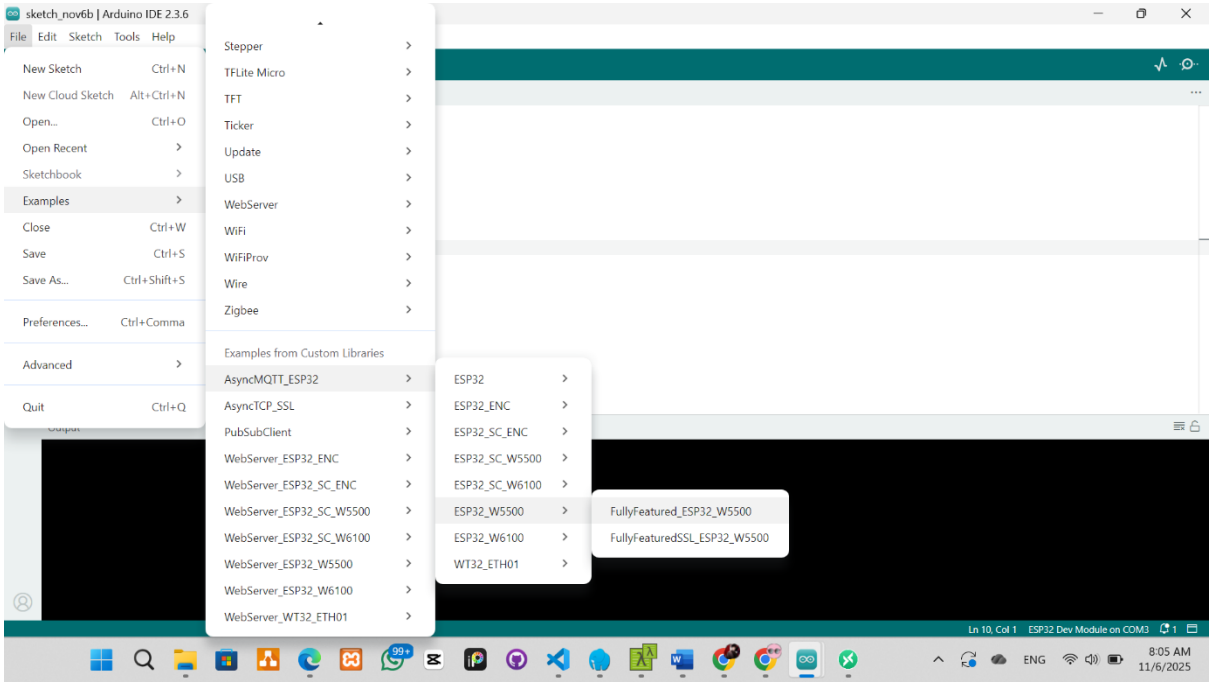


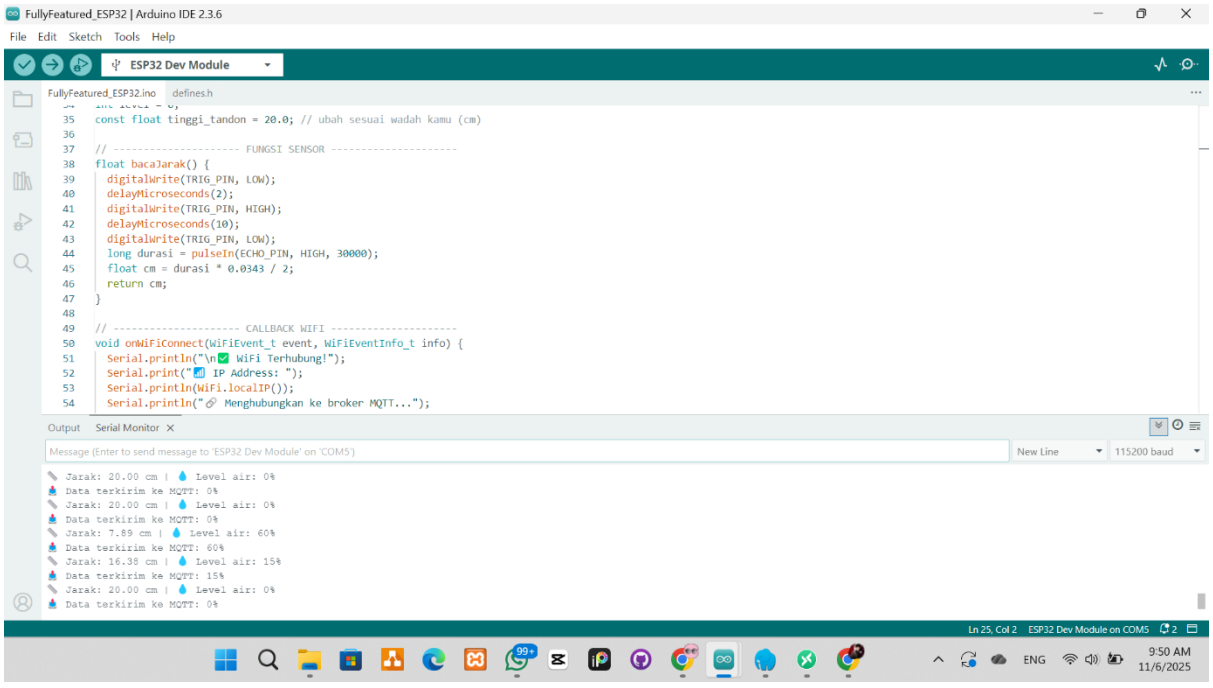
Pada praktikum ini aktuator berhasil menerima data dari sensor, sehingga LED dapat menyala sesuai dengan jarak yang diterima dari sensor

