PUBLISH DATA TO THE IBM CLOUD

Date	31 October 2022
Team ID	Based PNT2022TMID12751
Project Name	IoT based Smart Waste Management System For Metropolitan Cities

Steps

Install json, wiotp, time modules in python and develop a code with corresponding credentials to publish the temperature and humidity

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = { "identity":
{
"orgId": "1p9sem",
"typeId": "smartwaste123",
"deviceId":"76013" },
"auth": { "token": "12345678" }
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)

client.disconnect()
```

Save and Run the code therefore temperature and humidity are published in Node RED

```
Published data Successfully: %s {'temperature': 66, 'humidity': 11}
Published data Successfully: %s {'temperature': -9, 'humidity': 37}
Published data Successfully: %s {'temperature': 19, 'humidity': 83}
Published data Successfully: %s {'temperature': 52, 'humidity': 58}
Published data Successfully: %s {'temperature': 27, 'humidity': 83}
Published data Successfully: %s {'temperature': 20, 'humidity': 28}
Published data Successfully: %s {'temperature': -12, 'humidity': 52}
Published data Successfully: %s {'temperature': 64, 'humidity': 97}
Published data Successfully: %s {'temperature': -4, 'humidity': 32}
Published data Successfully: %s {'temperature': 88, 'humidity': 44}
Published data Successfully: %s {'temperature': 59, 'humidity': 8}
Published data Successfully: %s {'temperature': 57, 'humidity': 62}
Published data Successfully: %s {'temperature': 25, 'humidity': 97}
Published data Successfully: %s {'temperature': 96, 'humidity': 17}
Published data Successfully: %s {'temperature': 102, 'humidity': 7}
Published data Successfully: %s {'temperature': 75, 'humidity': 13}
Published data Successfully: %s {'temperature': 41, 'humidity': 81}
Published data Successfully: %s {'temperature': 58, 'humidity': 85}
Published data Successfully: %s {'temperature': 120, 'humidity': 73}
Published data Successfully: %s {'temperature': -13, 'humidity': 88}
Published data Successfully: %s {'temperature': 48, 'humidity': 3}
Published data Successfully: %s {'temperature': 51, 'humidity': 85}
Published data Successfully: %s {'temperature': 113, 'humidity': 67}
Published data Successfully: %s {'temperature': -7, 'humidity': 15}
Published data Successfully: %s {'temperature': 55, 'humidity': 1}
Published data Successfully: %s {'temperature': 124, 'humidity': 32}
Published data Successfully: %s {'temperature': -6, 'humidity': 88}
Published data Successfully: %s {'temperature': 92, 'humidity': 84}
Published data Successfully: %s {'temperature': 105, 'humidity': 63}
Published data Successfully: %s {'temperature': 56, 'humidity': 67}
Published data Successfully: %s {'temperature': 63, 'humidity': 29}
Published data Successfully: %s {'temperature': 122, 'humidity': 53}
Published data Successfully: %s {'temperature': 27, 'humidity': 22}
Published data Successfully: %s {'temperature': 72, 'humidity': 27}
Published data Successfully: %s {'temperature': 44, 'humidity': 5}
Published data Successfully: %s {'temperature': 42, 'humidity': 89}
Published data Successfully: %s {'temperature': 95, 'humidity': 44}
Published data Successfully: %s {'temperature': 57, 'humidity': 92}
Published data Successfully: %s {'temperature': 75, 'humidity': 63}
```

The published data (i.e.) temperature and humidity are seen in Node RED