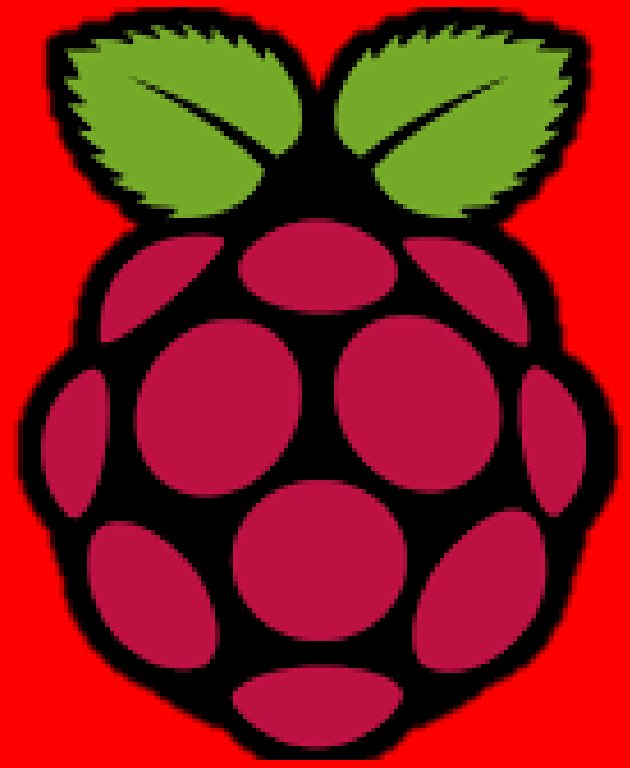
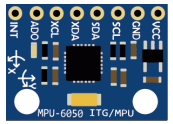
MQTT

