

PYTHON CODE FOR GAS TEMPERATURE AND HUMIDITY

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Team ID	PNT2022TMID25345
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Mark	4 marks

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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 = "5py6q9"
deviceType = "Weather_now"
deviceId = "Weather1234"
authMethod = "token"
authToken = "XeJFia7_@@t9@@eq_?"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
```

```

        print ("led is on")
    elif status == "lightoff":
        print ("led is off")    else :
            print ("please send proper command")

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

    temp=random.randint(90,110)
    Humid=random.randint(60,100)

    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 IoT")    time.sleep(10)

```

```
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/AZIZ MRK/OneDrive/Desktop/new python code.py =====
2022-11-17 12:31:12,097 ibmiotf.device.Client INFO Connected successfully
lly: d:5py6q9:Weather_now:Weather1234
Published Temperature = 100 C Humidity = 61 % to IBM Watson
Published Temperature = 92 C Humidity = 70 % to IBM Watson
Published Temperature = 98 C Humidity = 79 % to IBM Watson
Published Temperature = 99 C Humidity = 80 % to IBM Watson
Published Temperature = 90 C Humidity = 60 % to IBM Watson
Published Temperature = 95 C Humidity = 70 % to IBM Watson
Published Temperature = 93 C Humidity = 84 % to IBM Watson
Published Temperature = 91 C Humidity = 94 % to IBM Watson
Published Temperature = 101 C Humidity = 94 % to IBM Watson
Published Temperature = 109 C Humidity = 61 % to IBM Watson
Published Temperature = 100 C Humidity = 77 % to IBM Watson
Published Temperature = 108 C Humidity = 69 % to IBM Watson
Published Temperature = 102 C Humidity = 63 % to IBM Watson
Published Temperature = 95 C Humidity = 75 % to IBM Watson
Published Temperature = 97 C Humidity = 90 % to IBM Watson
Published Temperature = 104 C Humidity = 84 % to IBM Watson
Published Temperature = 93 C Humidity = 100 % to IBM Watson
Published Temperature = 98 C Humidity = 86 % to IBM Watson
Published Temperature = 95 C Humidity = 100 % to IBM Watson
Published Temperature = 97 C Humidity = 74 % to IBM Watson
Published Temperature = 107 C Humidity = 73 % to IBM Watson
Published Temperature = 91 C Humidity = 84 % to IBM Watson
Published Temperature = 110 C Humidity = 64 % to IBM Watson
Published Temperature = 92 C Humidity = 96 % to IBM Watson
Published Temperature = 92 C Humidity = 99 % to IBM Watson
Published Temperature = 108 C Humidity = 72 % to IBM Watson
Published Temperature = 100 C Humidity = 69 % to IBM Watson
Published Temperature = 93 C Humidity = 61 % to IBM Watson
Published Temperature = 105 C Humidity = 69 % to IBM Watson
Published Temperature = 96 C Humidity = 63 % to IBM Watson
Published Temperature = 92 C Humidity = 69 % to IBM Watson
Published Temperature = 103 C Humidity = 89 % to IBM Watson
Published Temperature = 97 C Humidity = 97 % to IBM Watson
Ln: 51 Col: 4
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