day2_test2 - MPLAB IDE v8.91

File Edit View Project Debugger Programmer Tools Configure Window Help

Debug

Checksum: 0xca1a

C:\...\test2.c

```
#include <p18f4580.h>
#include <spi.h>
#include <usart.h>
#include <string.h>
#include <stdio.h>

#define MCP23S17_IODIRA  0x00  // I/O Direction register A
#define MCP23S17_IODIRB  0x01  // I/O Direction register B
#define MCP23S17_GPIOA   0x12  // GPIO register A
#define MCP23S17_GPIOB   0x13  // GPIO register B
#define MCP23S17_WRITE   0x40  // Control byte for writing
#define MCP23S17_ADDR    0x00  // MCP23S17 address

unsigned char gpioa_state = 0x00;  // To store the state of GPIOA pins
unsigned char gpiob_state = 0x00;  // To store the state of GPIOB pins

// SPI Initialization
void SPI_Init(void) {
    OpenSPI(SPI_FOSC_16, MODE_00, SMPEND);  // Configure SPI
    TRISDbits.TRISD0 = 0;                   // Set RD0 as output for CS
    LATDbits.LATD0 = 1;                     // Set RD0 high (inactive)
}

// UART Initialization
void UART_Init(void) {
    OpenUSART(USART_TX_INT_OFF & USART_RX_INT_ON & USART_ASYNCH_MODE &
    // Baud rate at 9600 bps for 10 MHz FOSC
}

// Write data to MCP23S17 registers
void MCP23S17_Write(unsigned char reg, unsigned char data) {
    LATDbits.LATD0 = 0;  // Select MCP23S17 (CS low)
    WriteSPI(MCP23S17_WRITE | (MCP23S17_ADDR << 1));  // Send control b
    WriteSPI(reg);  // Send register address
    WriteSPI(data);  // Send data
    LATDbits.LATD0 = 1;  // Deselect MCP23S17 (CS high)
}

// Initialize MCP23S17 to set all pins as output
void MCP23S17_Init(void) {
    MCP23S17_Write(MCP23S17_IODIRA, 0x00);  // Set all A pins as output
    MCP23S17_Write(MCP23S17_IODIRB, 0x00);  // Set all B pins as output
```

Output

Build | Version Control | Find in Files

```
Debug build of project `C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\day2_test2.mcp' started.
Language tool versions: mpasmwin.exe v5.54, mplink.exe v5.00, mcc18.exe v3.47, mplib.exe v5.00
Preprocessor symbol `__DEBUG' is defined.
Sun Sep 01 23:26:03 2024
---------------------------------------------------------------------
Clean: Deleting intermediary and output files.
Clean: Deleted file "C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\test2.o".
Clean: Deleted file "C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\day2_test2.cof".
Clean: Deleted file "C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\day2_test2.hex".
Clean: Done.
Executing: "C:\Program Files (x86)\Microchip\mplabc18\v3.47\bin\mcc18.exe" -p=18F4580 "test2.c" -fo="test2.o" -D__DEBUG -Ou- -Ot- -Ob- -Op- -Or- -Od
MPLAB C18 3.47 (evaluation)
Copyright 2000-2011 Microchip Technology Inc.
Days remaining until evaluation becomes feature limited:  55

WARNING:  Running the compiler in extended mode will not be supported when the evaluation becomes feature limit

C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\test2.c:60:Warning [2066] type qualifier mismatch in assig
C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\test2.c:66:Warning [2066] type qualifier mismatch in assig
C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\test2.c:77:Warning [2066] type qualifier mismatch in assig
Executing: "C:\Program Files (x86)\Microchip\mplabc18\v3.47\bin\mplink.exe" /p18F4580 /l"C:\Program Files (x86)\Microchip\mplabc18\v3.47\lib" "test2.
MPLINK 5.00, LINKER
Device Database Version 1.17
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors    : 0

MP2HEX 5.00, COFF to HEX File Converter
Copyright (c) 1998-2013 Microchip Technology Inc.
Errors    : 0

Loaded C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\day2_test2.cof.
---------------------------------------------------------------------
Debug build of project `C:\Users\SANDY\Desktop\mplab\!development\day2\mplab\day2_test2.mcp' succeeded.
Language tool versions: mpasmwin.exe v5.54, mplink.exe v5.00, mcc18.exe v3.47, mplib.exe v5.00
Preprocessor symbol `__DEBUG' is defined.
Sun Sep 01 23:26:04 2024
---------------------------------------------------------------------
BUILD SUCCEEDED
```

