

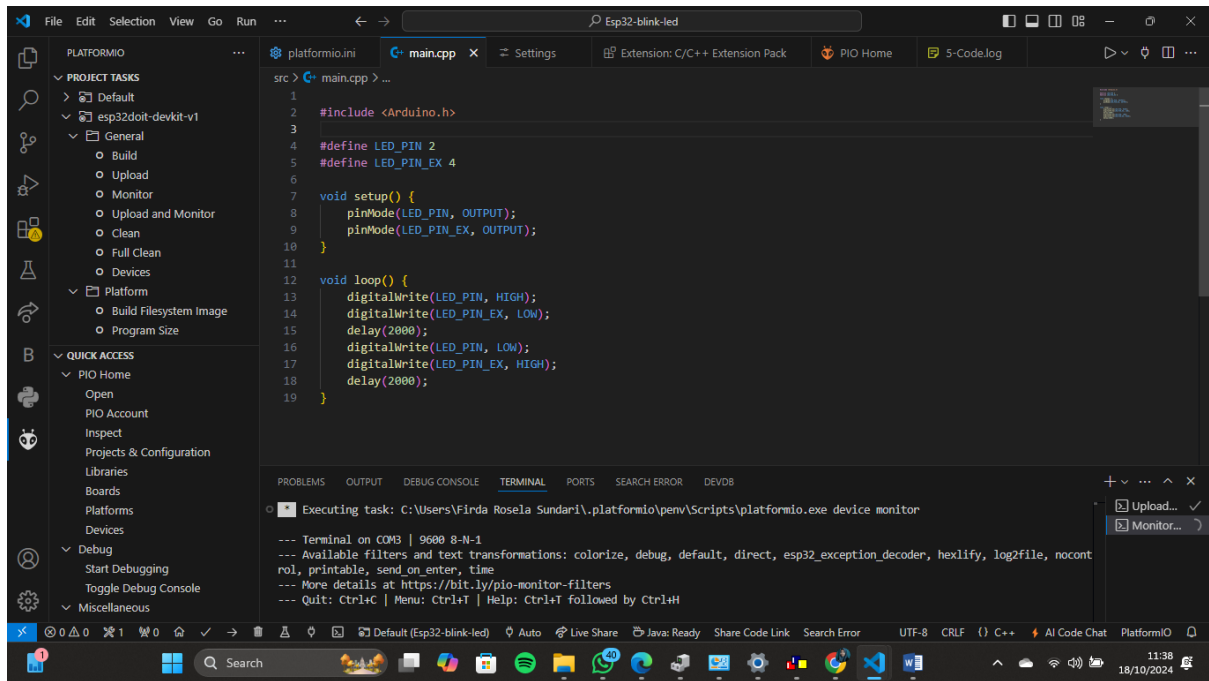
Nama : Firda Rosela Sundari

NIM : 2200198

Kelas : 5B

Mata Kuliah : Sistem Tertanam P7

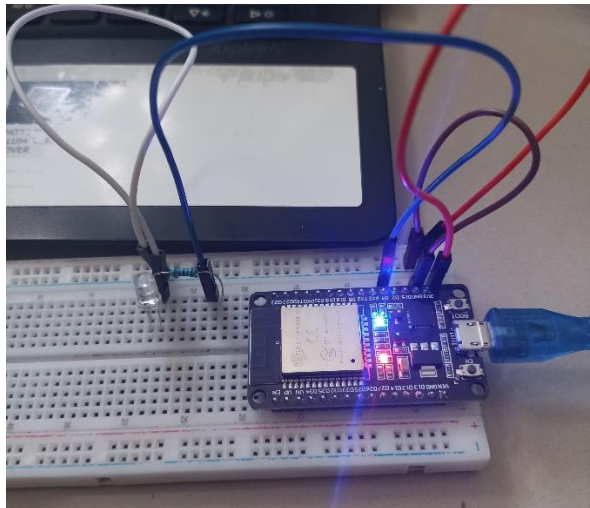
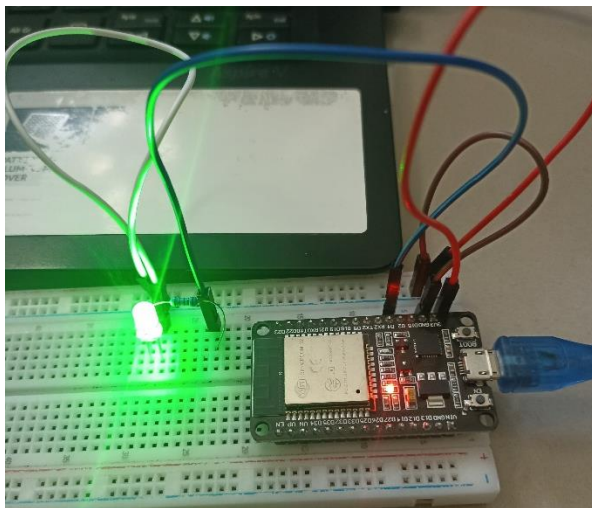
1. ESP32_Blink_Led



