GitHub/VSCode/PlatformIO Lab Report

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Serial output of first task:

```
○ ✳ 正在执行任务: platformio device monitor

--- Terminal on /dev/cu.usbmodem101 | 115200 8-N-1
--- Available filters and text transformations: colorize, debug, default, direct,
esp32_exception_decoder, hexlify, log2file, nocontrol, printable, send_on_enter, t
ime
--- More details at https://bit.ly/pio-monitor-filters
--- Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H
Hello XIAO!
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```

Build log of second task:

```cpp
#include <Arduino.h>
#include <Bounce2.h>

// Pin definitions
const int SWITCH_PIN = D2;   // GPIO switch
const int LED_PIN = D10;     // GPIO LED pin

// Debounce object
Bounce2::Button button = Bounce2::Button();

// Variable to track LED state
bool ledState = false;

void setup() {
  // Initialize Serial for logging
  Serial.begin(115200);
  delay(1000);   // Wait for serial to init

  Serial.println("\n\n=== LED Switch Contro
  Serial.println("XIAO ESP32C3 – Tactile Sw
  Serial.println("==========================

  // Configure LED pin
  pinMode(LED_PIN, OUTPUT);
  digitalWrite(LED_PIN, LOW);   // Start wit

  // Configure debounced button
  button.attach(SWITCH_PIN, INPUT_PULLUP);
  button.interval(50);   // Debounce interva
  button.setPressedState(LOW);   // Button i

  Serial.println("Setup complete. Waiting f
}

void loop() {
  // Update button state
  button.update();

  // Check if button was pressed
  if (button.pressed()) {
    // Toggle LED state
    ledState = !ledState;
    digitalWrite(LED_PIN, ledState ? HIGH :

    // Log the state change
    Serial.print("Button pressed – LED is n
```

```
正在执行任务: platformio run
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/IPAddress.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/IPv6Address.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/MD5Builder.cpp.o
Archiving .pio/build/seeed_xiao_esp32c3/lib76f/libBounce2.a
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/Print.cpp.o
Indexing .pio/build/seeed_xiao_esp32c3/lib76f/libBounce2.a
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/Stream.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/StreamString.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/Tone.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/USB.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/USBCDC.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/USBMSC.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/WMath.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/WString.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/base64.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/cbuf.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-adc.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-bt.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-cpu.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-dac.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-gpio.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-i2c-slave.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-i2c.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-ledc.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-matrix.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-misc.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-psram.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-rgb-led.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-rmt.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-sigmadelta.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-spi.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-time.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-timer.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-tinyusb.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-touch.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/esp32-hal-uart.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/firmware_msc_fat.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/libb64/cdecode.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/libb64/cencode.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/main.cpp.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/stdlib_noniso.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/wiring_pulse.c.o
Compiling .pio/build/seeed_xiao_esp32c3/FrameworkArduino/wiring_shift.c.o
Archiving .pio/build/seeed_xiao_esp32c3/libFrameworkArduino.a
Indexing .pio/build/seeed_xiao_esp32c3/libFrameworkArduino.a
Linking .pio/build/seeed_xiao_esp32c3/firmware.elf
Retrieving maximum program size .pio/build/seeed_xiao_esp32c3/firmware.elf
Checking size .pio/build/seeed_xiao_esp32c3/firmware.elf
Advanced Memory Usage is available via "PlatformIO Home > Project Inspect"
RAM:   [          ]    4.2% (used 13668 bytes from 327680 bytes)
Flash: [==        ]   17.9% (used 235056 bytes from 1310720 bytes)
Building .pio/build/seeed_xiao_esp32c3/firmware.bin
esptool.py v4.9.0
Creating esp32c3 image...
Merged 2 ELF sections
Successfully created esp32c3 image.
======================================== [SUCCESS] Took 4.54 seconds ========================================
终端将被任务重用，按任意键关闭。
```

Upload log of second task:

