**Libraries**  
OLED display - [adafruit\_SSD1306.h](https://github.com/adafruit/Adafruit_SSD1306) and the [adafruit\_GFX.h](https://github.com/adafruit/Adafruit-GFX-Library" \t "_blank)

GFX (adafruit)

**Code**:

#include <Wire.h>

#include <Adafruit\_GFX.h>

#include <Adafruit\_SSD1306.h>

#define OLED\_RESET 4

Adafruit\_SSD1306 display(OLED\_RESET);

#include <Adafruit\_Fingerprint.h>

#include <SoftwareSerial.h>

SoftwareSerial mySerial(2, 3);

Adafruit\_Fingerprint finger = Adafruit\_Fingerprint(&mySerial);

int fingerprintID = 0;

String IDname;

void setup(){

//Fingerprint sensor module setup

Serial.begin(9600);

// set the data rate for the sensor serial port

finger.begin(57600);

if (finger.verifyPassword()) {

Serial.println("Found fingerprint sensor!");

}

else {

Serial.println("Did not find fingerprint sensor :(");

while (1) { delay(1); }

}

//OLED display setup

Wire.begin();

display.begin(SSD1306\_SWITCHCAPVCC, 0x3C);

//displays main screen

displayMainScreen();

}

void loop(){

displayMainScreen();

fingerprintID = getFingerprintIDez();

delay(50);

if(fingerprintID == 1 || fingerprintID == 3 || fingerprintID == 4 || fingerprintID == 5){

IDname = "Sara";

displayUserGreeting(IDname);

}

else if(fingerprintID == 2){

IDname = "Rui";

displayUserGreeting(IDname);

}

}

// returns -1 if failed, otherwise returns ID #

int getFingerprintIDez() {

uint8\_t p = finger.getImage();

if (p != FINGERPRINT\_OK) return -1;

p = finger.image2Tz();

if (p != FINGERPRINT\_OK) return -1;

p = finger.fingerFastSearch();

if (p != FINGERPRINT\_OK) return -1;

// found a match!

Serial.print("Found ID #");

Serial.print(finger.fingerID);

Serial.print(" with confidence of ");

Serial.println(finger.confidence);

return finger.fingerID;

}

void displayMainScreen(){

display.clearDisplay();

display.setTextSize(1);

display.setTextColor(WHITE);

display.setCursor(7,5);

display.println("Waiting fingerprint");

display.setTextSize(1);

display.setTextColor(WHITE);

display.setCursor(52,20);

display.println("...");

display.display();

delay(2000);

}

void displayUserGreeting(String Name){

display.clearDisplay();

display.setTextColor(WHITE);

display.setTextSize(2);

display.setCursor(0,0);

display.print("Hello");

display.setCursor(0,15);

display.print(Name);

display.display();

delay(5000);

fingerprintID = 0;

}