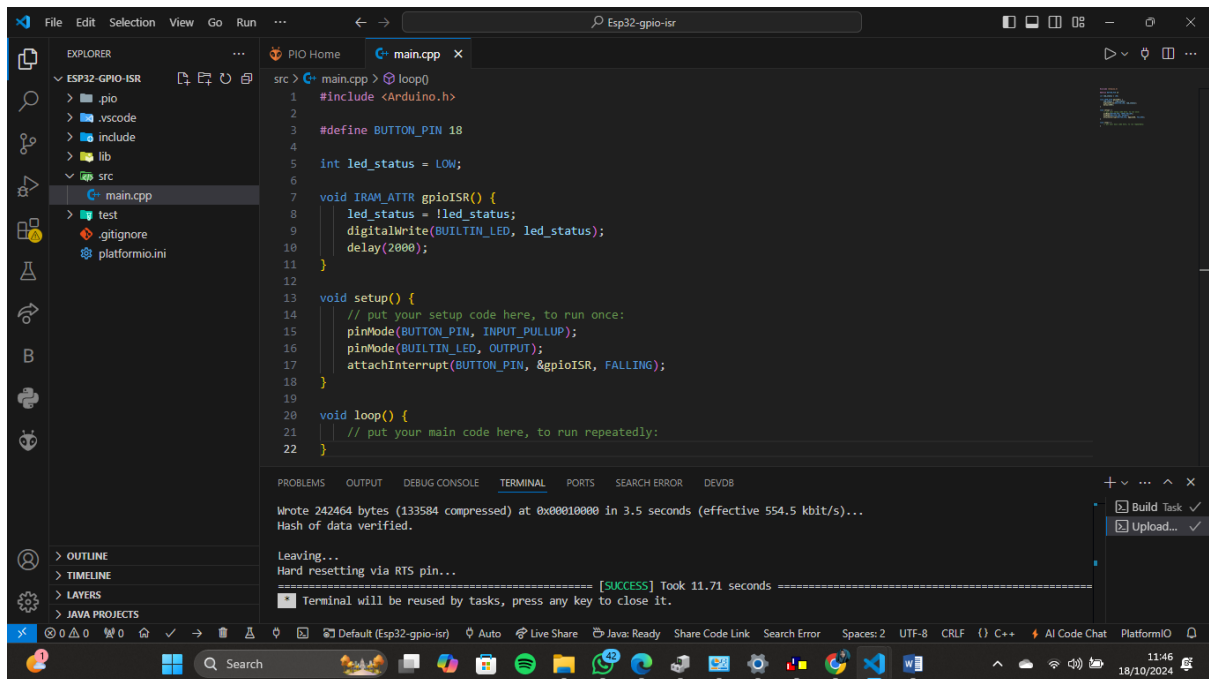
```
1 #include <Arduino.h>
2
3
4 #define LED_PIN 2
5 #define LED_PIN_EX 4
6
7 void setup() {
8   pinMode(LED_PIN, OUTPUT);
9   pinMode(LED_PIN_EX, OUTPUT);
10 }
11
12 void loop() {
13   digitalWrite(LED_PIN, HIGH);
14   digitalWrite(LED_PIN_EX, LOW);
15   delay(2000);
16   digitalWrite(LED_PIN, LOW);
17   digitalWrite(LED_PIN_EX, HIGH);
18   delay(2000);
19 }
```

Executing task: C:\Users\Firda Rosela Sundari\platformio\penv\Scripts\platformio.exe device monitor

--- Terminal on COM3 | 9600 8-N-1
--- Available filters and text transformations: colorize, debug, default, direct, esp32_exception_decoder, hexlify, log2file, nocont
roll, printable, send_on_enter, time
--- More details at <https://bit.ly/pio-monitor-filters>
--- Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H



