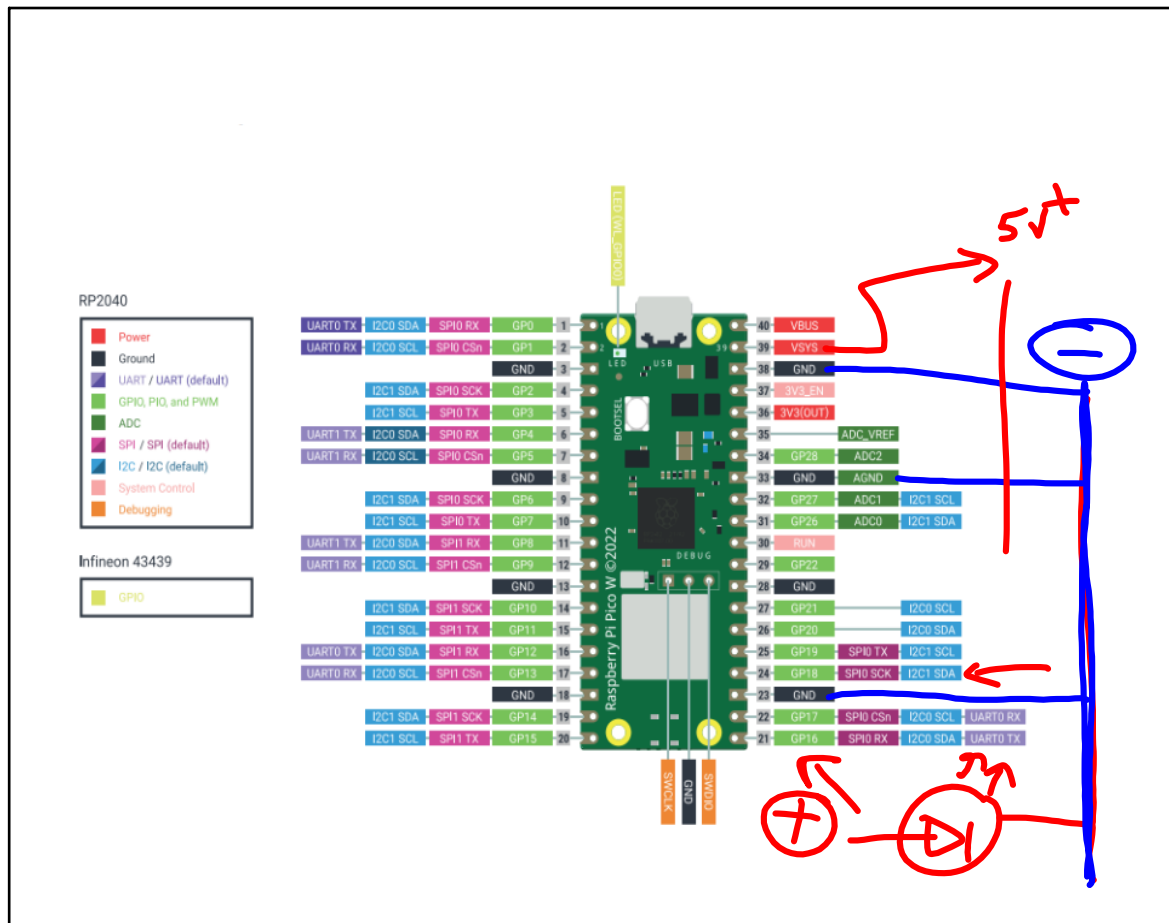
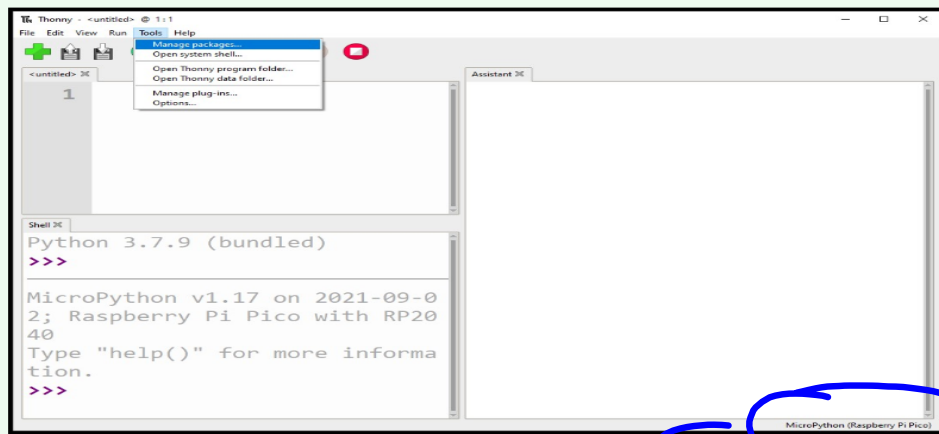


TEJ201 - Dec. 15th - 2023

→ 2 Thonny open!
↳ General Tab check!
→





① Client! Local Python 3.
 ② Pico → PicoW

10.122.0.0
 → ON Lcd? Pico-W.

