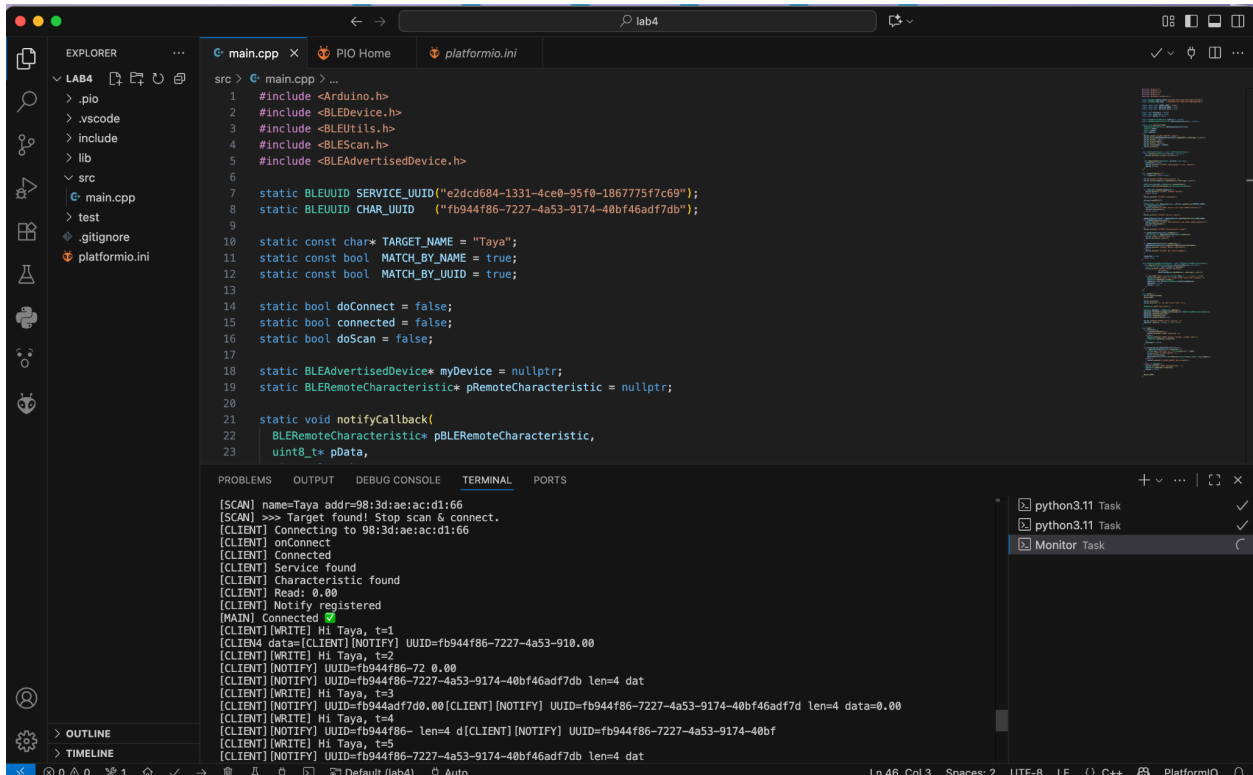
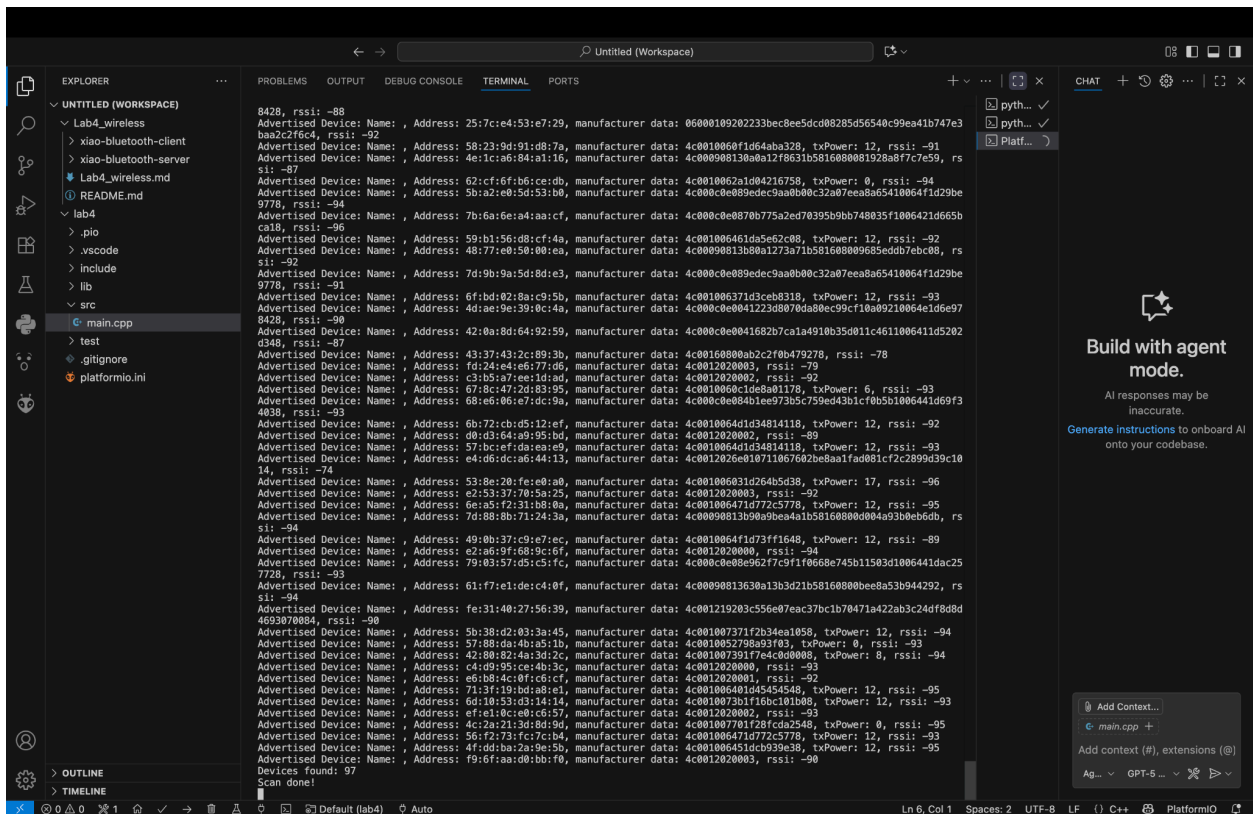


