Sprint – 1

Team ID: *PNT2022TMID33446*

Team Members: *Suriyaprakash S, Sujith M, Ragul R, Rajesh G.*

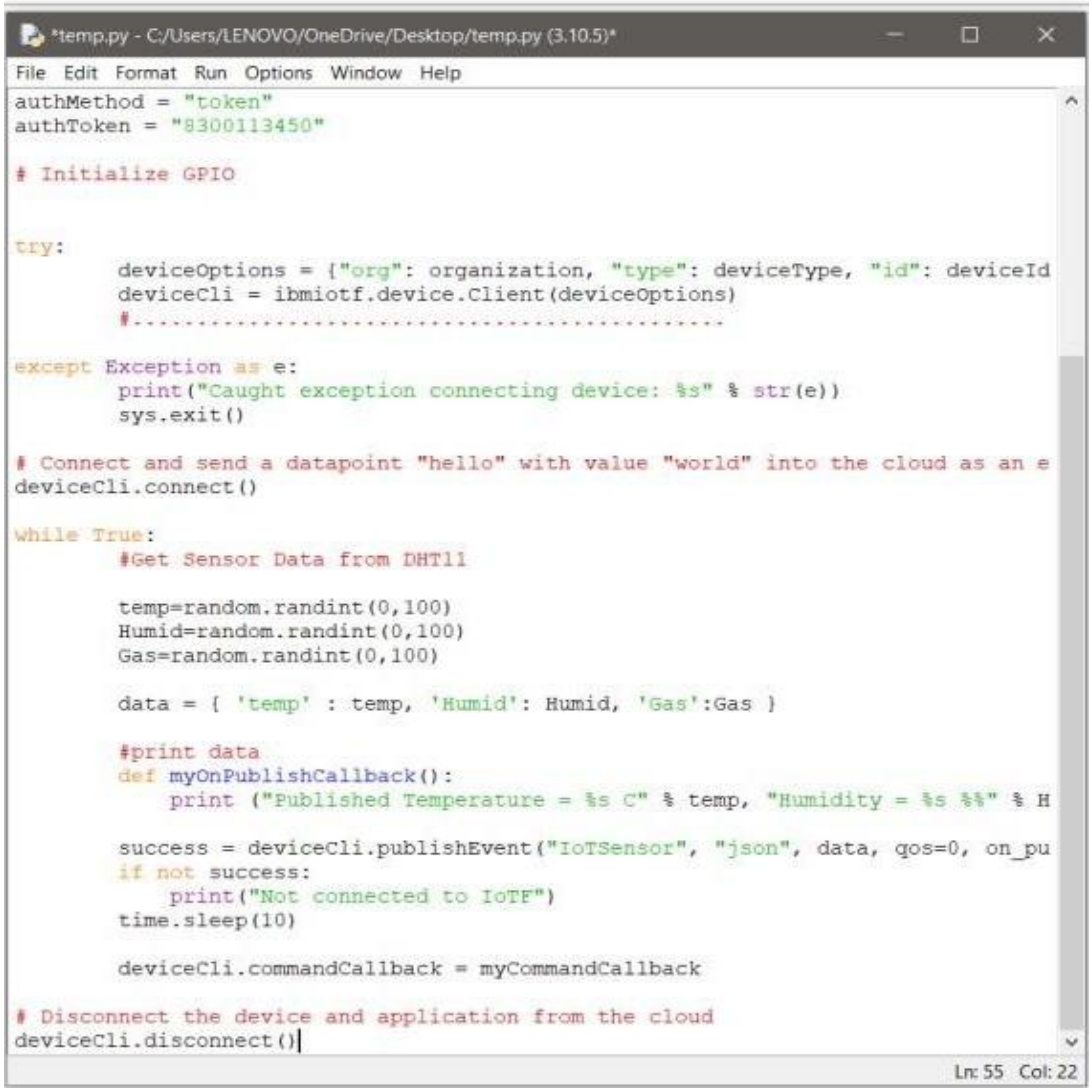
Project: *Gas Leakage Monitoring and Alerting System using IOT.*