PIC18F4580 | W:0 | n ov z dc c | bank 0 | WR

day2_test1 - Proteus 8 Professional - Schematic Capture

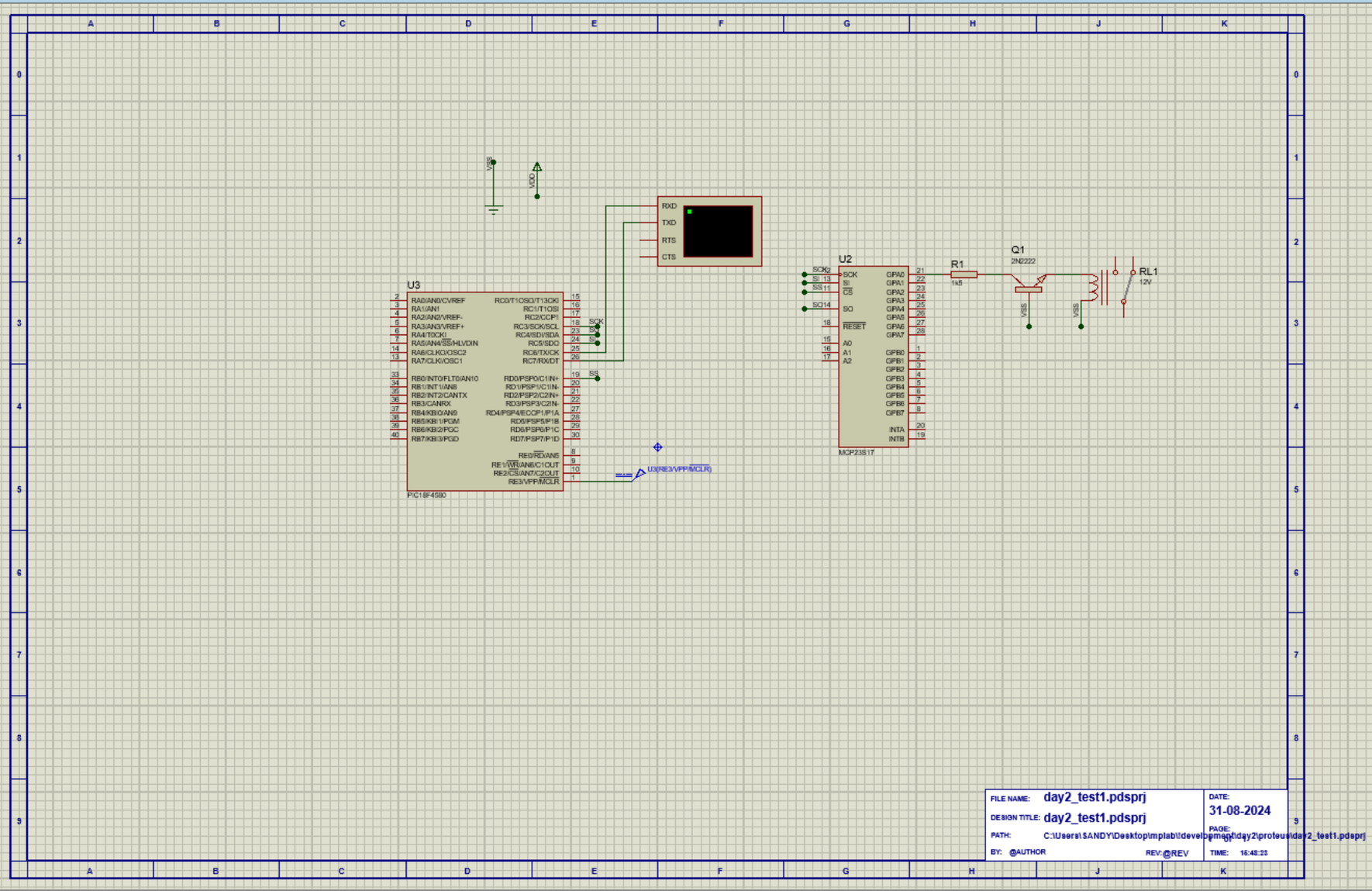
File Edit View Tool Design Graph Debug Library Template System Help