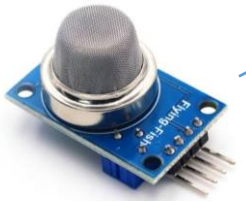


With Raspberry pi

Mr.Surawut Sukkum

Raspberry pi via NodeMCU by MQTT

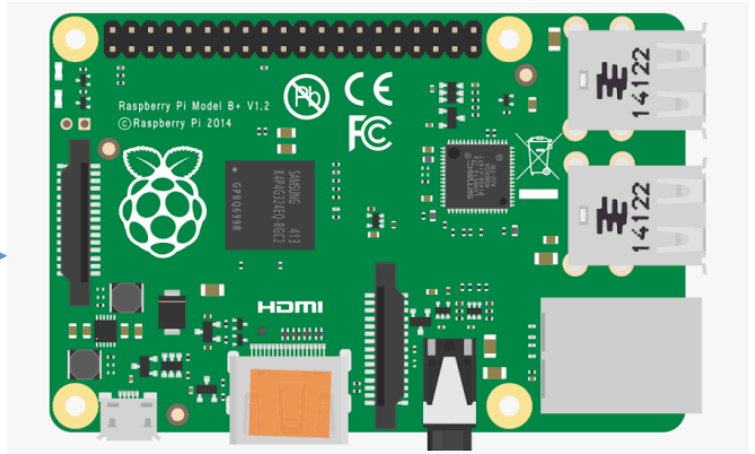




Client

MQTT

Server



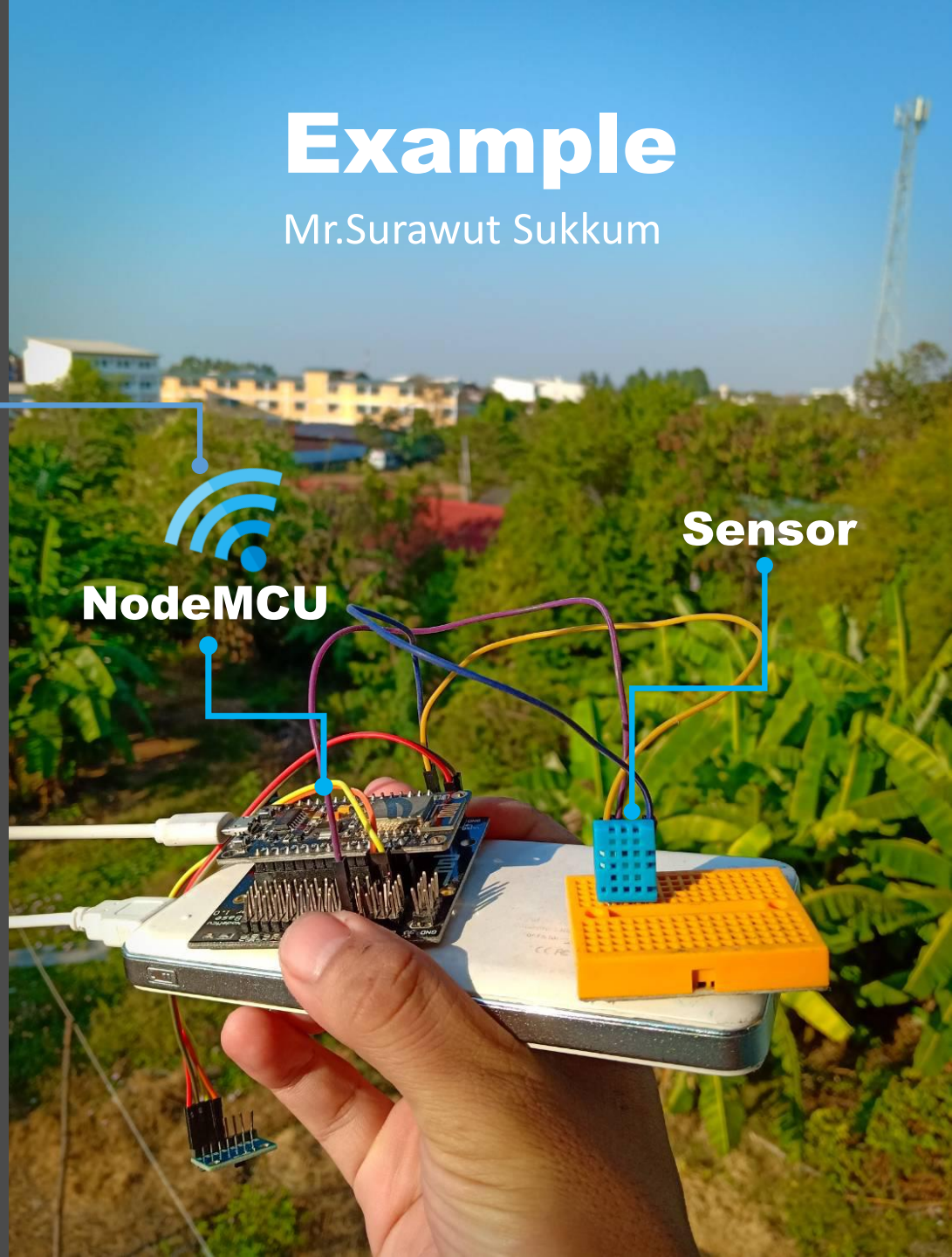
mosquitto

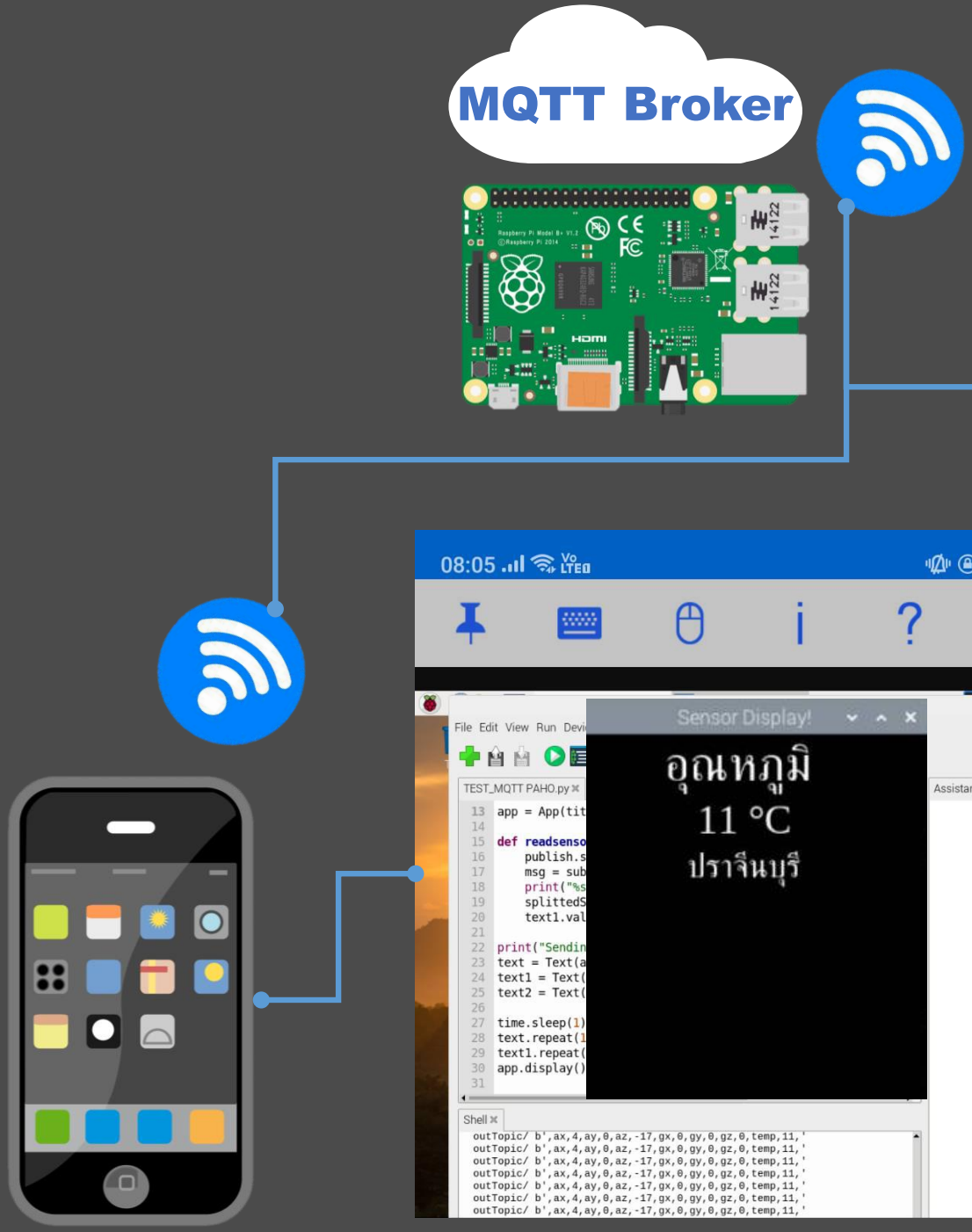
python™