Team members: Taya Li, Yan Zhang



Untitled (Workspace)

EXPLORER

main.cpp

hello_xiao > src > main.cpp > applyMovingAverage(float)

```
166 float applyMovingAverage(float newReading) {
176     if (validCount < FILTER_SIZE) {
179         validCount++;
180
181         // Not ready until buffer is full
182         if (validCount < FILTER_SIZE) return 0;
183
184         // Once full, set readIndex correctly for circular updates
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Time	File	Message	Status
2.97	86.84	NOT_SENT	CONN
2.97	85.28	NOT_SENT	CONN
1.66	64.37	NOT_SENT	CONN
2.32	43.72	NOT_SENT	CONN
16.62	24.71	TRANSMIT	SENT
2.64	4.23	TRANSMIT	SENT
2.32	4.20	TRANSMIT	SENT
2.32	4.07	TRANSMIT	SENT
2.97	3.97	TRANSMIT	SENT
2.32	3.91	TRANSMIT	SENT
0.00	3.91	TRANSMIT	SENT
0.00	3.91	TRANSMIT	SENT
209.88	24.60	TRANSMIT	SENT
210.65	45.37	NOT_SENT	CONN
209.86	66.19	NOT_SENT	CONN
210.04	86.96	NOT_SENT	CONN
0.00	86.96	NOT_SENT	CONN
9.55	86.25	NOT_SENT	CONN
3.29	86.32	NOT_SENT	CONN
5.57	86.65	NOT_SENT	CONN
5.57	86.97	NOT_SENT	CONN
5.25	87.20	NOT_SENT	CONN
4.27	87.39	NOT_SENT	CONN
5.25	66.93	NOT_SENT	CONN
6.23	46.49	NOT_SENT	CONN
4.27	25.93	TRANSMIT	SENT
2.32	5.16	TRANSMIT	SENT
6.88	4.89	TRANSMIT	SENT
5.57	5.12	TRANSMIT	SENT
3.62	4.92	TRANSMIT	SENT
17.01	6.07	TRANSMIT	SENT
17.01	7.24	TRANSMIT	SENT
17.01	8.52	TRANSMIT	SENT
17.00	9.69	TRANSMIT	SENT
17.01	10.77	TRANSMIT	SENT
17.01	12.04	TRANSMIT	SENT
17.01	13.51	TRANSMIT	SENT
17.01	14.53	TRANSMIT	SENT
17.03	15.67	TRANSMIT	SENT

zsh hello_xiao

python3.11 Task

python3.11 Task

PlatformIO: Monitor (hello_xia

Ln 189, Col 36 Spaces: 4 UTF-8 LF C++ PlatformIO

connecte Aa ab * d
Replace AB
13 results in 1 file -
Open in editor

main.cpp src 13

static bool connect...
connected = false;
if (pClient->isConn...
connected = true;
Serial.println("== ...
Serial.print("[HB] c...
...connected="); Se...
...println(pClient && (...
if (connected && (!...
...&& (!pClient || !pC...
connected = false;
if (!connected) {
connected = false;

main.cpp

platformio.ini

src > C: main.cpp > [0] pRemoteChar

#include <Arduino.h>
0
9 #define SERVICE_UUID "e2dc684-1331-4ce0-95f0-186775f7c69"
10 #define CHARACTERISTIC_UUID "fb944f86-7227-4a53-9174-40bf46adf7db"
11
12 static const uint32_t SERIAL_BAUD = 9600;
13
14 static BLEScan* pScan = nullptr;
15 static BLEClient* pClient = nullptr;
16 static BLEAdvertisedDevice* target = nullptr;
17 static BLERemoteCharacteristic* pRemoteChar = nullptr;
18
19 static bool connected = false;
20 static bool hasTarget = false;
21
22 static uint32_t lastHeartbeatMs = 0;
23 static uint32_t lastReadMs = 0;
