Python
Source Code

Team ID	PNT2022TMID22821
Project Name	Smart Waste Management system for Metropolitan Cities

Source code

```
Import time
Import sys
Import ibmiotf.application
Import ibmiotf.device
Import random
#Provide your IBM Watson Device Credentials
Organization = “wgsy43”
deviceType = “NodeMCU”
deviceId = “12345”
authMethod = “use-token-auth”
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 :
        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€)

        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
    Temp=random.randint(0,100)
    Humid=random.randint(0,100)
    Data = { 'temp' : temp, 'Humid': Humid }

    #print data

    Def myOnPublishCallback():

      Print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid, "to IBM Watson")
    Success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

    If not success:

      Print("Not connected to IoTF")

    Time.sleep(1)
    deviceCli.commandCallback = myCommandCallback


# Disconnect the device and application from the cloud

deviceCli.disconnect()
```