Mr.Surawut Sukkum

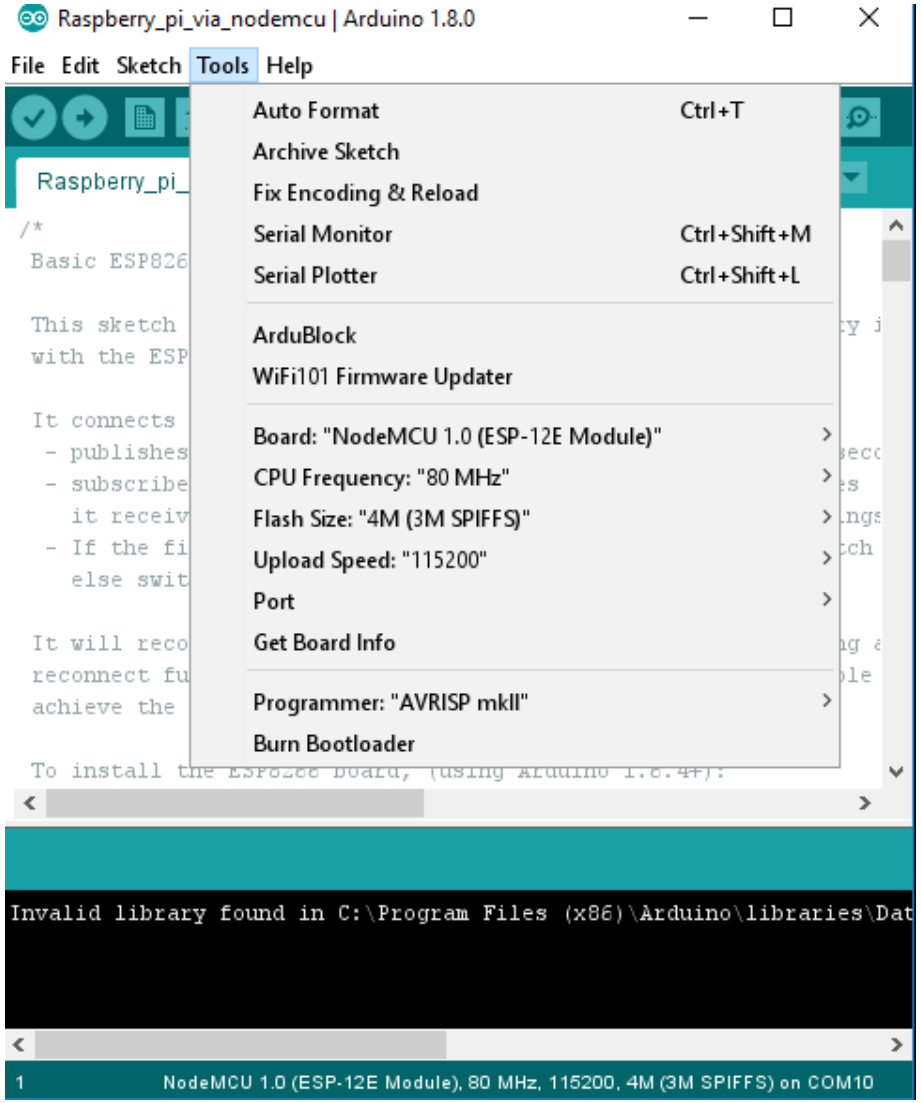
Example

Mr.Surawut Sukkum

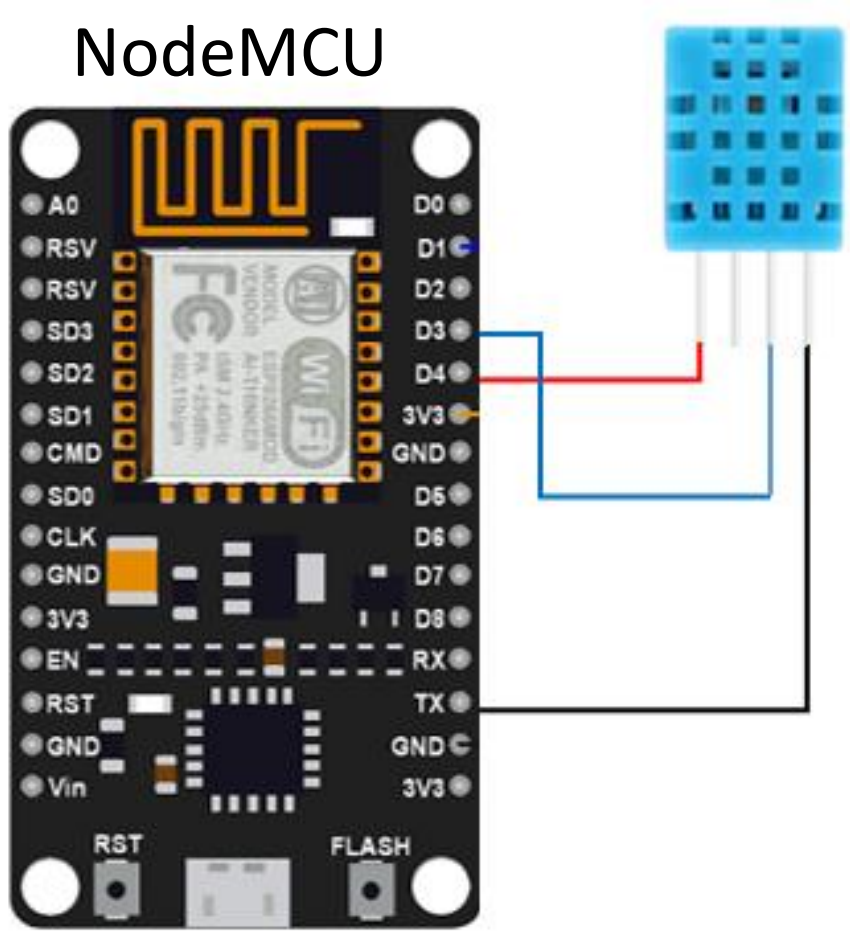




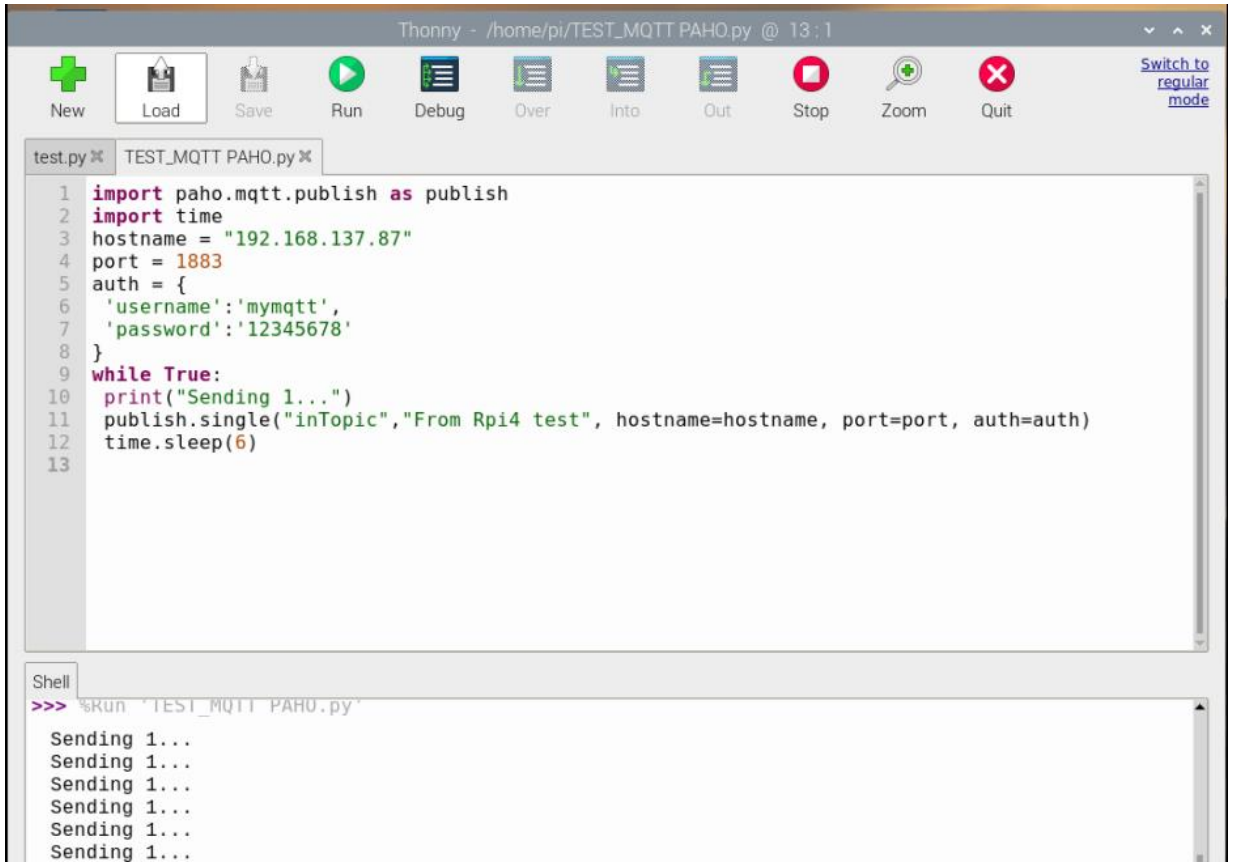
Arduino IDE

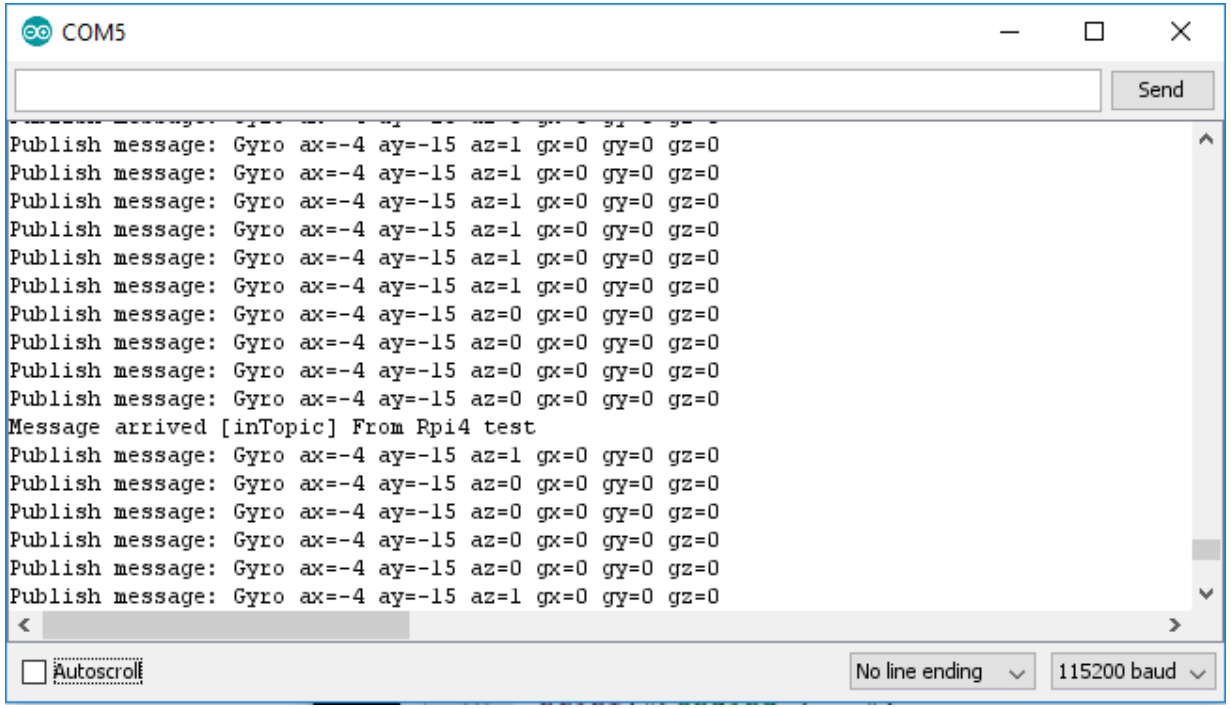


Diagram

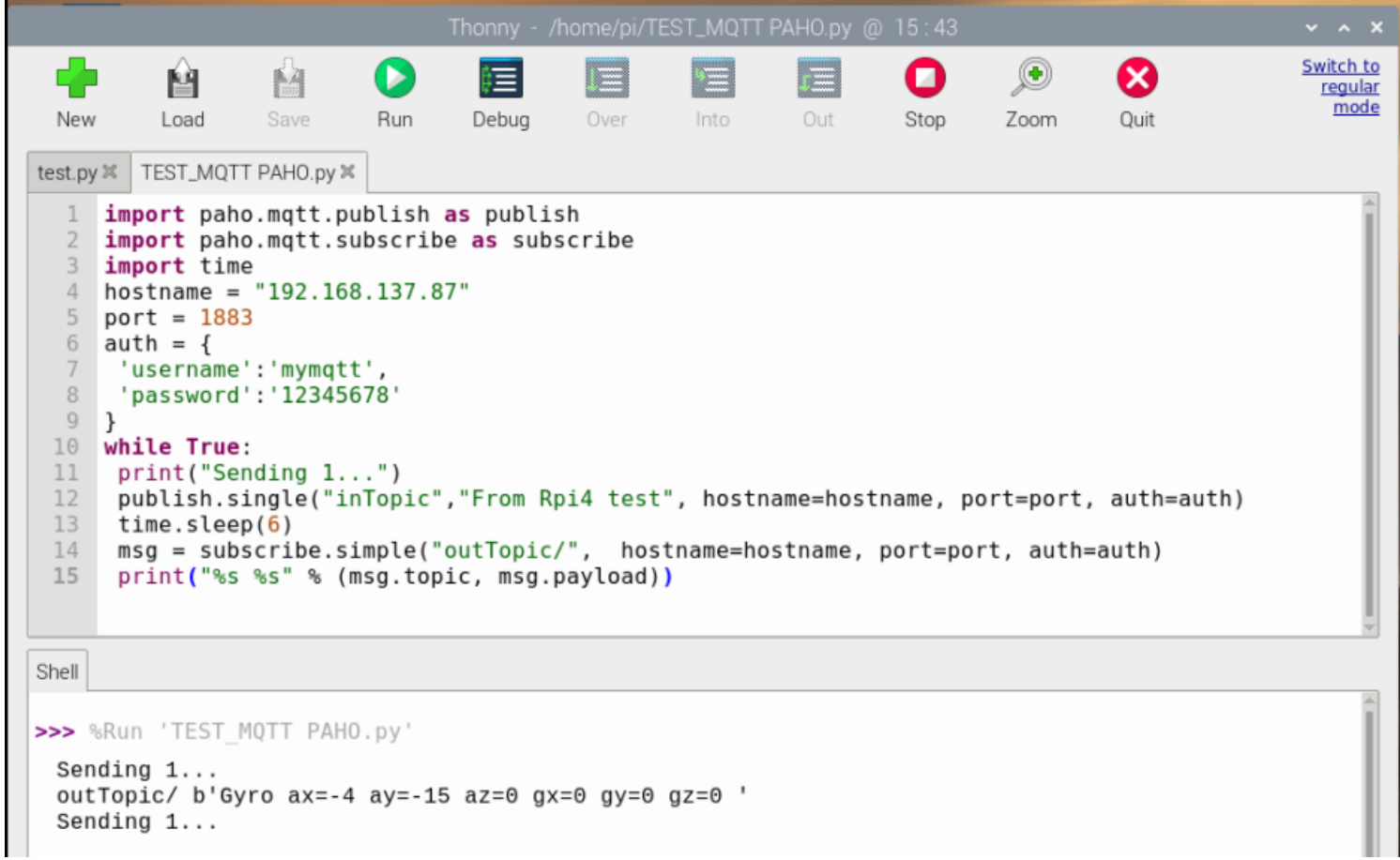


publish


Thonny - /home/pi/TEST_MQTT PAHO.py @ 13 : 1
New
Load
Save
Run
Debug
Over
Into
Out
Stop
Zoom
Quit
Switch to regular mode
test.py
TEST_MQTT PAHO.py
1 import paho.mqtt.publish as publish
2 import time
3 hostname = "192.168.137.87"
4 port = 1883
5 auth = {
6 'username':'mymqtt',
7 'password':'12345678'
8 }
9 while True:
10 print("Sending 1...")
11 publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port, auth=auth)
12 time.sleep(6)
13
Shell
>>> %Run 'TEST_MQTT PAHO.py'
Sending 1...
Sending 1...
Sending 1...
Sending 1...
Sending 1...
Sending 1...