24
25 static float currentDistance = 0.0f;
26 static float maxDistance = 0.0f;
27 static float minDistance = 999.0f;
28 static uint32_t dataCount = 0;

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

Current: 13.81 cm
Max: 29.79 cm
Min: 3.52 cm
=====

1
[HB] connected=1 hasTarget=1 clientLink=YES
[read] len=4
[read] raw=D3 F9 5C 41
[read] float=13.81 cm
===== NOTIFY =====
len=4
raw=C2 18 52 41
Data #542
Current: 13.13 cm
Max: 29.79 cm
Min: 3.52 cm
=====

len=4
raw=88 B8 46 41
Data #543
Current: 12.42 cm
Max: 29.79 cm
Min: 3.52 cm
=====

python3.11 Task ✓
python3.11 Task ✓
Monitor Task ✓

Ln 17, Col 37 Spaces: 2 UTF-8 LF () C++ PlatformIO

connecte Aa ab * d
Replace AB
13 results in 1 file -
Open in editor

main.cpp src 13

static bool connect...
connected = false;
if (pClient->isConn...
connected = true;
Serial.println("== ...
Serial.print("[HB] c...
...connected="); Se...
...println(pClient && (...
if (connected && (!...
...&& (!pClient || !pC...
connected = false;
if (!connected) {
connected = false;

main.cpp

platformio.ini

src > C: main.cpp > [0] pRemoteChar

#include <Arduino.h>
0
9 #define SERVICE_UUID "e2dc684-1331-4ce0-95f0-186775f7c69"
10 #define CHARACTERISTIC_UUID "fb944f86-7227-4a53-9174-40bf46adf7db"
11
12 static const uint32_t SERIAL_BAUD = 9600;
13
14 static BLEScan* pScan = nullptr;
15 static BLEClient* pClient = nullptr;
16 static BLEAdvertisedDevice* target = nullptr;
17 static BLERemoteCharacteristic* pRemoteChar = nullptr;
18
19 static bool connected = false;
20 static bool hasTarget = false;
21
22 static uint32_t lastHeartbeatMs = 0;
23 static uint32_t lastReadMs = 0;
24
25 static float currentDistance = 0.0f;
26 static float maxDistance = 0.0f;
27 static float minDistance = 999.0f;
28 static uint32_t dataCount = 0;

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

len=4
raw=40 8D 74 41
Data #630
Current: 15.25 cm
Max: 29.79 cm
Min: 3.52 cm
=====

len=4
raw=15 6E 79 41
Data #631
Current: 15.59 cm
Max: 29.79 cm
Min: 3.52 cm
=====

len=4
raw=EA CE 7E 41
Data #632
Current: 15.93 cm
Max: 29.79 cm
Min: 3.52 cm
=====

len=4
raw=EA CE 7E 41
Data #633
Current: 15.93 cm
Max: 29.79 cm
Min: 3.52 cm
=====

1
[HB] connected=1 hasTarget=1 clientLink=YES
[read] len=4
[read] raw=EA CE 7E 41
[read] float=15.93 cm
===== NOTIFY =====
len=4
raw=9D 10 93 41
Data #634
Current: 18.38 cm
Max: 29.79 cm
Min: 3.52 cm
=====

len=4
raw=27 E2 98 41
Data #635
Current: 18.11 cm
Max: 29.79 cm
Min: 3.52 cm
=====

python3.11 Task ✓
python3.11 Task ✓
Monitor Task ✓

Ln 17, Col 37 Spaces: 2 UTF-8 LF () C++ PlatformIO