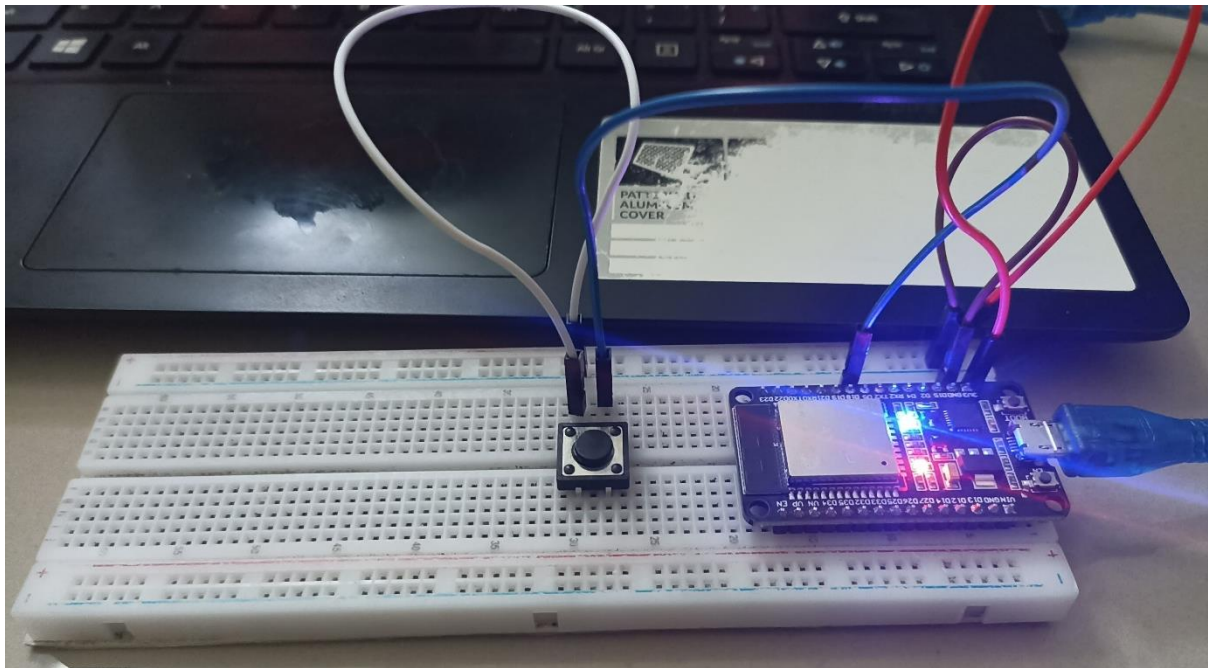
2. ESP32_GPIO_ISR



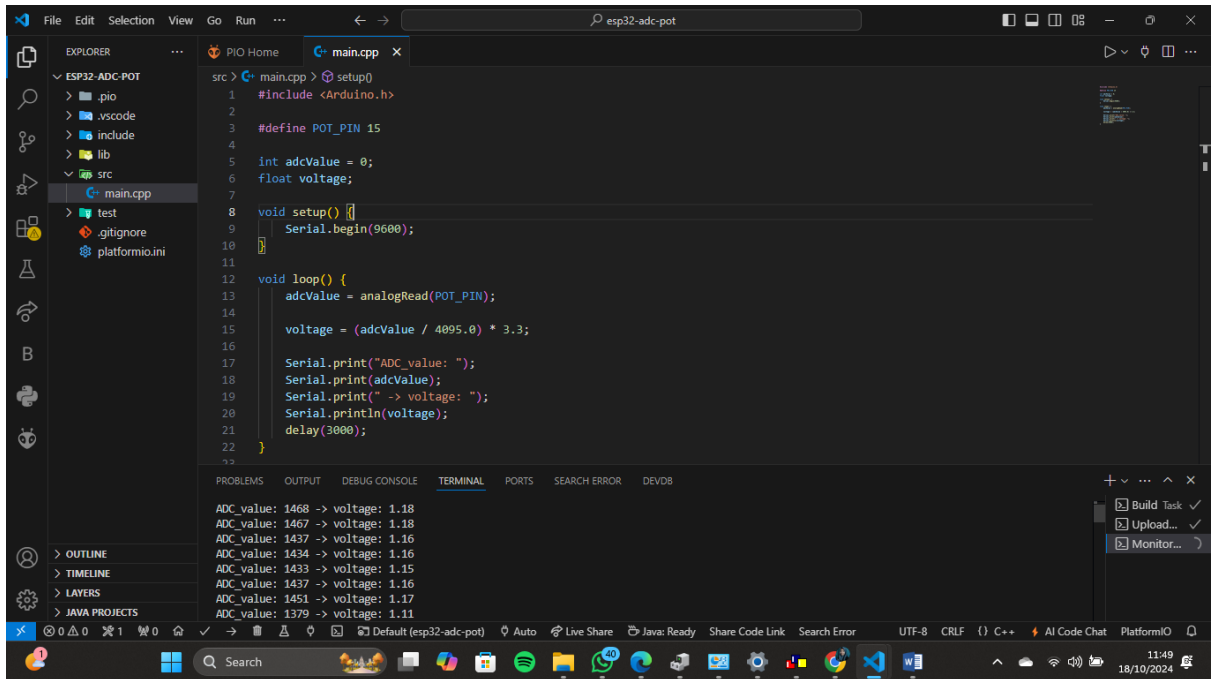
```
src > main.cpp > loop()
1 #include <Arduino.h>
2
3 #define BUTTON_PIN 18
4
5 int led_status = LOW;
6
7 void IRAM_ATTR gpioISR() {
8     led_status = !led_status;
9     digitalWrite(BUILTIN_LED, led_status);
10    delay(2000);
11 }
12
13 void setup() {
14     // put your setup code here, to run once:
15     pinMode(BUTTON_PIN, INPUT_PULLUP);
16     pinMode(BUILTIN_LED, OUTPUT);
17     attachInterrupt(BUTTON_PIN, &gpioISR, FALLING);
18 }
19
20 void loop() {
21     // put your main code here, to run repeatedly:
22 }
```