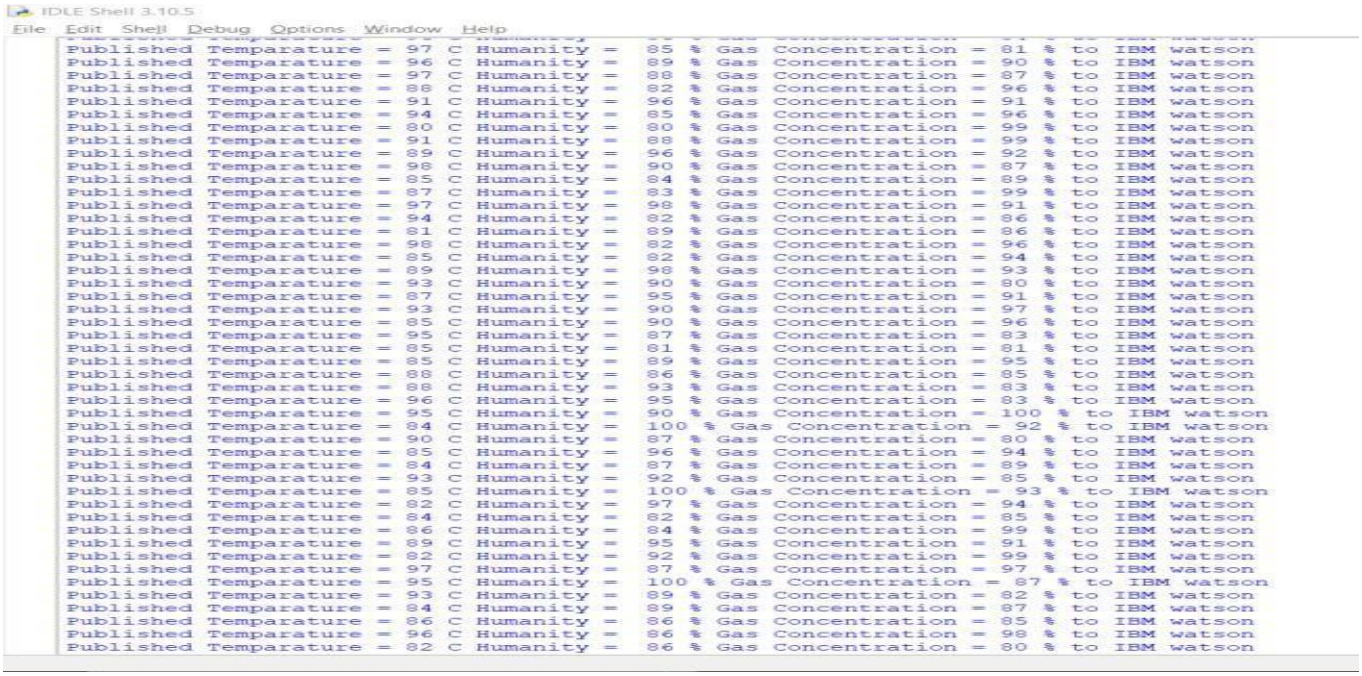
Python Code:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random


#Provide your IBM Watson Device Credentials

organization = "lcft5g"

deviceType = "Final"

deviceId = "Hello"

authMethod = "token"

authToken = "8300113450"


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(0,100)
    Humid=random.randint(0,100)
    Gas=random.randint(0,100)


    data = { 'temp' : temp, 'Humid': Humid,'Gas':gas }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid, "Gas Concentration = %s"%Gas"to IBM Watson")


