import uos as os

import network

from umqtt.robust import MQTTClient

import machine

import time

import sys

from hcsr04 import HCSR04

led = machine.Pin(16, machine.Pin.OUT) #D0\_\_builtin

led1 = machine.Pin(0, machine.Pin.OUT) #D3

led.value(0)

led1.value(0)

def sub\_cb(topic, msg):

if topic == b'prox/sub' and msg == b'0':

print('ESP received hello message')

led.value(1)

time.sleep(0.5)

elif topic == b'prox/sub' and msg == b'01':

print('ESP received hello1 message')

led1.value(1)

time.sleep(0.5)

elif topic == b'prox/sub' and msg == b'1':

print('ESP received bye message')

led.value(0)

time.sleep(0.5)

elif topic == b'prox/sub' and msg == b'10':

print('ESP received bye1 message')

led1.value(0)

time.sleep(0.5)

# WiFi connection information

WIFI\_SSID = 'HYPER'

WIFI\_PASSWORD = '9910399961'

# turn off the WiFi Access Point

ap\_if = network.WLAN(network.AP\_IF)

ap\_if.active(False)

# connect the device to the WiFi network

wifi = network.WLAN(network.STA\_IF)

wifi.active(True)

wifi.connect(WIFI\_SSID, WIFI\_PASSWORD)

# wait until the device is connected to the WiFi network

MAX\_ATTEMPTS = 20

attempt\_count = 0

while not wifi.isconnected() and attempt\_count < MAX\_ATTEMPTS:

attempt\_count += 1

time.sleep(1)

if attempt\_count == MAX\_ATTEMPTS:

print('could not connect to the WiFi network')

sys.exit()

client = MQTTClient("hello", "35.193.200.242", port=1883)

client.set\_callback(sub\_cb)

client.connect()

client.subscribe(topic="prox/sub")

try:

while True:

client.check\_msg()

sensor = HCSR04(trigger\_pin=5, echo\_pin=4)

distance = sensor.distance\_cm()

x = led.value()

if (x==0 and 0 <=distance <= 10):

client.publish(topic=b'proximity', msg=b'0')

led.value(1)

time.sleep(0.5)

elif(x==1 and 0 <=distance <= 10):

client.publish(topic=b'proximity', msg=b'1')

led.value(0)

time.sleep(0.5)

sensor1 = HCSR04(trigger\_pin=14, echo\_pin=2)

distance1 = sensor1.distance\_cm()

y = led1.value()

if (y==0 and 0 <=distance1 <= 10):

client.publish(topic=b'proximity', msg=b'01')

led1.value(1)

time.sleep(0.5)

elif(y==1 and 0 <=distance1 <= 10):

client.publish(topic=b'proximity', msg=b'10')

led1.value(0)

time.sleep(0.5)

finally:

client.disconnect()