Wrote 242464 bytes (133584 compressed) at 0x00100000 in 3.5 seconds (effective 554.5 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
===== [SUCCESS] Took 11.71 seconds =====
Terminal will be reused by tasks, press any key to close it.



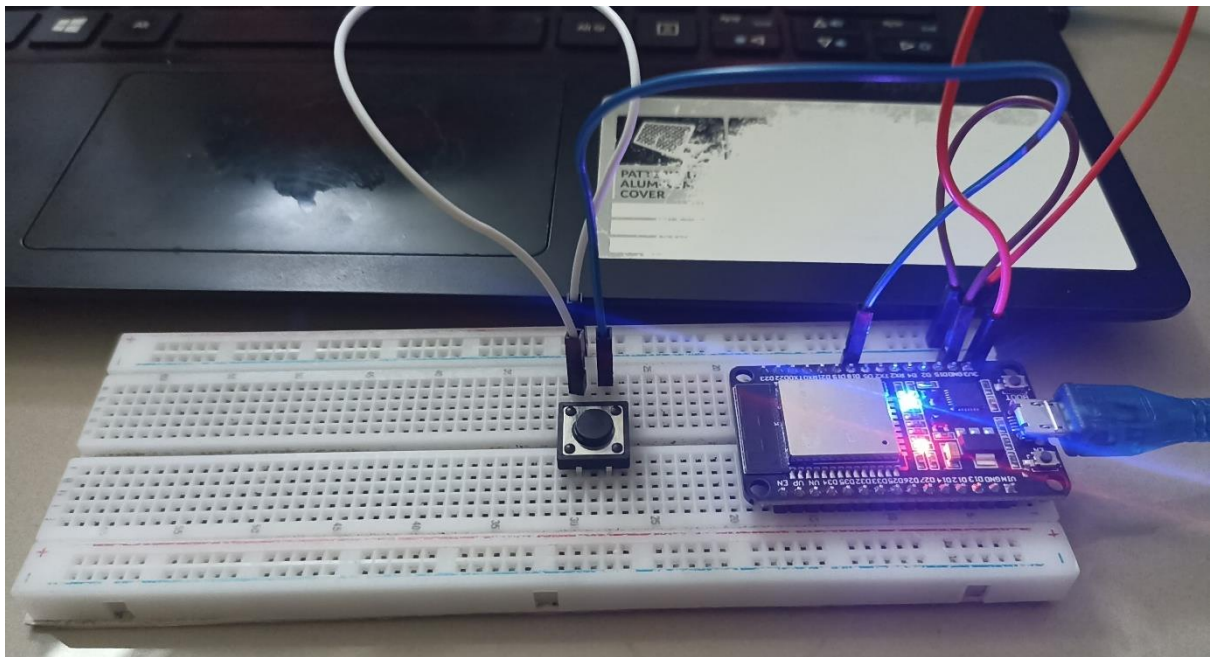
3. ESP32_ADC_POT



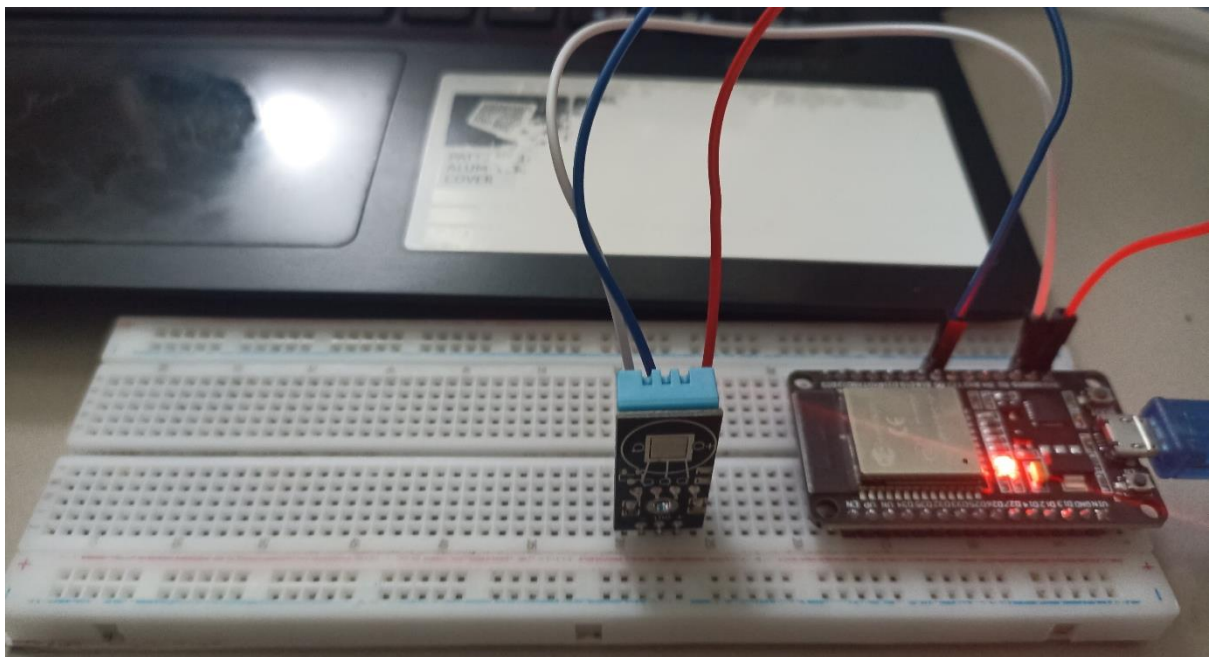
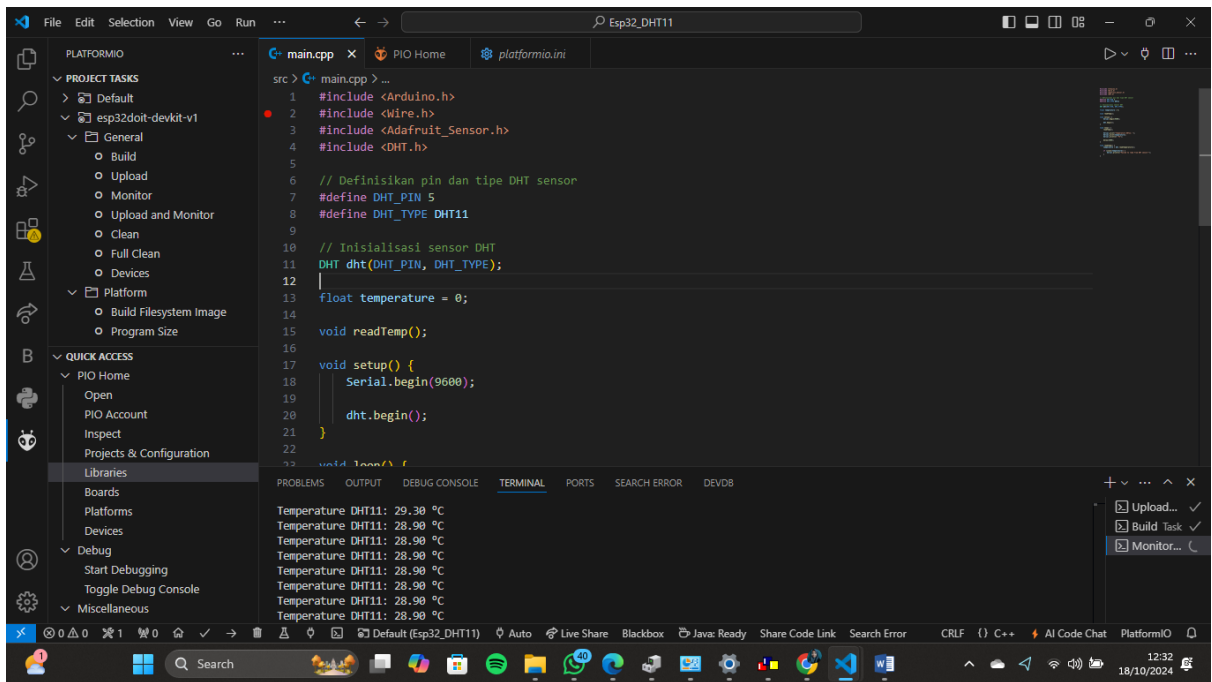
```
src > main.cpp > setup()