② Client → Run!

Pico Server

```

#WATCH--> SDA and SCL are different based on LCD used
# Pico SDA=pin1st SCL=pin2nd

import socket #last file is main.py and run off battery
import time
import network
import secrets
import machine

from machine import Pin,I2C
from ssi1306 import SSI1306_I2C

redLEDPin=16
greenLEDPin=17
blueLEDPin=18

#connect pins to LEDs
greenLED=Pin(greenLEDPin,Pin.OUT)
blueLED=Pin(blueLEDPin,Pin.OUT)
redLED=Pin(redLEDPin,Pin.OUT)

greenLED.value(0)
blueLED.value(0)
redLED.value(0)

i2c = I2C(0,sda=Pin(0),scl=Pin(1),freq=100000)
dnp= SSI1306_I2C(128,64,i2c)
#dnp.text('Hello World',0,0)
#dnp.show() #test2

wifi=network.WLAN(network.STA_IF)
time.sleep(.5)
wifi.active(True)
time.sleep(.5)
wifi.connect('CompEngDpoclab','CompEng20231')
wifi.connect(secrets.SSID,secrets.PASSWORD)
test=0
while wifi.isconnected()==False:
    print('Waiting . . .')
    dnp.text(' . . . Waiting',0,0)
    dnp.show()
    time.sleep(1)
    cnt=cnt+1
    dnp.fill(0) #sometimes unplugs & replugs pico
dnp.fill(0)
wifiInfo=wifi.ifconfig()
ServerIP=wifiInfo[0] #test print(wifiInfo)
ServerPort=2222
bufferSize=1024
UDPServer=socket.socket(socket.AF_INET,socket.SOCK_DGRAM)
UDPServer.bind((ServerIP,ServerPort))
dnp.text(str(ServerIP),0,0) #IP:
dnp.text('PORT: '+str(ServerPort),0,16)
cmd,address=UDPServer.recvfrom(bufferSize)
cmdDecoded=cmd.decode('utf-8')
print(cmdDecoded)
dnp.text('Message RECEIVED: ',0,26)
dnp.text(str(cmdDecoded),16,36)
dnp.text('From: ',0,46)
dnp.text(str(address[0]),16,56)
dnp.show()
dnp.fill(0) #clear screen
dataString='Received Your Command: '+cmdDecoded
dataStringEncoded=dataString.encode('utf-8')
UDPServer.sendto(dataStringEncoded,address)
if cmdDecoded.lower()=='red':
    redLED.value(1)
    greenLED.value(0)
    blueLED.value(0)
elif cmdDecoded.lower()=='green':
    redLED.value(0)
    greenLED.value(1)
    blueLED.value(0)
elif cmdDecoded.lower()=='blue':
    redLED.value(0)
    greenLED.value(0)
    blueLED.value(1)
time.sleep(1)

```

Handwritten notes:

- where! SIGNAL → IN?** (with arrows pointing to pin definitions)
- 0 = OFF, 1 = ON.** (with arrows pointing to LED value assignments)
- where! ? ?** (with arrows pointing to the while loop and IP/port display)
- Lcd!** (with an arrow pointing to the SSI1306_I2C import and usage)

Client on your Desktop Computer

```

import socket
#blueServerAddress=('192.168.0.107',2222)
ServerAddress=('192.168.1.42',2222)
bufferSize=1024
UDPCClient=socket.socket(socket.AF_INET,socket.SOCK_DGRAM)
while True:
    cmd=input('What is your Color? ')
    cmdEncoded=cmd.encode('utf-8')
    UDPCClient.sendto(cmdEncoded,ServerAddress) #test
    data,address=UDPCClient.recvfrom(bufferSize)
    dataDecoded=data.decode('utf-8')
    print('Message from Server: ',dataDecoded)

```

Handwritten notes:

- Lcd!** (with an arrow pointing to the ServerAddress line)