    success = deviceCli.publishEvent("IoTSensor", "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()
```

Output:


temp.py - C:/Users/LENOVO/OneDrive/Desktop/temp.py (3.10.5)
File Edit Format Run Options Window Help
authMethod = "token"
authToken = "8300113450"
# Initialize GPIO
try:
deviceOptions = {"org": organization, "type": deviceType, "id": deviceId
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 e
deviceCli.connect()
while True:
#Get Sensor Data from DHT11
temp=random.randint(0,100)
Humid=random.randint(0,100)
Gas=random.randint(0,100)
data = { 'temp' : temp, 'Humid': Humid, 'Gas':Gas }
#print data
def myOnPublishCallback():
print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % H
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_pu
if not success:
print("Not connected to IoTF")
time.sleep(10)
deviceCli.commandCallback = myCommandCallback
# Disconnect the device and application from the cloud
deviceCli.disconnect()
Ln: 55 Col: 22


IDLE Shell 3.10.5
File Edit Shell Debug Options Window Help
Published Temparature = 97 C Humanity = 85 % Gas Concentration = 81 % to IBM watson
Published Temparature = 96 C Humanity = 89 % Gas Concentration = 90 % to IBM watson
Published Temparature = 97 C Humanity = 88 % Gas Concentration = 87 % to IBM watson
Published Temparature = 88 C Humanity = 82 % Gas Concentration = 96 % to IBM watson
Published Temparature = 91 C Humanity = 96 % Gas Concentration = 91 % to IBM watson
Published Temparature = 94 C Humanity = 85 % Gas Concentration = 96 % to IBM watson
Published Temparature = 80 C Humanity = 80 % Gas Concentration = 99 % to IBM watson
Published Temparature = 91 C Humanity = 88 % Gas Concentration = 99 % to IBM watson
Published Temparature = 89 C Humanity = 96 % Gas Concentration = 92 % to IBM watson
Published Temparature = 98 C Humanity = 90 % Gas Concentration = 87 % to IBM watson
Published Temparature = 85 C Humanity = 84 % Gas Concentration = 89 % to IBM watson
Published Temparature = 87 C Humanity = 83 % Gas Concentration = 99 % to IBM watson
Published Temparature = 97 C Humanity = 98 % Gas Concentration = 91 % to IBM watson
Published Temparature = 94 C Humanity = 82 % Gas Concentration = 86 % to IBM watson
Published Temparature = 81 C Humanity = 89 % Gas Concentration = 86 % to IBM watson
Published Temparature = 98 C Humanity = 82 % Gas Concentration = 96 % to IBM watson
Published Temparature = 85 C Humanity = 82 % Gas Concentration = 94 % to IBM watson
Published Temparature = 89 C Humanity = 98 % Gas Concentration = 93 % to IBM watson
Published Temparature = 93 C Humanity = 90 % Gas Concentration = 80 % to IBM watson
Published Temparature = 87 C Humanity = 95 % Gas Concentration = 91 % to IBM watson
Published Temparature = 93 C Humanity = 90 % Gas Concentration = 97 % to IBM watson
Published Temparature = 85 C Humanity = 90 % Gas Concentration = 96 % to IBM watson
Published Temparature = 95 C Humanity = 87 % Gas Concentration = 83 % to IBM watson
Published Temparature = 85 C Humanity = 81 % Gas Concentration = 81 % to IBM watson
Published Temparature = 85 C Humanity = 89 % Gas Concentration = 95 % to IBM watson
Published Temparature = 88 C Humanity = 86 % Gas Concentration = 85 % to IBM watson
Published Temparature = 88 C Humanity = 93 % Gas Concentration = 83 % to IBM watson
Published Temparature = 96 C Humanity = 95 % Gas Concentration = 83 % to IBM watson
Published Temparature = 95 C Humanity = 90 % Gas Concentration = 100 % to IBM watson
Published Temparature = 84 C Humanity = 100 % Gas Concentration = 92 % to IBM watson
Published Temparature = 90 C Humanity = 87 % Gas Concentration = 80 % to IBM watson
Published Temparature = 85 C Humanity = 96 % Gas Concentration = 94 % to IBM watson
Published Temparature = 84 C Humanity = 87 % Gas Concentration = 89 % to IBM watson
Published Temparature = 93 C Humanity = 92 % Gas Concentration = 85 % to IBM watson
Published Temparature = 85 C Humanity = 100 % Gas Concentration = 93 % to IBM watson
Published Temparature = 82 C Humanity = 97 % Gas Concentration = 94 % to IBM watson
Published Temparature = 84 C Humanity = 82 % Gas Concentration = 85 % to IBM watson
Published Temparature = 86 C Humanity = 84 % Gas Concentration = 99 % to IBM watson
Published Temparature = 89 C Humanity = 95 % Gas Concentration = 91 % to IBM watson
Published Temparature = 82 C Humanity = 92 % Gas Concentration = 99 % to IBM watson
Published Temparature = 97 C Humanity = 87 % Gas Concentration = 97 % to IBM watson
Published Temparature = 95 C Humanity = 100 % Gas Concentration = 87 % to IBM watson
Published Temparature = 93 C Humanity = 89 % Gas Concentration = 82 % to IBM watson
Published Temparature = 84 C Humanity = 89 % Gas Concentration = 87 % to IBM watson
Published Temparature = 86 C Humanity = 86 % Gas Concentration = 85 % to IBM watson
Published Temparature = 96 C Humanity = 86 % Gas Concentration = 98 % to IBM watson
Published Temparature = 82 C Humanity = 86 % Gas Concentration = 80 % to IBM watson