Publish data to the IBM Cloud

Team ID	PNT2022TMID22430
Project Name	Project – Smart waste management system for Metropolitan cities

The Python script is developed and published to cloud.

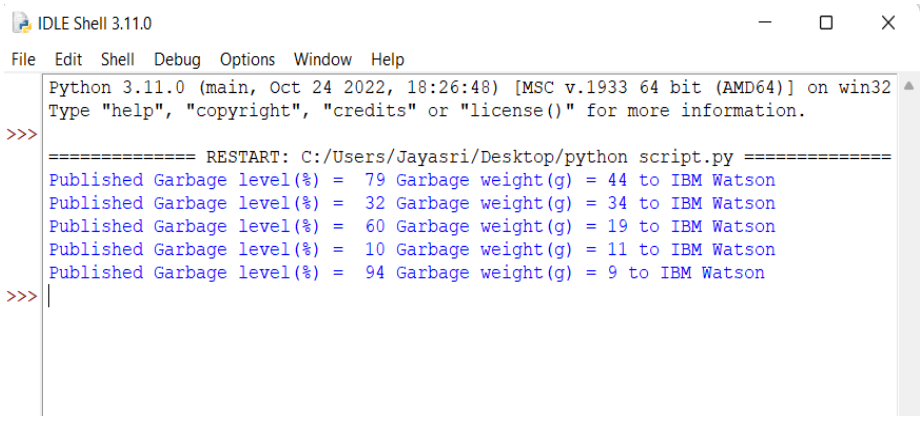
```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "32ws5h"
deviceType = "Ultrasonic_sensor"
deviceId = "554517"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
def myCommandCallback(cmd):
   print("Message received from IBM IOT Platform : %s" % cmd.data['ALERT'])
   status=cmd.data['ALERT']
   if status=="BIN FULL":
      print ("Empty the bin immediately")

try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method":
authMethod, "auth-token": authToken}
        deviceCli = ibmiotf.device.Client(deviceOptions)
        #.....................................................

except Exception as e:
        print(" Caught exception connecting device: %s" % str(e))
        sys.exit()

deviceCli.connect()

#SENSOR DATA

Garbage_level=0
Garbage_weight=0
while True:
```

```
        #Get Sensor Data from DHT11

        Garbage_level=Garbage_level+random.randint(90,110)
        Garbage_weight=Garbage_weight+random.randint(60,100)


        data = { 'Garbage level(%)' : Garbage_level, 'Garbage weight(g)': Garbage_weight , 'Location': "10, Gandhi nagar, Adayar"}

        def myOnPublishCallback():
            print ("Published Garbage level(%) = %s %" % Garbage_level, "Garbage weight(g) = %s %" % Garbage_weight, "to IBM Watson")

        success = deviceCli.publishEvent("Ultrasonic_sensor", "json", data, qos=0, on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(10)

        deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

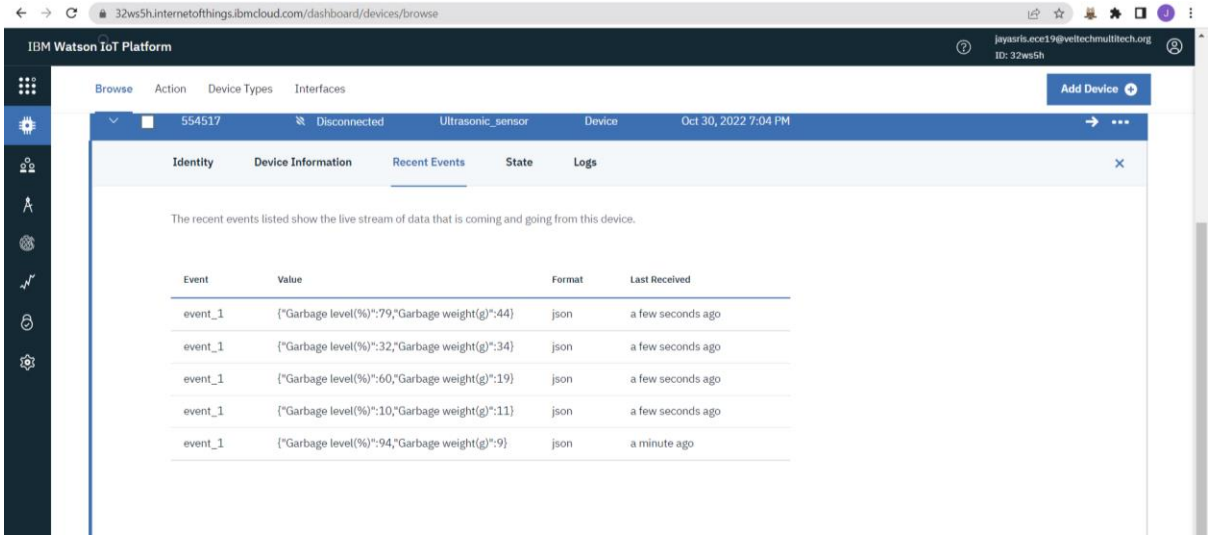
python script.py - C:/Users/Jayasri/Desktop/python script.py (3.11.0)

File Edit Format Run Options Window Help