Base Design

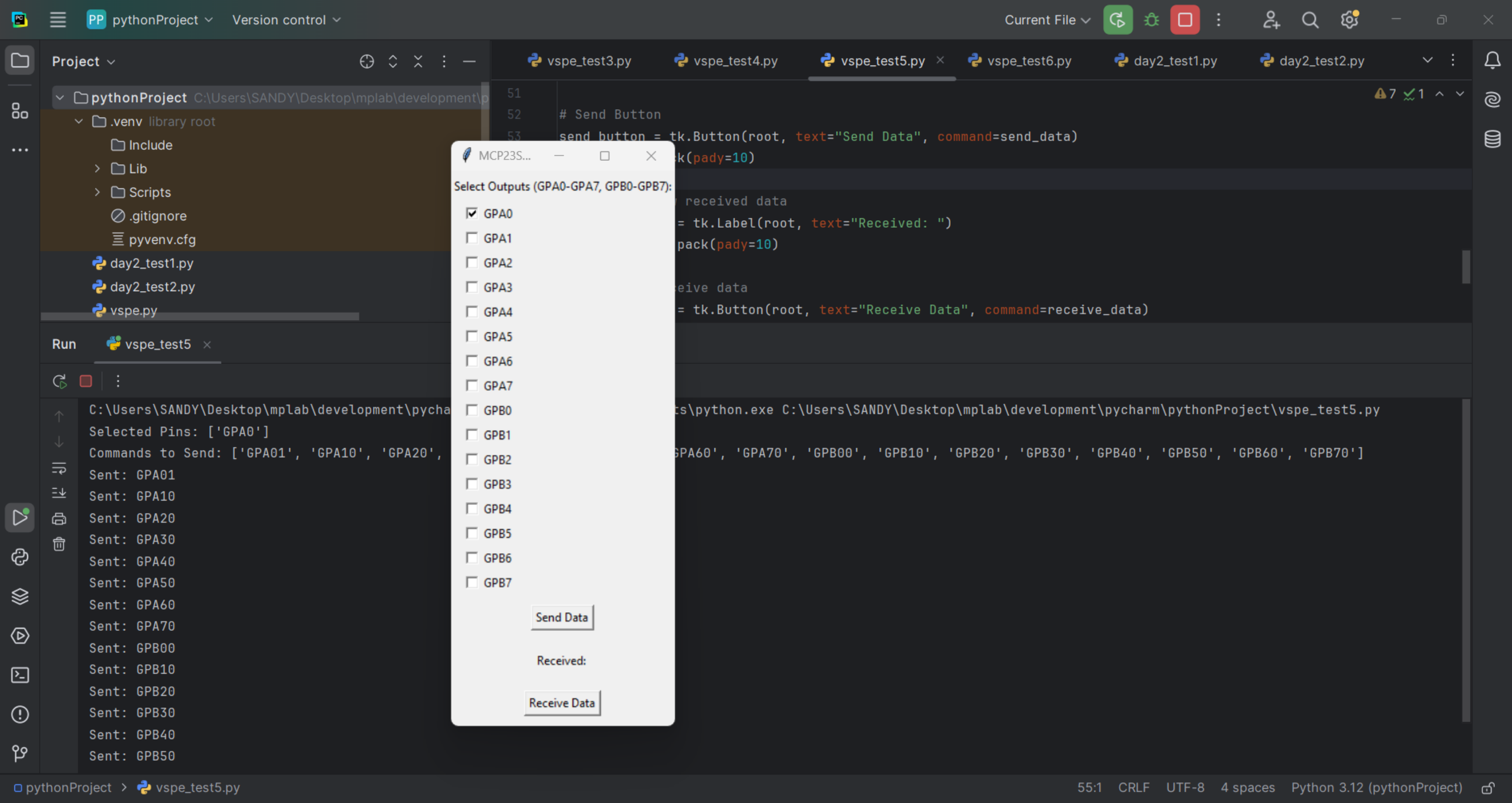
Schematic Capture | Source Code

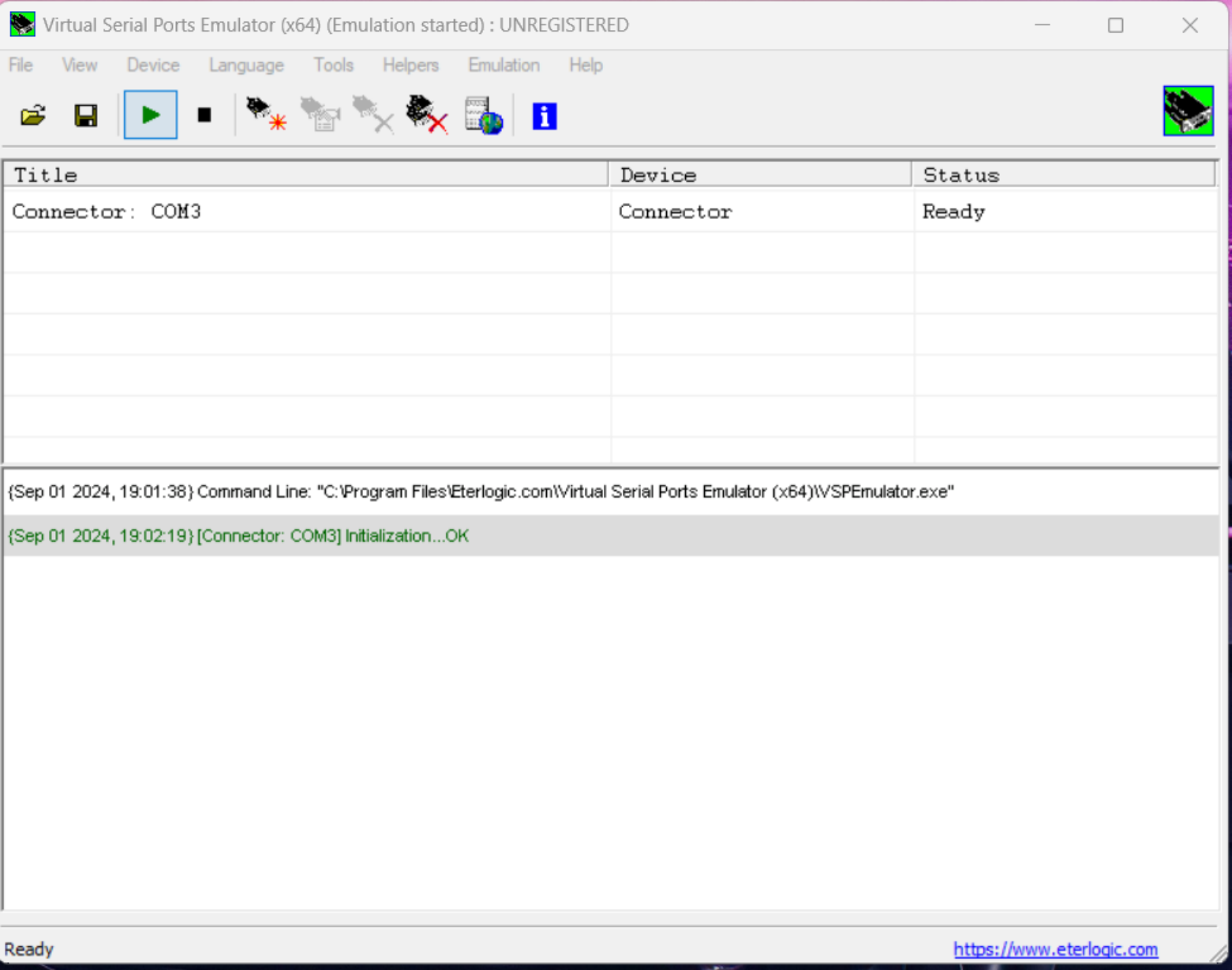
DEVICES

- 2N2222
- 3WATT1K5
- 9C04021A3000FLH
- 10WATT1K
- DIODE-LED
- LAMP
- MCP23S17
- MMBTA43
- PIC18F4580
- RELAY
- RTDPROBE



0 Message(s) | Root sheet 1 | x: -3900.0 y: +1300.0


pythonProject
Version control
Current File
Project
pythonProject C:\Users\SANDY\Desktop\mplab\development\p
.venv library root
Include
Lib
Scripts
.gitignore
pyvenv.cfg
day2_test1.py
day2_test2.py
vspe.py
vspe_test3.py
vspe_test4.py
vspe_test5.py
vspe_test6.py
day2_test1.py
day2_test2.py
51
52 # Send Button