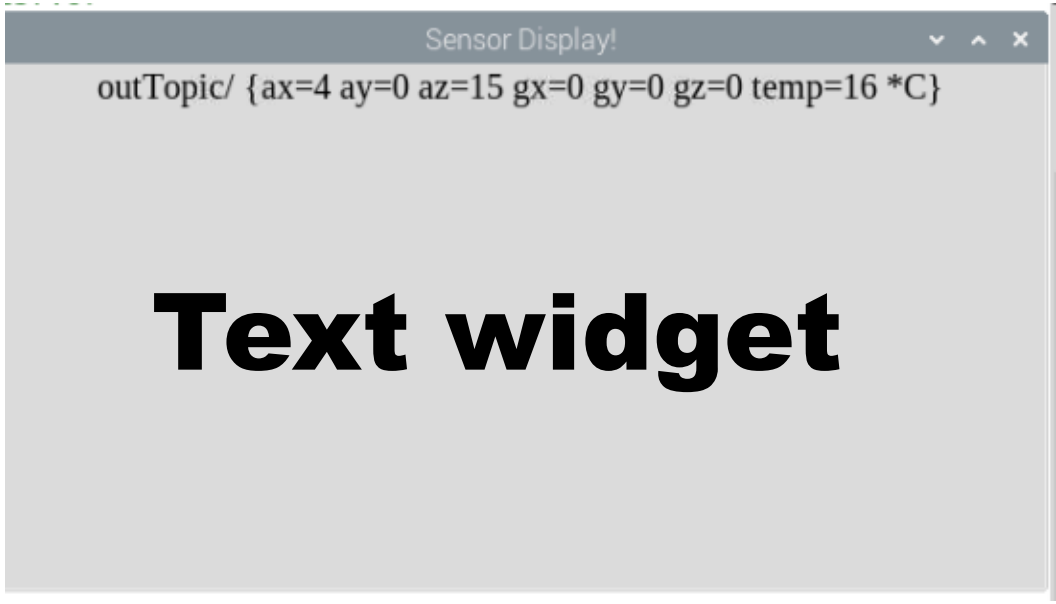

COM5
Send
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Message arrived [inTopic] From Rpi4 test
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=0 gx=0 gy=0 gz=0
Publish message: Gyro ax=-4 ay=-15 az=1 gx=0 gy=0 gz=0
Autoscroll
No line ending
115200 baud

subscript



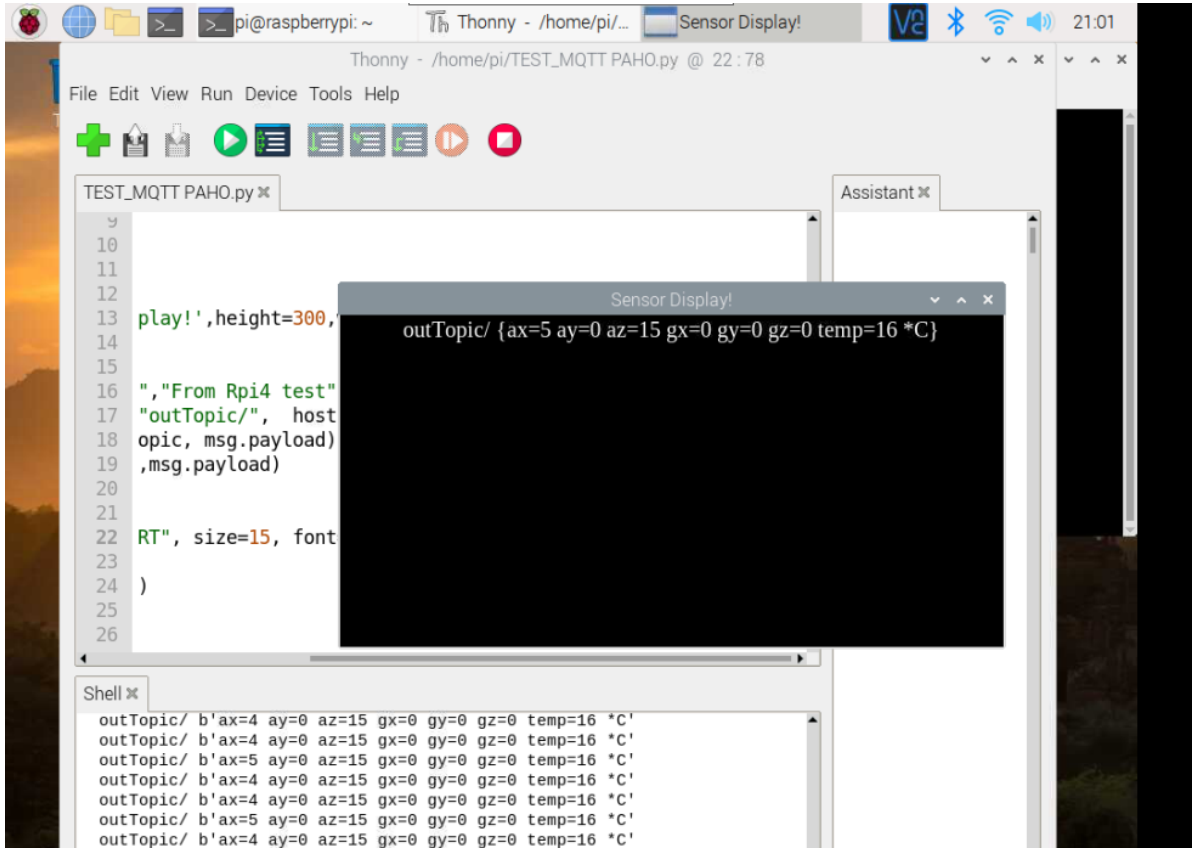

```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
import time
hostname = "192.168.137.87"
port = 1883
auth = {
 'username':'mymqtt',
 'password':'12345678'
}
while True:
 print("Sending 1...")
 publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port, auth=auth)
 time.sleep(6)
 msg = subscribe.simple("outTopic/",  hostname=hostname, port=port, auth=auth)
 print("%s %s" % (msg.topic, msg.payload))
```

```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
from guizero import App
from guizero import App, Text
import time

hostname = "192.168.137.87"
port = 1883
auth = {
 'username':'mymqtt',
 'password':'12345678'
}
app = App(title='Sensor Display!',height=300,width=600)

def readsensor():
    publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port, auth=auth)
    msg = subscribe.simple("outTopic/",  hostname=hostname, port=port, auth=auth)
    print("%s %s " % (msg.topic, msg.payload))
    text.value = (msg.topic,msg.payload)

print("Sending 1...")
text = Text(app, text= "START", size=15, font="Times New Roman", color="black")
time.sleep(1)
text.repeat(1000,readsensor)
app.display()
```



