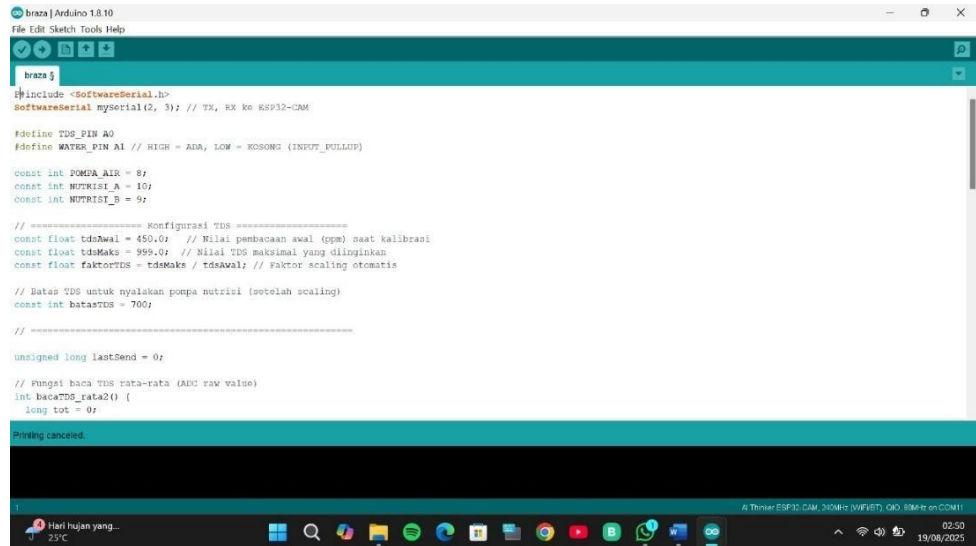


LAMPIRAN

Lampiran 1. Program Arduino Nano



```
branza | Arduino 1.8.10
File Edit Sketch Tools Help

branza
#include <SoftwareSerial.h>
SoftwareSerial mySerial(2, 3); // TX, RX ke ESP32-CAM

#define TDS_PIN A0
#define WATER_PIN A1 // HIGH = ADA, LOW = KOSONG (INPUT_PULLUP)

const int POMPA_AIR = 8;
const int NUTRISI_A = 10;
const int NUTRISI_B = 9;

// ===== Konfigurasi TDS =====
const float tdsAwal = 450.0; // Nilai pembacaan awal (ppm) saat kalibrasi
const float tdsMaks = 999.0; // Nilai TDS maksimal yang diinginkan
const float faktorTDS = tdsMaks / tdsAwal; // Faktor scaling otomatis

// Batas TDS untuk nyalakan pompa nutrisi (setelah scaling)
const int batasTDS = 700;

// =====

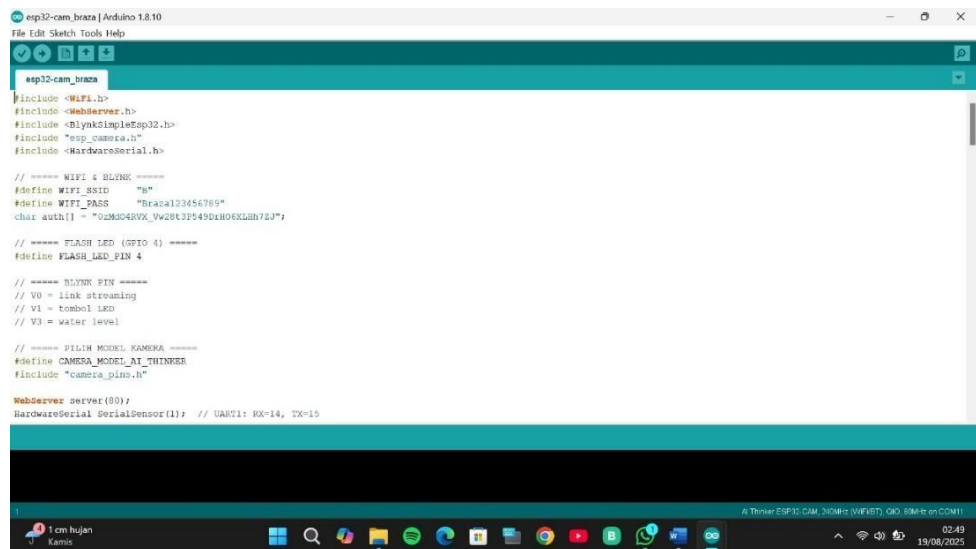
unsigned long lastSend = 0;

// Fungsi baca TDS rata-rata (ADC raw value)
int bacaTDS_rata2() {
  long tot = 0;

  Pasting canceled.

1
6: Tinker ESP32-CAM, 30MHz (WiFiBT), 0Kb BMem on COM11
Hari hujan yang... 25°C
```

Lampiran 2. Program ESP32-Cam



```
esp32-cam, branza | Arduino 1.8.10
File Edit Sketch Tools Help

esp32-cam, branza
#include <WiFi.h>
#include <WebServer.h>
#include <BlynkSimpleEsp32.h>
#include "esp_camera.h"
#include <HardwareSerial.h>

// ===== WIFI & BLYNK =====
#define WIFI_SSID "B"
#define WIFI_PASS "Branta123456789"
char auth[] = "028504R0X_Vw28tJf9490zR06Xk2b7dJ";

// ===== FLASH LED (GPIO 4) =====
#define FLASH_LED_PIN 4

// ===== BLYNK PIN =====
// V0 = link streaming
// V1 = tombol LED
// V3 = water level

// ===== PILIH MODEL KAMERA =====
#define CAMERA_MODEL_AI_THINKER
#include "camera_pins.h"

WebServer server(80);
HardwareSerial SerialSensor(1); // UART1: RX=14, TX=15

1
6: Tinker ESP32-CAM, 30MHz (WiFiBT), 0Kb BMem on COM11
1 cm hujan Kamis 02:49 19/08/2025
```

Lampiran 3. Tampilan Serial Monitor

COM11					
TDS: 0	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON	
02:55:21.684 ->	TDS: 0	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:22.766 ->	TDS: 1	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:23.851 ->	TDS: 1	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:24.934 ->	TDS: 1	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:25.970 ->	TDS: 1	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:27.050 ->	TDS: 18	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:28.166 ->	TDS: 25	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:29.249 ->	TDS: 23	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:30.330 ->	TDS: 203	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:31.412 ->	TDS: 129	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:32.494 ->	TDS: 92	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:33.576 ->	TDS: 81	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:34.660 ->	TDS: 77	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:35.742 ->	TDS: 76	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:36.827 ->	TDS: 77	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:37.908 ->	TDS: 77	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:38.991 ->	TDS: 77	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON
02:55:40.075 ->	TDS: 77	WATER: ADA	Pompa Air: OFF	Nutrisi A: ON	Nutrisi B: ON

Lampiran 4. Rangkaian alat dan Netpot hidroponik

