import uos as os

import sys

import network

from umqtt.robust import MQTTClient

import machine

import time

from hcsr04 import HCSR04

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

def sub\_cb(topic, msg):

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

led.value(0)

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

led.value(1)

# 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("proxi", "35.193.200.242", port=1883)

client.set\_callback(sub\_cb)

client.connect()

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

try :

while 1:

client.check\_msg()

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

distanceUS = sensor.distance\_cm()

x = led.value()

if (x==0 and 0.5 <=distanceUS <= 10):

print('Distance:', distanceUS, 'cm')

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

led.value(1)

time.sleep(0.5)

elif (x==1 and 0.5 <=distanceUS <= 10):

print('Distance:', distanceUS, 'cm')

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

led.value(0)

time.sleep(0.5)

finally:

client.disconnect()