from sense\_hat import SenseHat

import time

import paho.mqtt.client as mqtt

import paho.mqtt.publish as publish

sense = SenseHat()

Broker = "192.168.1.252"

sub\_topic = "sensor/instructions" # receive messages on this topic

pub\_topic = "sensor/data" # send messages to this topic

############### sensehat inputs ##################

def read\_temp():

t = sense.get\_temperature()

t = round(t)

return t

def read\_humidity():

h = sense.get\_humidity()

h = round(h)

return h

def read\_pressure():

p = sense.get\_pressure()

p = round(p)

return p

def display\_sensehat(message):

sense.show\_message(message)

time.sleep(10)

############### MQTT section ##################

# when connecting to mqtt do this;

def on\_connect(client, userdata, flags, rc):

print("Connected with result code "+str(rc))

client.subscribe(sub\_topic)

# when receiving a mqtt message do this;

def on\_message(client, userdata, msg):

message = str(msg.payload)

print(msg.topic+" "+message)

display\_sensehat(message)

def on\_publish(mosq, obj, mid):

print("mid: " + str(mid))

client = mqtt.Client()

client.on\_connect = on\_connect

client.on\_message = on\_message

client.connect(Broker, 1883, 60)

client.loop\_start()

while True:

sensor\_data = [read\_temp(), read\_humidity(), read\_pressure()]

client.publish("monto/solar/sensors", str(sensor\_data))

time.sleep(1\*60)