Text widget background

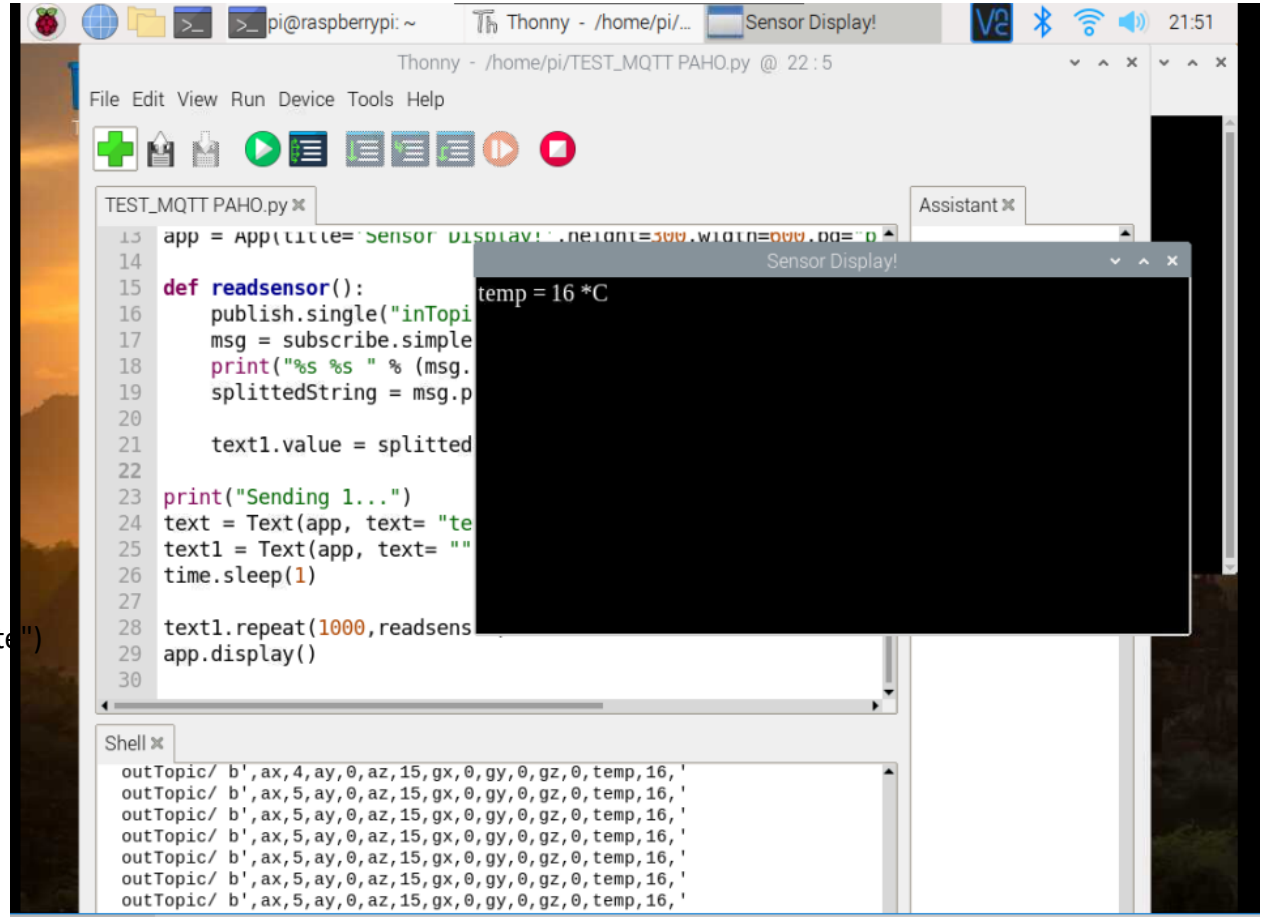
```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
from guizero import App
from guizero import App, Text
import time

hostname = "192.168.137.87"
port = 1883
auth = {
 'username':'mymqtt',
 'password':'12345678'
}
app = App(title='Sensor Display!',height=300,width=600,bg="black")

def readsensor():
   publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port,
auth=auth)
   msg = subscribe.simple("outTopic/",  hostname=hostname, port=port,
auth=auth)
   print("%s %s " % (msg.topic, msg.payload))
   text.value = (msg.topic,msg.payload)

print("Sending 1...")
text = Text(app, text= "START", size=15, font="Times New Roman", color="white")
time.sleep(1)
text.repeat(1000,readsensor)
app.display()
```



