REPORT LAB

EMBEDDED SYSTEM - CO3054

Group: **CC02**

Student: **Dương Gia An – 1952163**

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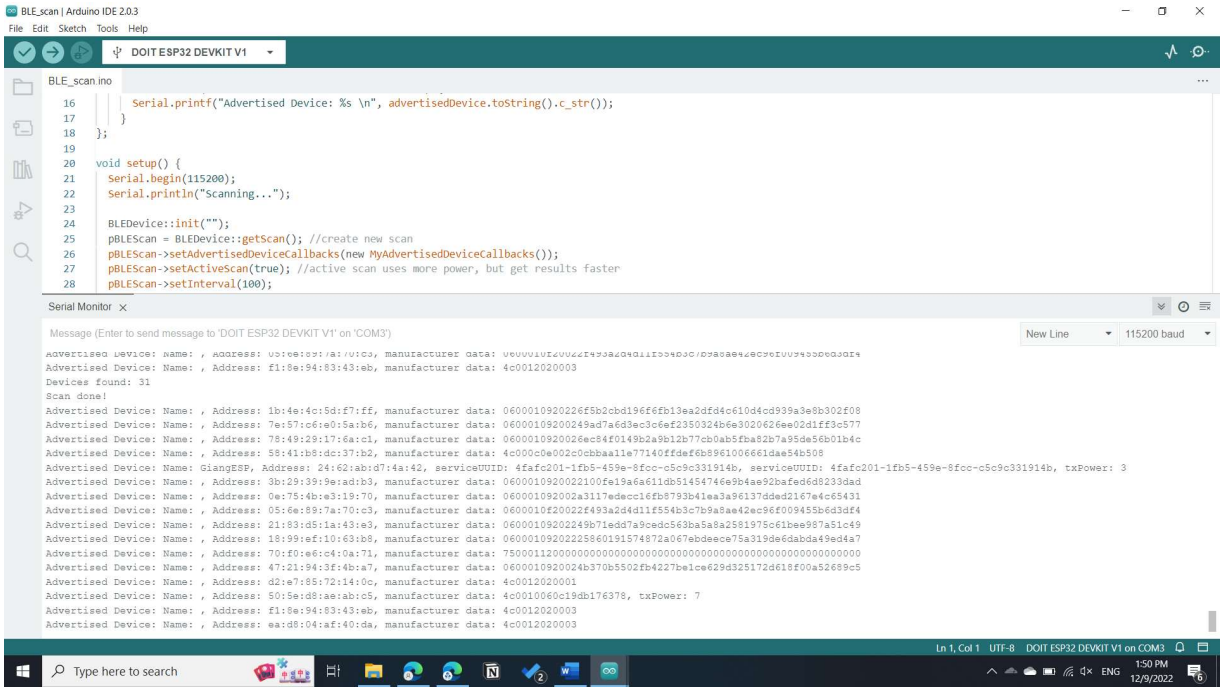
I. BLE with ESP32 on Arduino IDE