```
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Message received from IBM IOT Platform : %s" % cmd.data['ALERT'])
    status=cmd.data['ALERT']
    if status=="BIN FULL":
        print ("Empty the bin immediately")

try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
        deviceCli = ibmiotf.device.Client(deviceOptions)
        #.....................................

except Exception as e:
        print(" Caught exception connecting device: %s" % str(e))
        sys.exit()

deviceCli.connect()

#SENSOR DATA

Garbage_level=0
Garbage_weight=0
while True:
        #Get Sensor Data from DHT11

        Garbage_level=Garbage_level+random.randint(90,110)
        Garbage_weight=Garbage_weight+random.randint(60,100)


        data = { 'Garbage level(%)' : Garbage_level, 'Garbage weight(g)': Garbage_weight , 'Location': "10, Gandhi nagar, Adayar"}

        def myOnPublishCallback():
            print ("Published Garbage level(%) = %s %" % Garbage_level, "Garbage weight(g) = %s %" % Garbage_weight, "to IBM Watson")

        success = deviceCli.publishEvent("Ultrasonic_sensor", "json", data, qos=0, on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(10)

        deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```


IDLE Shell 3.11.0
File Edit Shell Debug Options Window Help
Python 3.11.0 (main, Oct 24 2022, 18:26:48) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/Jayasri/Desktop/python script.py ==========
Published Garbage level(%) = 79 Garbage weight(g) = 44 to IBM Watson
Published Garbage level(%) = 32 Garbage weight(g) = 34 to IBM Watson
Published Garbage level(%) = 60 Garbage weight(g) = 19 to IBM Watson
Published Garbage level(%) = 10 Garbage weight(g) = 11 to IBM Watson
Published Garbage level(%) = 94 Garbage weight(g) = 9 to IBM Watson
>>>

Cr


32ws5h.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
jayasris.ece19@veltechmultitech.org
ID: 32ws5h
Browse
Action
Device Types
Interfaces
Add Device
554517
Disconnected
Ultrasonic_sensor
Device
Oct 30, 2022 7:04 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
event_1
{"Garbage level(%)":79,"Garbage weight(g)":44}
json
a few seconds ago
event_1
{"Garbage level(%)":32,"Garbage weight(g)":34}
json
a few seconds ago
event_1
{"Garbage level(%)":60,"Garbage weight(g)":19}
json
a few seconds ago
event_1
{"Garbage level(%)":10,"Garbage weight(g)":11}
json
a few seconds ago
event_1
{"Garbage level(%)":94,"Garbage weight(g)":9}
json
a minute ago