```
✳ 正在执行任务：platformio run --target upload
jtag, jlink, minimodule, olimex-arm-usb-ocd, olimex-arm-usb-ocd-h, olimex-arm-usb-
tiny-h, olimex-jtag-tiny, tumpa
CURRENT: upload_protocol = esptool
Looking for upload port...
Auto-detected: /dev/cu.usbmodem101
Uploading .pio/build/seeed_xiao_esp32c3/firmware.bin
esptool.py v4.9.0
Serial port /dev/cu.usbmodem101
Connecting...
Chip is ESP32-C3 (QFN32) (revision v0.4)
Features: WiFi, BLE, Embedded Flash 4MB (XMC)
Crystal is 40MHz
USB mode: USB-Serial/JTAG
MAC: 98:3d:ae:a9:f1:e0
Uploading stub...
Running stub...
Stub running...
Changing baud rate to 460800
Changed.
Configuring flash size...
Flash will be erased from 0x00000000 to 0x00003fff...
Flash will be erased from 0x00008000 to 0x00008fff...
Flash will be erased from 0x0000e000 to 0x0000ffff...
Flash will be erased from 0x00010000 to 0x0004cfff...
SHA digest in image updated
Compressed 13248 bytes to 9562...
Writing at 0x00000000... (100 %)
Wrote 13248 bytes (9562 compressed) at 0x00000000 in 0.2 seconds (effective 451.0
kbit/s)...
Hash of data verified.
Compressed 3072 bytes to 146...
Writing at 0x00008000... (100 %)
Wrote 3072 bytes (146 compressed) at 0x00008000 in 0.1 seconds (effective 372.7 kb
it/s)...
Hash of data verified.
Compressed 8192 bytes to 47...
Writing at 0x0000e000... (100 %)
Wrote 8192 bytes (47 compressed) at 0x0000e000 in 0.1 seconds (effective 624.6 kbi
t/s)...
Hash of data verified.
Compressed 246752 bytes to 137435...
Writing at 0x00010000... (11 %)
Writing at 0x0001af24... (22 %)
Writing at 0x00022cd9... (33 %)
Writing at 0x00028ba9... (44 %)
Writing at 0x0002ed12... (55 %)
Writing at 0x00034cd0... (66 %)
Writing at 0x0003c9c8... (77 %)
Writing at 0x000436b8... (88 %)
Writing at 0x00049a8b... (100 %)
Wrote 246752 bytes (137435 compressed) at 0x00010000 in 2.2 seconds (effective 906
.8 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
=========================== [SUCCESS] Took 4.76 seconds ===========================
✳ 终端将被任务重用，按任意键关闭。
```

Serial output of second task:

```
○ ⋇ 正在执行任务: platformio device monitor

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  --- Available filters and text transformations: colorize, debug, default, direct,
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  ime
  --- More details at https://bit.ly/pio-monitor-filters
  --- Quit: Ctrl+C | Menu: Ctrl+T | Help: Ctrl+T followed by Ctrl+H
  ton pressed - LED is now: OFF
  Button pressed - LED is now: ON
  Button pressed - LED is now: OFF
  Button pressed - LED is now: ON
  Button pressed - LED is now: OFF
  Button pressed - LED is now: ON
  Button pressed - LED is now: OFF
  Button pressed - LED is now: ON
  Button pressed - LED is now: OFF
```

Final Photo:
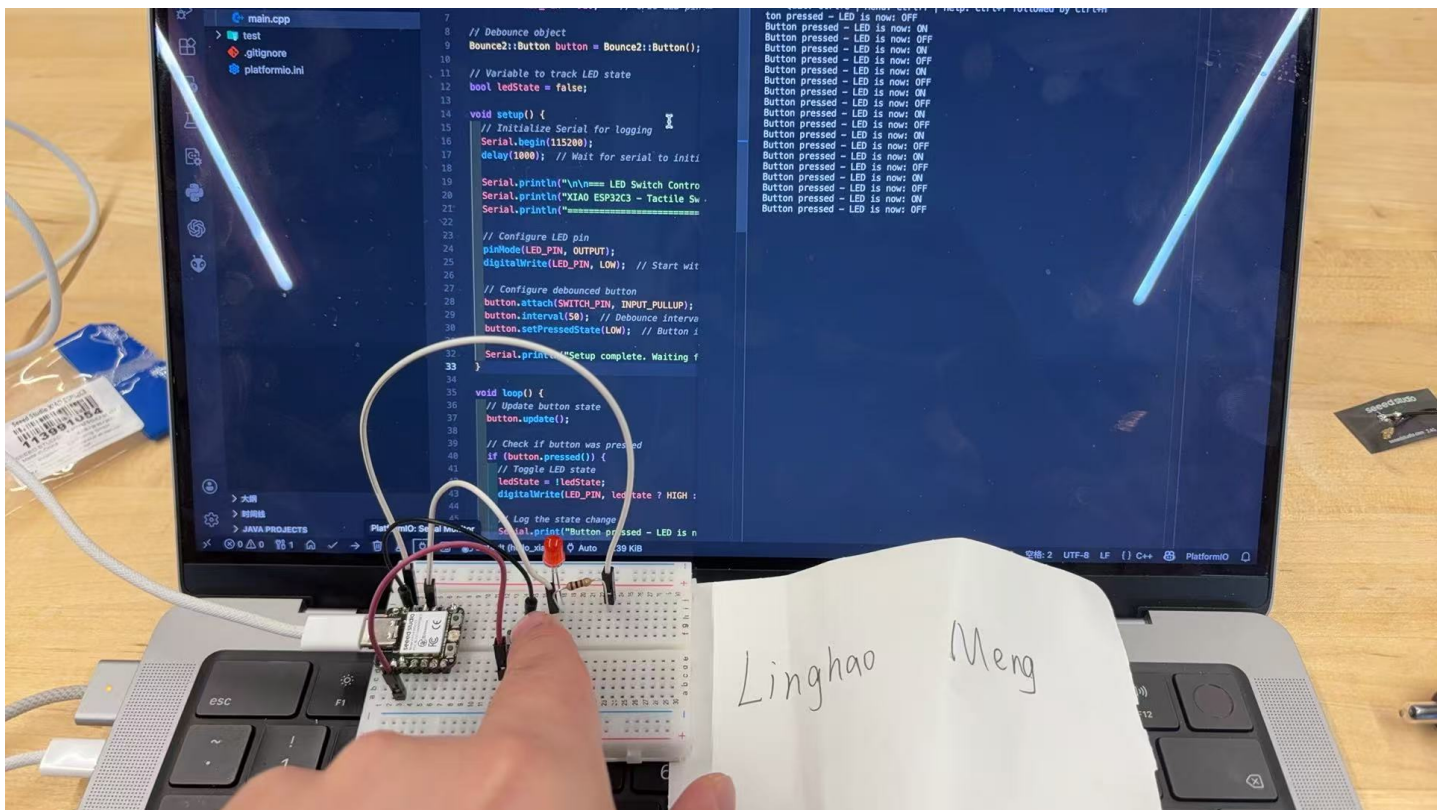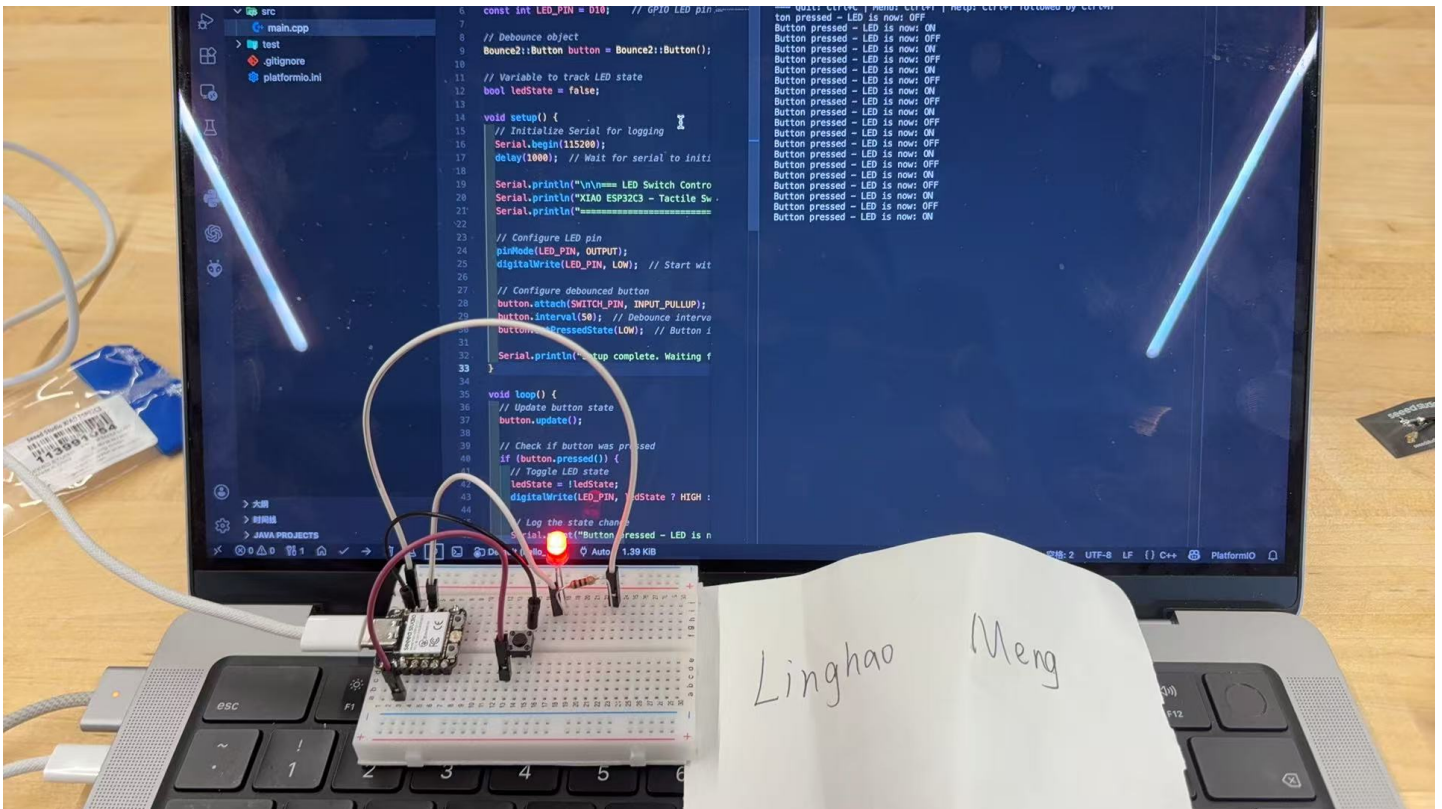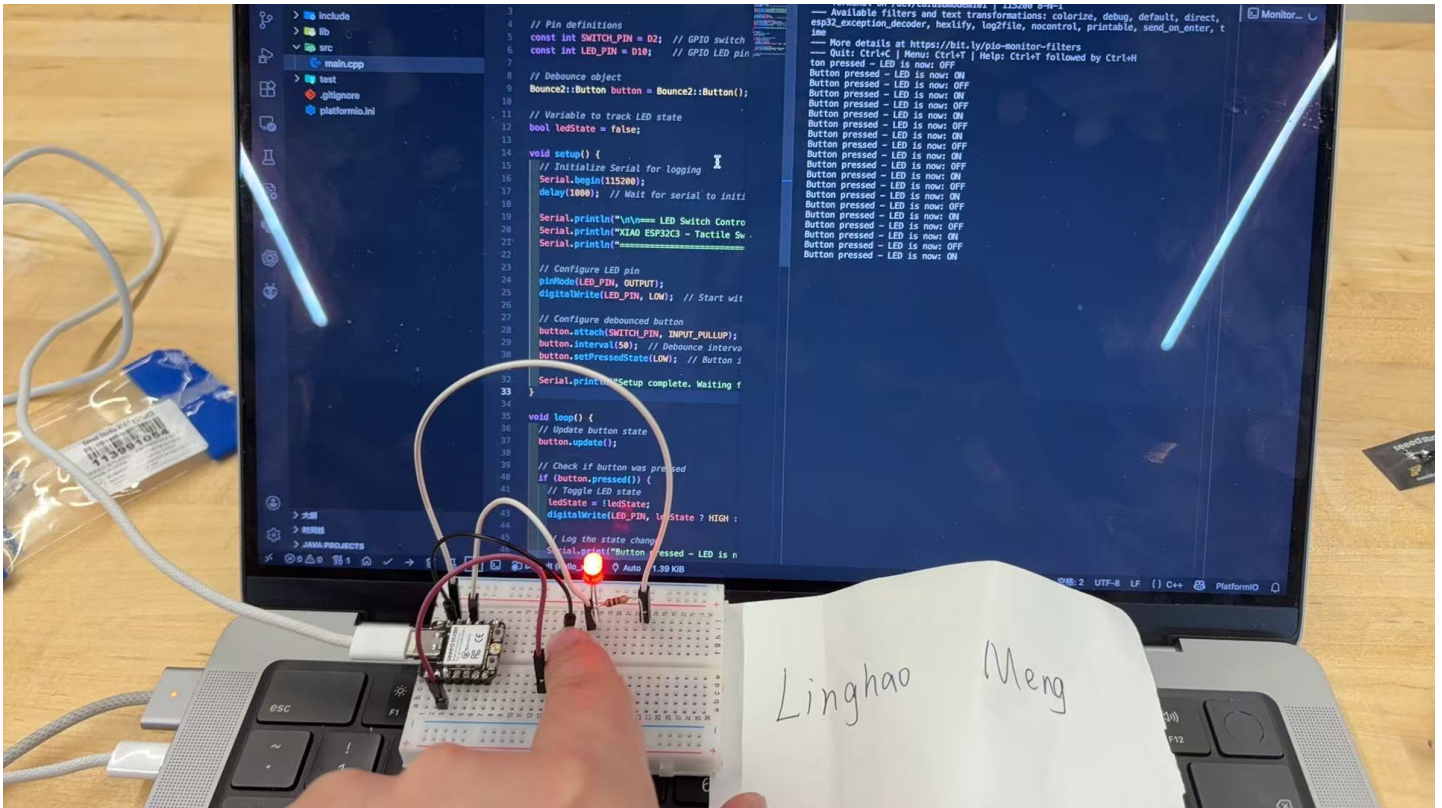
Github Page:

HelloXiao Public

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main   1 Branch   0 Tags

Go to file   Add file   <> Code

menglh20 first commit   ✕   11efb2c · now   1 Commit

📁 hello_xiao	first commit	now
📄 Lab_Report.markdown	first commit	now

📖 README

📖

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Help people interested in this repository understand your project.

Add a README

About

First try of PlatformIO

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Publish your first package

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Based on your tech stack

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Build a MSBuild based project.

C/C++ with Make   Configure
Build and test a C/C++ project using Make.