SPRINT – 2

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Python Code

import time import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "2melo1" deviceType =

"waste" deviceId = "1234" authMethod =

"token" authToken = "12345678"

Initialize GPIO

```
def myCommandCallback(cmd):    print("Command
received: %s" % cmd.data['command'])
status=cmd.data['command']    if status=="waste level":
      print ("waste level monitored")
    else :
      print ("weight level monitored")

    #print(cmd)
```

```python
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()


# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type
"greeting" 10 times deviceCli.connect()


while True:

    #Get Sensor Data from DHT11


    level=random.randint(0,100)

weight=random.randint(0,100)


    data = { 'level' : level, 'weight': weight }

    #print data

    def myOnPublishCallback():

        print ("Published Level = %s %%" % level, "Weight = %s %%" % weight, "to IBM Watson")


    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
```
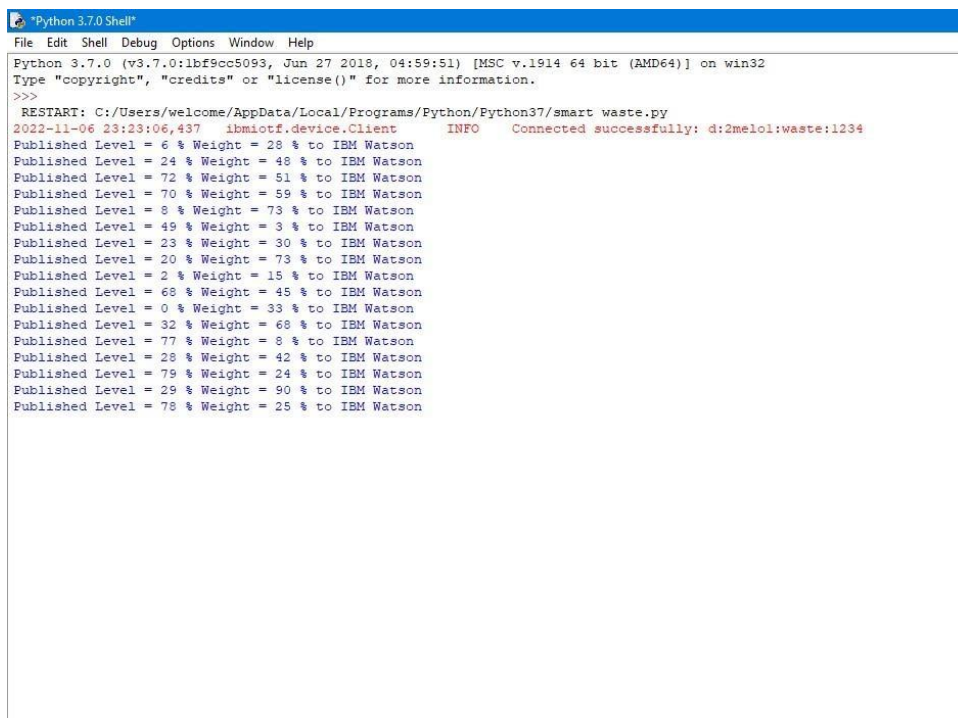
```
    if not success:            print("Not

connected            to            IoTF")

time.sleep(20)


    deviceCli.commandCallback = myCommandCallback


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

OUTPUT:


```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
 RESTART: C:/Users/welcome/AppData/Local/Programs/Python/Python37/smart waste.py
2022-11-06 23:23:06,437   ibmiotf.device.Client     INFO    Connected successfully: d:2melo1:waste:1234
Published Level = 6 % Weight = 28 % to IBM Watson
Published Level = 24 % Weight = 48 % to IBM Watson
Published Level = 72 % Weight = 51 % to IBM Watson
Published Level = 70 % Weight = 59 % to IBM Watson
Published Level = 8 % Weight = 73 % to IBM Watson
Published Level = 49 % Weight = 3 % to IBM Watson
Published Level = 23 % Weight = 30 % to IBM Watson
Published Level = 20 % Weight = 73 % to IBM Watson
Published Level = 2 % Weight = 15 % to IBM Watson
Published Level = 68 % Weight = 45 % to IBM Watson
Published Level = 0 % Weight = 33 % to IBM Watson
Published Level = 32 % Weight = 68 % to IBM Watson
Published Level = 77 % Weight = 8 % to IBM Watson
Published Level = 28 % Weight = 42 % to IBM Watson
Published Level = 79 % Weight = 24 % to IBM Watson
Published Level = 29 % Weight = 90 % to IBM Watson
Published Level = 78 % Weight = 25 % to IBM Watson
```
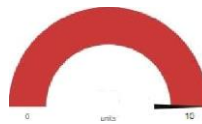
NODE RED INPUT AND OUPUT:

11/6/2022, 11:24:46 PM   node: e5cd12a9b2c1d4a9
iot-2/type/waste/id/1234/evt/IoTSensor/fmt/json :
msg.payload : number
49
11/6/2022, 11:24:46 PM   node: e5cd12a9b2c1d4a9
iot-2/type/waste/id/1234/evt/IoTSensor/fmt/json :
msg.payload : number

11/6/2022, 11:25:02 PM   node: e5cd12a9b2c1d4a9

Garbage Monitoring

Trash Weight

Garbage Level

32