1 #include <Arduino.h>
2
3 #define POT_PIN 15
4
5 int adcValue = 0;
6 float voltage;
7
8 void setup() {
9     Serial.begin(9600);
10 }
11
12 void loop() {
13     adcValue = analogRead(POT_PIN);
14
15     voltage = (adcValue / 4095.0) * 3.3;
16
17     Serial.print("ADC_value: ");
18     Serial.print(adcValue);
19     Serial.print(" -> voltage: ");
20     Serial.println(voltage);
21     delay(3000);
22 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR DEVDB

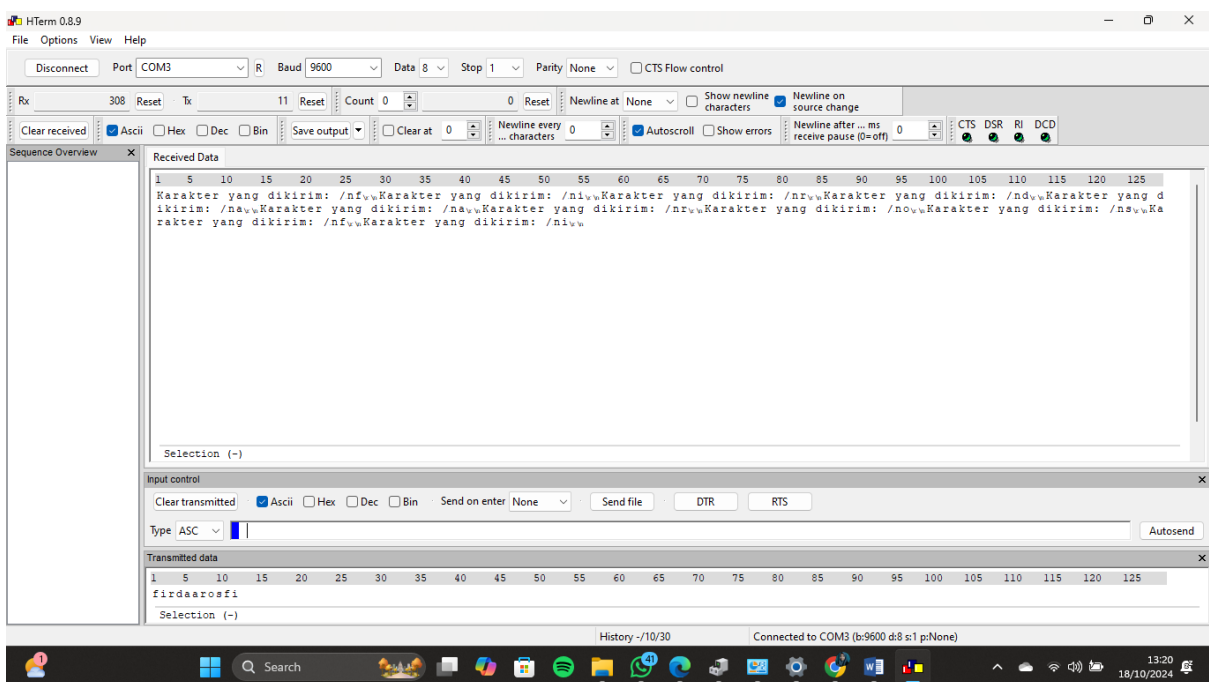
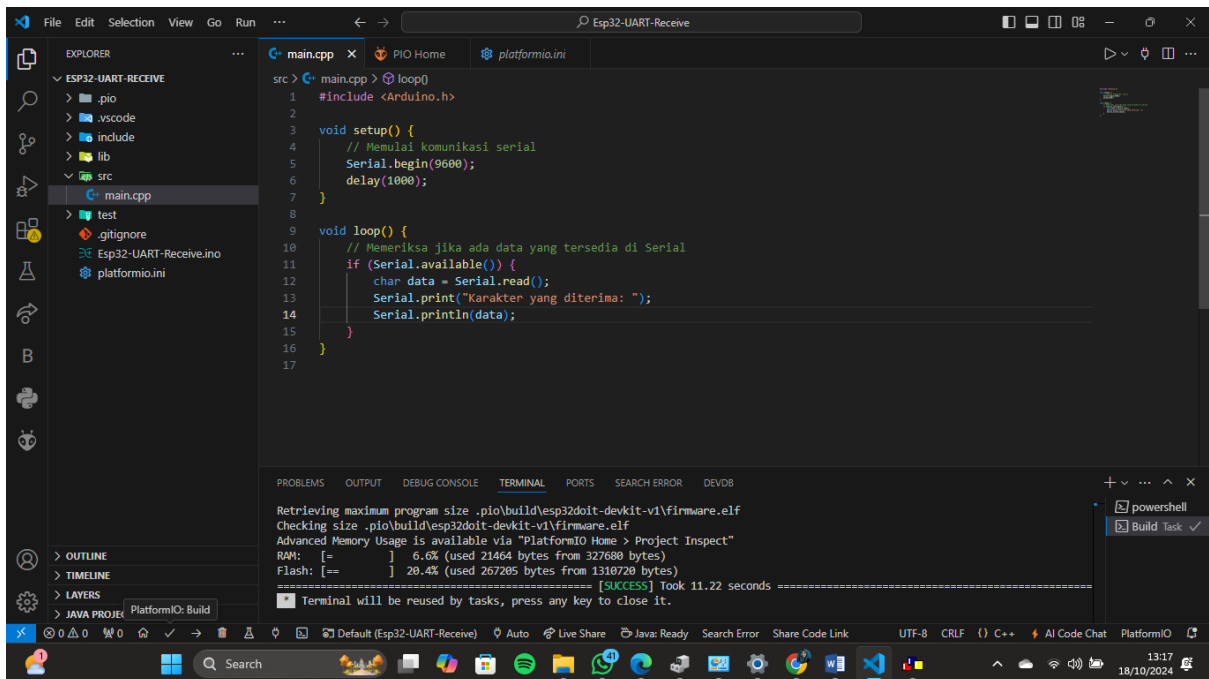
ADC_value: 1468 -> voltage: 1.18
ADC_value: 1467 -> voltage: 1.18
ADC_value: 1437 -> voltage: 1.16
ADC_value: 1434 -> voltage: 1.16
ADC_value: 1433 -> voltage: 1.15
ADC_value: 1437 -> voltage: 1.16
ADC_value: 1451 -> voltage: 1.17
ADC_value: 1379 -> voltage: 1.11



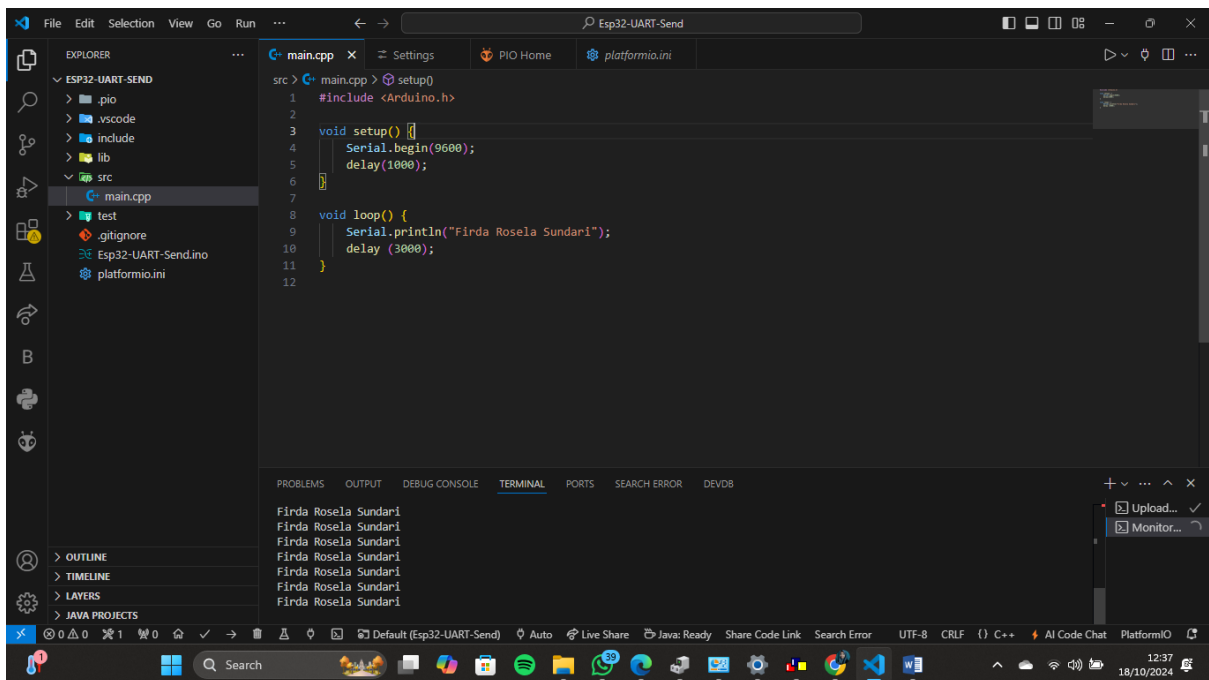
