DATE	19 NOVEMBER 2022
TEAM ID	PNT2022TMID52032
PROJECT NAME	SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

PYTHON CODE :

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


#Provide your IBM Watson Device Credentials
organization = "wjmfdn"
deviceType = "abcd"
deviceId = "1234"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO


def   myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
```

```python
        print ("led is off")
#print(cmd)
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 C" % level, "weight = %s %%"
    % weight, "to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json",
```
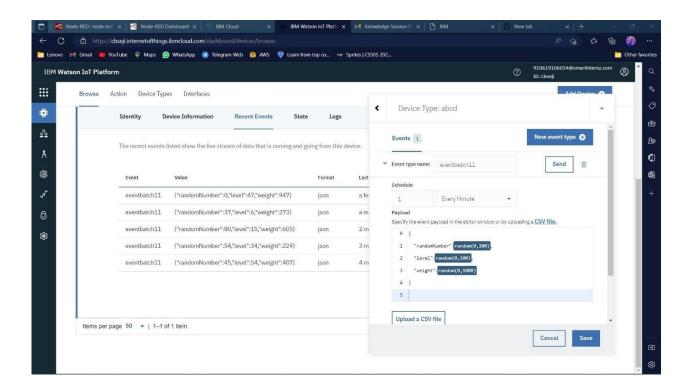
```
qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
    time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

if (level>=75):
        print("Full LED ON")

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

OUTPUT :

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


#Provide your IBM Watson Device Credentials
organization = "cbseji"
de1ceType="sbcd"
deñceId="1234"
autbMdhod="tokeo"
*«t¥roReo="l2J45678"

# Initialize GPIO


def myComnnandCa llbaclttctnd):
    pri• tt "Couiuiand received: •Z«s" •Zo cmd.dzta['command
    status=cmd.data['coaieiand']
    if status    "lighton":
        print ("led is or ")
    else :
        print ("led is of1")




        deñceopGous=("org":orgoéñudoo,"type":dt
```

```
Python 3.7.0 (v3.7.0:lbf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win3 `
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Type "copyright", "credits" or "ii•ea e0" for more information.

= RESTART: C:\Users\navee\Dropboz\PC\Downloads\ibmiotpublisbsubscribe(t).py =
2022-11-13 11:52144,6S•l  lbmio4f.devlce.Clleal     INFO Connected successfully: d:cbseji:sbc
d:1234
Published level = 82 C weight = 64 % to IBM Watson
Full LED ON
Published level = 5 C weight = 2 •Ze to IBM Watson
Published level = 22 C weight = 57 % to IBM Watson
Published level = 83 C weight = 60 'Zo to IBM Watson
run LEDOn
Published level = 16 C weight = 12 •Z« to IBM Watson
Published level = t9 C weight = 91 •Ze to IBM Watson
Published level = 35 C weight = 77 •Z« to IBM Watson
Published level = 22 C weight = 46 % to IBM Watson
Published level = 85 C weight = 68 .•Z» to IBM Watsoa
FuE LED ON
Published level = 36 C weight = 88 'Z* to IBM Watson
Published level = 69 C weight = 72 •Z« to IBM Watson
Published level = 14 C weight = 3 •Z« to IBM Watsoa
Published level = 99 C weight = 0 •Ze to IBM Watson
```



```
Published level = 81 C weight = 55 % to IBM Watson
Published level = 100 C weight = 47 % to IBM Watson
Published level = 11 C weight = 30 % to IBM Watson
Published level = 12 C weight = 20 % to IBM Watson
Published level = 22 C weight = 71 % to IBM Watson
Published level = 95 C weight = 61 % to IBM Watson
Published level = 39 C weight = 99 % to IBM Watson
Published level = 54 C weight = 65 % to IBM Watson
Published level = 14 C weight = 14 % to IBM Watson
Published level = 42 C weight = 58 % to IBM Watson
Published level = 85 C weight = 37 % to IBM Watson
Published level = 69 C weight = 12 % to IBM Watson
Command received: lighton
led is on
Published level = 73 C weight = 1 % to IBM Watson
Published level = 74 C weight = 13 % to IBM Watson
Published level = 25 C weight = 64 % to IBM Watson
Published level = 27 C weight = 69 % to IBM Watson
Published level = 50 C weight = 79 % to IBM Watson
Published level = 12 C weight = 19 % to IBM Watson
Published level = 78 C weight = 32 % to IBM Watson
Published level = 88 C weight = 18 % to IBM Watson
Published level = 41 C weight = 8 % to IBM Watson
Published level = 44 C weight = 82 % to IBM Watson
Published level = 40 C weight = 39 % to IBM Watson
Published level = 19 C weight = 59 % to IBM Watson
Published level = 42 C weight = 77 % to IBM Watson
Published level = 19 C weight = 46 % to IBM Watson
Published level = 20 C weight = 65 % to IBM Watson
Published level = 99 C weight = 4 % to IBM Watson
Published level = 99 C weight = 33 % to IBM Watson
```