II. ESP32 BLE SCANNER

Result:

```
Devices found: 31
Scan done!
Advertised Device: Name: , Address: 42:97:02:07:7f:7a, manufacturer data: 4c001005141c463802, txPower: 12
Advertised Device: Name: , Address: 3b:29:39:9e:ad:b3, manufacturer data: 0600010920022100fe19a6a611db51454746e9b4ae92bafed6d8233dad
Advertised Device: Name: , Address: 1b:4e:4c:5d:f7:ff, manufacturer data: 0600010920226f5b2cbd196f6fb13ea2dfd4c610d4cd939a3e8b302f08
Advertised Device: Name: , Address: d2:e7:85:72:14:0c, manufacturer data: 4c0012020001
Advertised Device: Name: , Address: 58:41:b8:dc:37:b2, manufacturer data: 4c000c0e00270c3d62ceac49b756c9ce0e541006661dae54b508
Advertised Device: Name: , Address: 7e:57:c6:e0:5a:b6, manufacturer data: 0600010920024ad7a6d3ec3c6ef2350324b6e3020626ee02d1ff3c577
Advertised Device: Name: GiangESP, Address: 24:62:ab:d7:4a:42, serviceUUID: 4fafc201-1fb5-459e-8fcc-c5c9c331914b, serviceUUID: 4fafc201-1fb5-459e-8fcc-c5c9c3
Advertised Device: Name: , Address: 78:49:29:17:6a:c1, manufacturer data: 0600010920026ec84f0149b2a9b12b77cb0ab5fba82b7a95de56b01b4c
Advertised Device: Name: , Address: 5b:76:85:75:39:65, manufacturer data: 4c001005571cb36f19, txPower: 7
Advertised Device: Name: 1952536, Address: 24:6f:28:ae:8f:02, serviceUUID: 4fafc201-1fb5-459e-8fcc-c5c9c331914b, serviceUUID: 4fafc201-1fb5-459e-8fcc-c5c9c33
Advertised Device: Name: , Address: 18:99:ef:10:63:b8, manufacturer data: 060001092022258601915748 72a067ebdeece75a319de6dabda49ed4a7
Advertised Device: Name: , Address: 47:21:94:3f:4b:a7, manufacturer data: 0600010920024b370b5502fb4227be1ce629d325172d618f00a52689c5
Advertised Device: Name: , Address: 07:a9:50:e1:06:4b, manufacturer data: 060001092002de9e79e16c0a86712fdecac67776d6403518e4e03b14ca
Advertised Device: Name: , Address: 48:cd:05:79:c7:9b, manufacturer data: 4c001005161c64b1c1, txPower: 12
Advertised Device: Name: , Address: 77:1b:60:e9:b2:60, manufacturer data: 4c0010063f1a84d819b7, txPower: 8
Advertised Device: Name: , Address: f1:8e:94:83:43:eb, manufacturer data: 4c0012020003
Advertised Device: Name: , Address: 2c:52:57:12:d9:a1, manufacturer data: 0600010f2002d9303541e87913297a3da95f7ce62e46ae0b21d53a3dd1
Advertised Device: Name: , Address: 3c:59:49:78:7a:da, manufacturer data: 0600010f2002b84b9b5eaad7350220b104af4bc814d4b1f635064e4bdb
Advertised Device: Name: , Address: c8:0d:de:fc:a4:cc, manufacturer data: 4c0012020000
Advertised Device: Name: , Address: 21:83:d5:1a:43:e3, manufacturer data: 06000109202249b71edd7a9cedc563ba5a8a2581975c61bee987a51c49
Advertised Device: Name: , Address: 40:c7:49:6b:b7:9b, manufacturer data: 4c0010062d1a86923ca1, txPower: 7
Advertised Device: Name: , Address: f3:de:c5:55:7d:c2, manufacturer data: 4c0012020000
Advertised Device: Name: , Address: 70:f0:e6:c4:0a:71, manufacturer data: 750001120000000000000000000000000000000000000000000000000000000000
Advertised Device: Name: , Address: 50:5e:d8:ae:ab:c5, manufacturer data: 4c0010060c19db176378, txPower: 7
Advertised Device: Name: , Address: cb:07:95:48:5d:ec, manufacturer data: 4c0012020002
Advertised Device: Name: , Address: fc:57:42:5b:b2:d7, manufacturer data: 4c0012020000
Advertised Device: Name: , Address: db:1c:37:d8:a7:be, manufacturer data: 4c0012020002
```

III. ESP32 BLE SEVER with sever name: “ESP32 Gia An 1952163”

```
#define SERVICE_UUID        "69a87d99-f2d3-4b5f-ba31-2a6b6a94a9f7"
#define CHARACTERISTIC_UUID "35480e82-188e-4b6b-bc77-1dde5fb8ddb3"
```