4. ESP32_DHT11



5. ESP32_UART_Receive



6. ESP32_UART_Send



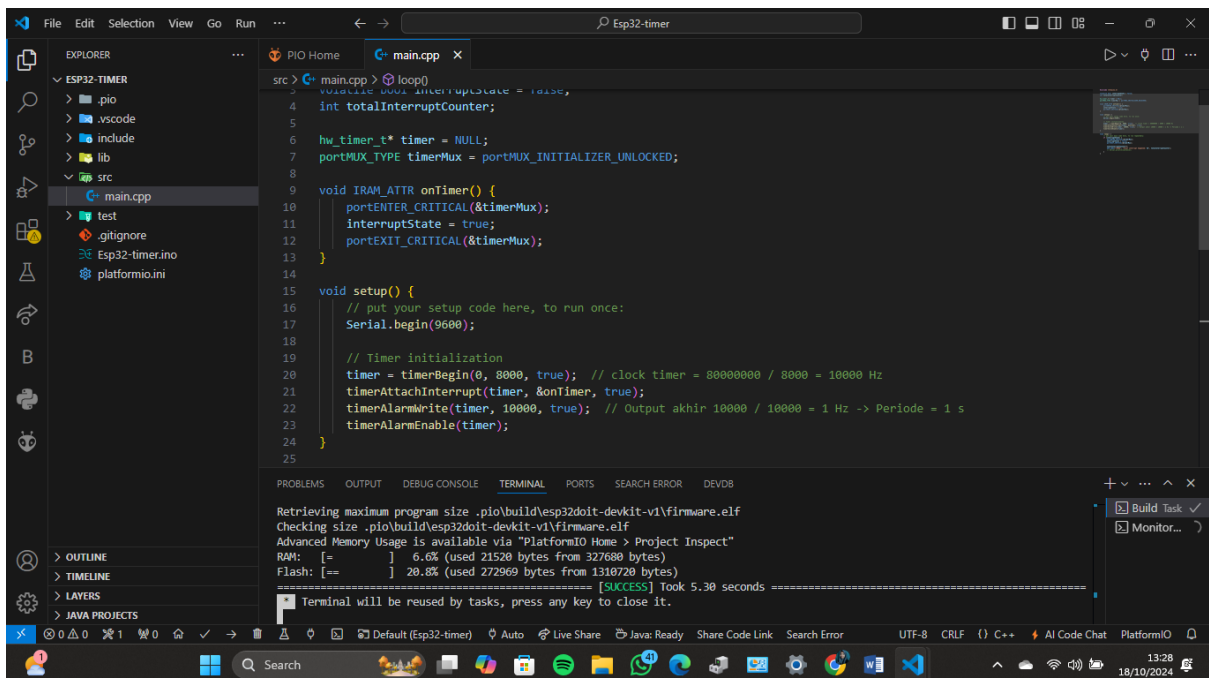
```
src > main.cpp x Settings PIO Home platformio.ini
src > main.cpp x setup()
1 #include <Arduino.h>
2
3 void setup() {
4   Serial.begin(9600);
5   delay(1000);
6 }
7
8 void loop() {
9   Serial.println("Firda Rosela Sundari");
10  delay(3000);
11 }
12
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR DEVDB