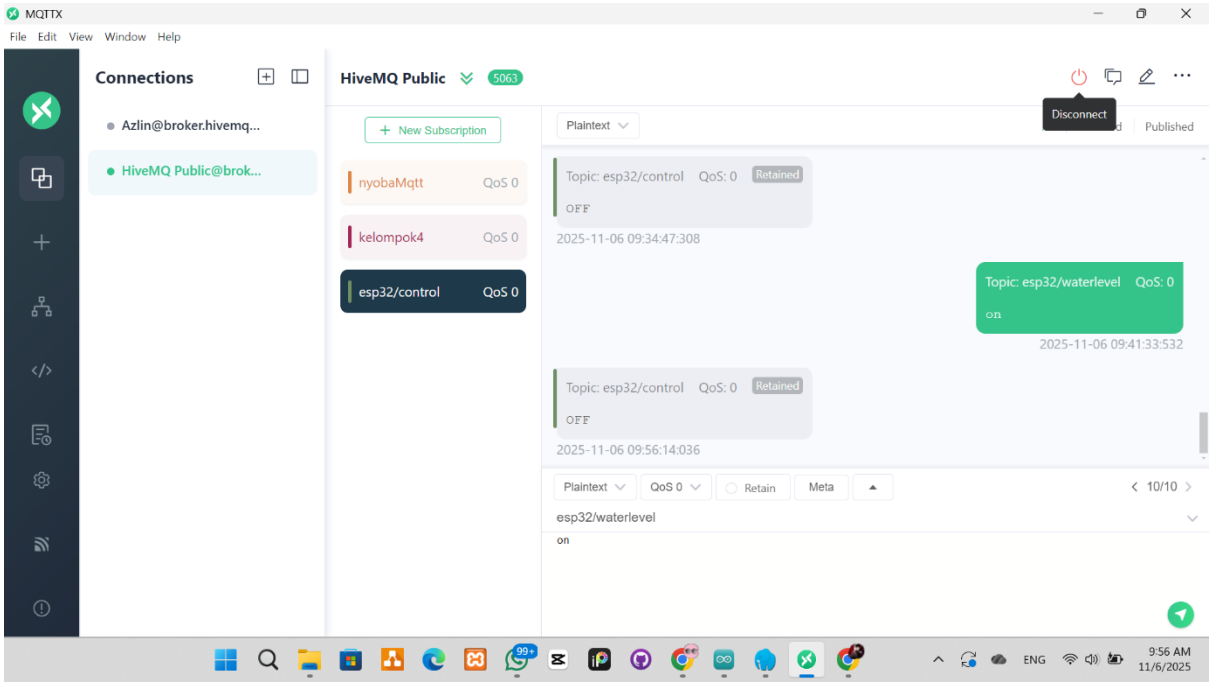
TUGAS PRAKTIKUM
06 November 2025






sketch_nov6b | Arduino IDE 2.3.6
File Edit Sketch Tools Help
New Sketch Ctrl+N
New Cloud Sketch Alt+Ctrl+N
Open... Ctrl+O
Open Recent
Sketchbook
Examples
Close Ctrl+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Preferences... Ctrl+Comma
Advanced
Quit Ctrl+Q
Stepper
TFLite Micro
TFT
Ticker
Update
USB
WebServer
WiFi
WiFiProv
Wire
Zigbee
Examples from Custom Libraries
AsyncMQTT_ESP32
AsyncTCP_SSL
PubSubClient
WebServer_ESP32_ENC
WebServer_ESP32_SC_ENC
WebServer_ESP32_SC_W5500
WebServer_ESP32_SC_W6100
WebServer_ESP32_W5500
WebServer_ESP32_W6100
WebServer_WT32_ETH01
ESP32
ESP32_ENC
ESP32_SC_ENC
ESP32_SC_W5500
ESP32_SC_W6100
ESP32_W5500
ESP32_W6100
WT32_ETH01
FullyFeatured_ESP32_W5500
FullyFeaturedSSL_ESP32_W5500
Ln 10, Col 1 ESP32 Dev Module on COM3
ENG 8:05 AM 11/6/2025


FullyFeatured_ESP32 | Arduino IDE 2.3.6
File Edit Sketch Tools Help
ESP32 Dev Module
FullyFeatured_ESP32.ino defines.h
const float tinggi_tandon = 20.0; // ubah sesuai wadah kamu (cm)
// -------------------- FUNGSI SENSOR --------------------
float bacaJarak() {
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);