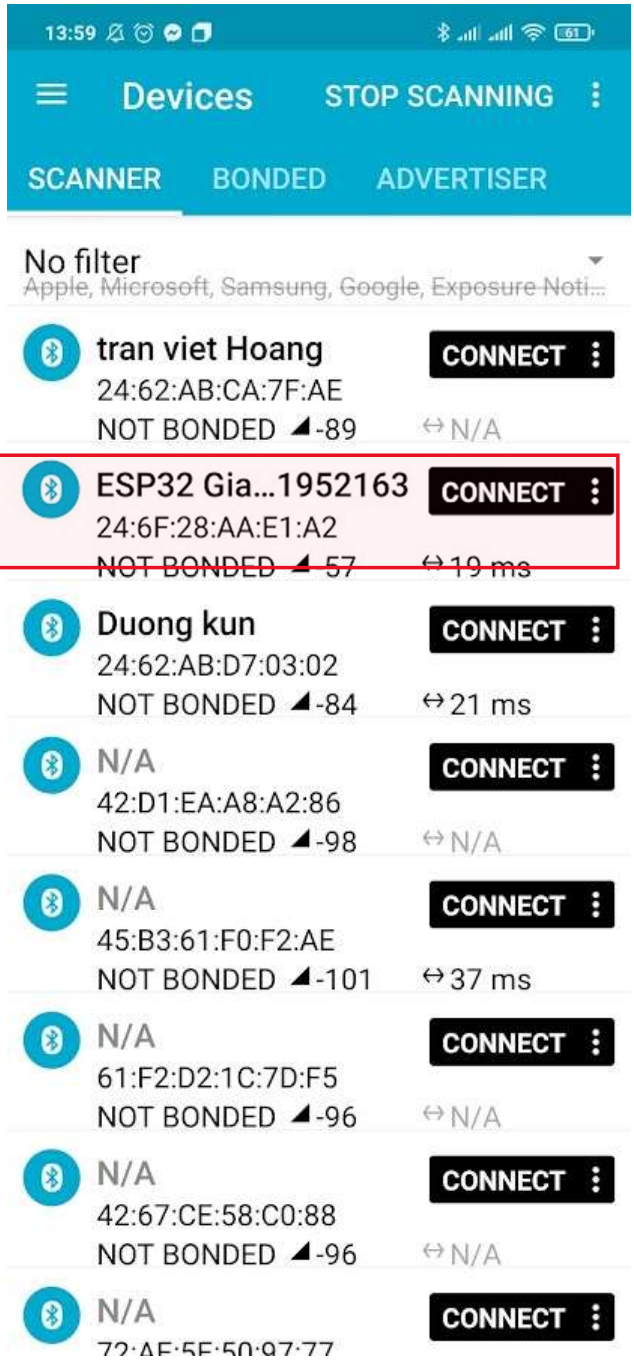
BLE name setup:

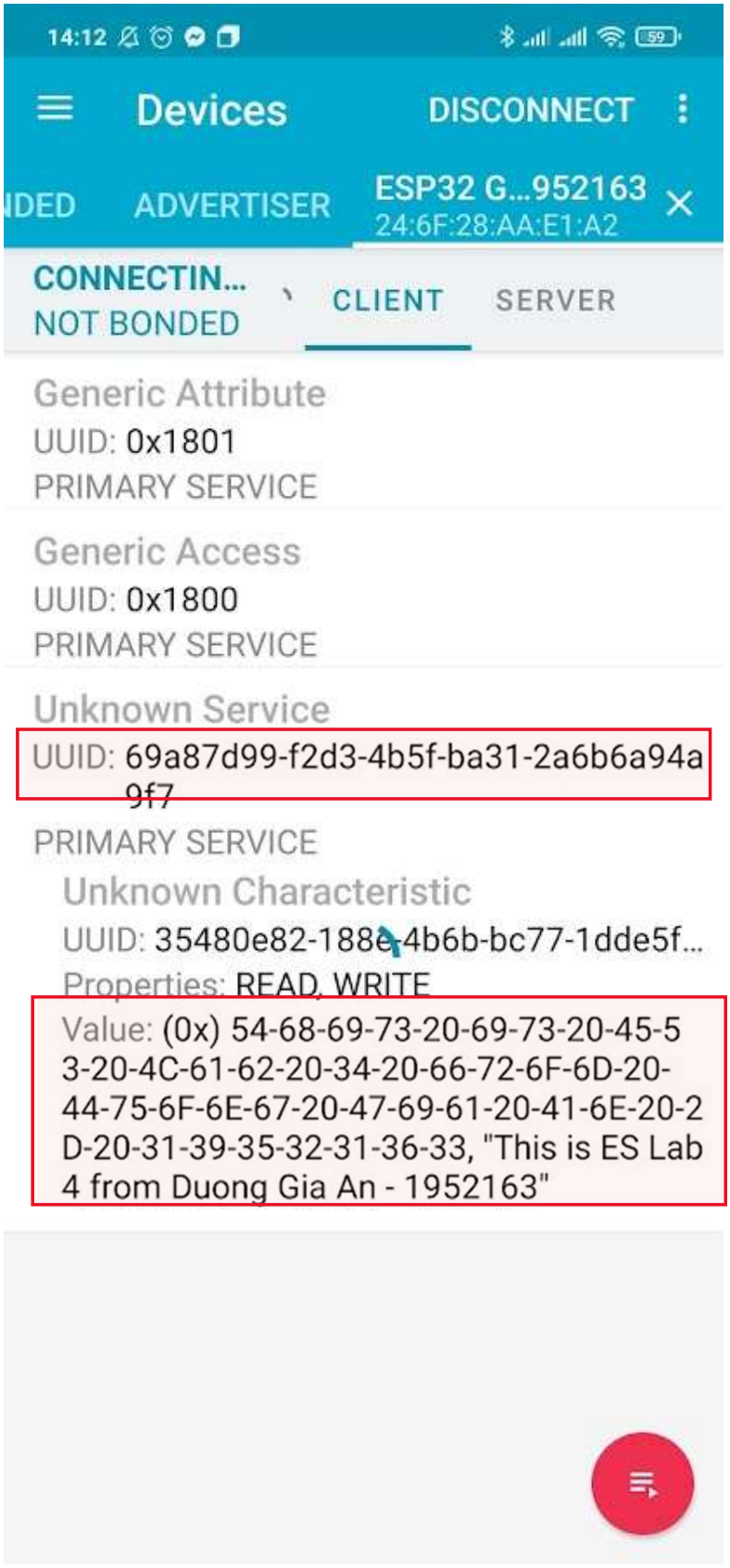
```
  BLEDevice::init("ESP32 Gia An 1952163");
```

Set Characteristic:

```
  pCharacteristic->setValue("This is ES Lab 4 from Duong Gia An - 195163");
```

IV. ESP32 BLE SEVER WITH SMARTPHONE




14:12
Devices
DISCONNECT
IDED
ADVERTISER
ESP32 G...952163
24:6F:28:AA:E1:A2
CONNECTIN...
NOT BONDED
CLIENT
SERVER
Generic Attribute
UUID: 0x1801
PRIMARY SERVICE
Generic Access
UUID: 0x1800
PRIMARY SERVICE
Unknown Service
UUID: 69a87d99-f2d3-4b5f-ba31-2a6b6a94a9f7
PRIMARY SERVICE
Unknown Characteristic
UUID: 35480e82-188e-4b6b-bc77-1dde5f...
Properties: READ, WRITE
Value: (0x) 54-68-69-73-20-69-73-20-45-53-20-4C-61-62-20-34-20-66-72-6F-6D-20-44-75-6F-6E-67-20-47-69-61-20-41-6E-20-2D-20-31-39-35-32-31-36-33, "This is ES Lab 4 from Duong Gia An - 1952163"