53 send_button = tk.Button(root, text="Send Data", command=send_data)
k(pady=10)
received data
= tk.Label(root, text="Received: ")
pack(pady=10)
eive data
= tk.Button(root, text="Receive Data", command=receive_data)
MCP23S...
Select Outputs (GPA0-GPA7, GPB0-GPB7):
GPA0
GPA1
GPA2
GPA3
GPA4
GPA5
GPA6
GPA7
GPB0
GPB1
GPB2
GPB3
GPB4
GPB5
GPB6
GPB7
Send Data
Received:
Receive Data
Run
vspe_test5
C:\Users\SANDY\Desktop\mplab\development\pycha
s\python.exe C:\Users\SANDY\Desktop\mplab\development\pycharm\pythonProject\vspe_test5.py
Selected Pins: ['GPA0']
Commands to Send: ['GPA01', 'GPA10', 'GPA20',
GPA60', 'GPA70', 'GPB00', 'GPB10', 'GPB20', 'GPB30', 'GPB40', 'GPB50', 'GPB60', 'GPB70']
Sent: GPA01
Sent: GPA10
Sent: GPA20
Sent: GPA30
Sent: GPA40
Sent: GPA50
Sent: GPA60
Sent: GPA70
Sent: GPB00
Sent: GPB10
Sent: GPB20
Sent: GPB30
Sent: GPB40
Sent: GPB50
pythonProject > vspe_test5.py
55:1 CRLF UTF-8 4 spaces Python 3.12 (pythonProject)


Virtual Serial Ports Emulator (x64) (Emulation started) : UNREGISTERED
File
View
Device
Language
Tools
Helpers
Emulation
Help
Title
Device
Status
Connector: COM3
Connector
Ready
{Sep 01 2024, 19:01:38} Command Line: "C:\Program Files\Eterlogic.com\Virtual Serial Ports Emulator (x64)\VSPEmulator.exe"
{Sep 01 2024, 19:02:19} [Connector: COM3] Initialization...OK
Ready
https://www.eterlogic.com