Firda Rosela Sundari
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Firda Rosela Sundari
Firda Rosela Sundari
Firda Rosela Sundari
Firda Rosela Sundari

Upload... Monitor...

7. ESP32_Timer



```
src > main.cpp x loop()
1 volatile bool interruptState = false;
2
3 int totalInterruptCounter;
4
5
6 hw_timer_t* timer = NULL;
7 portMUX_TYPE timerMux = portMUX_INITIALIZER_UNLOCKED;
8
9 void IRAM_ATTR onTimer() {
10   portENTER_CRITICAL(&timerMux);
11   interruptState = true;
12   portEXIT_CRITICAL(&timerMux);
13 }
14
15 void setup() {
16   // put your setup code here, to run once:
17   Serial.begin(9600);
18
19   // Timer initialization
20   timer = timerBegin(0, 8000, true); // clock timer = 80000000 / 8000 = 10000 Hz
21   timerAttachInterrupt(timer, &onTimer, true);
22   timerAlarmWrite(timer, 10000, true); // Output akhir 10000 / 10000 = 1 Hz -> Periode = 1 s
23   timerAlarmEnable(timer);
24 }
25
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR DEVDB

Retrieving maximum program size .pio\build\esp32doit-devkit-v1\firmware.elf
Checking size .pio\build\esp32doit-devkit-v1\firmware.elf
Advanced Memory Usage is available via "PlatformIO Home > Project Inspect"
RAM: [==] 6.6% (used 21520 bytes from 327680 bytes)
Flash: [==] 20.8% (used 272969 bytes from 1310720 bytes)
===== [SUCCESS] Took 5.30 seconds =====
Terminal will be reused by tasks, press any key to close it.

Build Task Monitor...