long durasi = pulseIn(ECHO_PIN, HIGH, 30000);
float cm = durasi * 0.0343 / 2;
return cm;
}
// -------------------- CALLBACK WIFI --------------------
void onWiFiConnect(WiFiEvent_t event, WiFiEventInfo_t info) {
Serial.println("\n✅ WiFi Terhubung!");
Serial.print("📶 IP Address: ");
Serial.println(WiFi.localIP());
Serial.println("🔗 Menghubungkan ke broker MQTT...");
Output Serial Monitor
Message (Enter to send message to 'ESP32 Dev Module' on 'COM5')
New Line 115200 baud
Jarak: 20.00 cm | 💧 Level air: 0%
Data terkirim ke MQTT: 0%
Jarak: 20.00 cm | 💧 Level air: 0%
Data terkirim ke MQTT: 0%
Jarak: 7.89 cm | 💧 Level air: 60%
Data terkirim ke MQTT: 60%
Jarak: 16.38 cm | 💧 Level air: 15%
Data terkirim ke MQTT: 15%
Jarak: 20.00 cm | 💧 Level air: 0%
Data terkirim ke MQTT: 0%
Ln 25, Col 2 ESP32 Dev Module on COM5
ENG 9:50 AM 11/6/2025



Pada dasarnya praktikum ini tidak jauh berbeda dari praktikum sebelumnya, namun ada perubahan pada board nya. Sehingga ada nya perubahan yang di sesuaikan dengan board nya. Hasil nya ketika sensor mengirimkan data jarak air nya, maka LED akan menyala atau meti sesuai dengan data yang di terima.