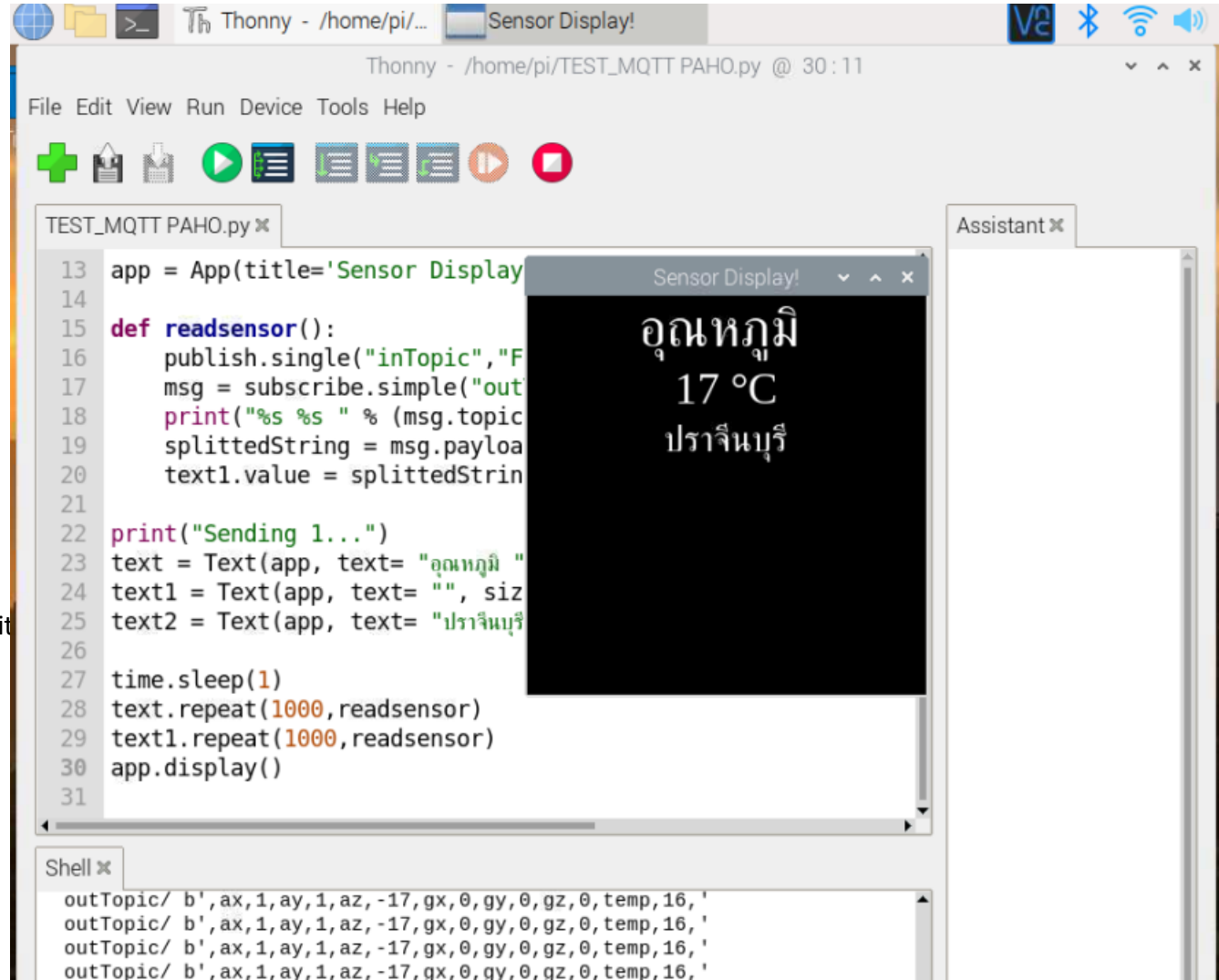
Text widget background layout grid

splittedString = msg.payload.decode().split(';')

```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
from guizero import App
from guizero import App, Text
import time

hostname = "192.168.137.87"
port = 1883
auth = {
 'username':'mymqtt',
 'password':'12345678'
}
app = App(title='Sensor Display!',height=300,width=600,bg="black",layout = "grid")

def readsensor():
    publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port, auth=auth)
    msg = subscribe.simple("outTopic/",  hostname=hostname, port=port, auth=auth)
    print("%s %s " % (msg.topic, msg.payload))
    splittedString = msg.payload.decode().split(',')

    text1.value = splittedString[14]+ " *C"

print("Sending 1...")
text = Text(app, text= "temp =", size=15, grid=[2,1], font="Times New Roman", color="white")
text1 = Text(app, text= "", size=15, grid=[3,1], font="Times New Roman", color="white")
time.sleep(1)

text1.repeat(1000,readsensor)
app.display()
```



```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
from guizero import App
from guizero import App, Text
import time

hostname = "192.168.137.87"
port = 1883
auth = {
 'username':'mymqtt',
 'password':'12345678'
}
app = App(title='Sensor Display!',height=300,width= 300,bg="black")

def readsensor():
   publish.single("inTopic","From Rpi4 test", hostname=hostname, port=port, auth=auth)
   msg = subscribe.simple("outTopic/",  hostname=hostname, port=port, auth=auth)
   print("%s %s " % (msg.topic, msg.payload))
   splittedString = msg.payload.decode().split(',')
   text1.value = splittedString[14]+ " °C"

print("Sending 1...")
text = Text(app, text= "อุณหภูมิ ", size=30,align ="top", font="Times New Roman", color="whit
text1 = Text(app, text= "", size=25,align ="top", font="Times New Roman", color="white")
text2 = Text(app, text= "ปราจีนบุรี", size=20, font="Times New Roman", color="white")

time.sleep(1)
text.repeat(1000,readsensor)
text1.repeat(1000,readsensor)
app.display()
```



BUTTON

```
import paho.mqtt.publish as publish
import paho.mqtt.subscribe as subscribe
from guizero import App
from guizero import App, Text
from guizero import App, PushButton
import time

i = 0
hostname = "192.168.137.87"
port = 1883


auth = {
 'username':'mymqtt',
 'password':'12345678'
}
app = App(title='Sensor Display!',height=300,width= 300,bg="blue")
def start():
   start_button.disable()
   stop_button.enable()
   print("RELAY1 ON")
   publish.single("inTopic","RELAY1 ON", hostname=hostname, port=port, auth=auth)

def stop():
   start_button.enable()
   stop_button.disable()
   print("RELAY1 OFF")
   publish.single("inTopic","RELAY1 OFF", hostname=hostname, port=port, auth=auth)

def readsensor():
   global i
   i = i + 1
   msg = subscribe.simple("outTopic/", hostname=hostname, port=port, auth=auth)
   print("%s %s " % (msg.topic, msg.payload))
   splittedString = msg.payload.decode().split(',')
   text1.value = splittedString[14]+ " °C"
   print(i)

print("Sending 1...")
text = Text(app, text= "อุณหภูมิ ", size=30,align ="top", font="Times New Roman", color="white")
text1 = Text(app, text= "", size=25,align ="top", font="Times New Roman", color="white")
text2 = Text(app, text= "ปราจีนบุรี", size=20, font="Times New Roman", color="white")

start_button = PushButton(app, command=start, text="RELAY1 ON")
stop_button = PushButton(app, command=stop, text="RELAY1 OFF", enabled=False)
time.sleep(1)
text.repeat(1000,readsensor)
text1.repeat(1000,readsensor)
app.display()
```