Sprint – 1

Team ID: *PNT2022TMID33446*

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

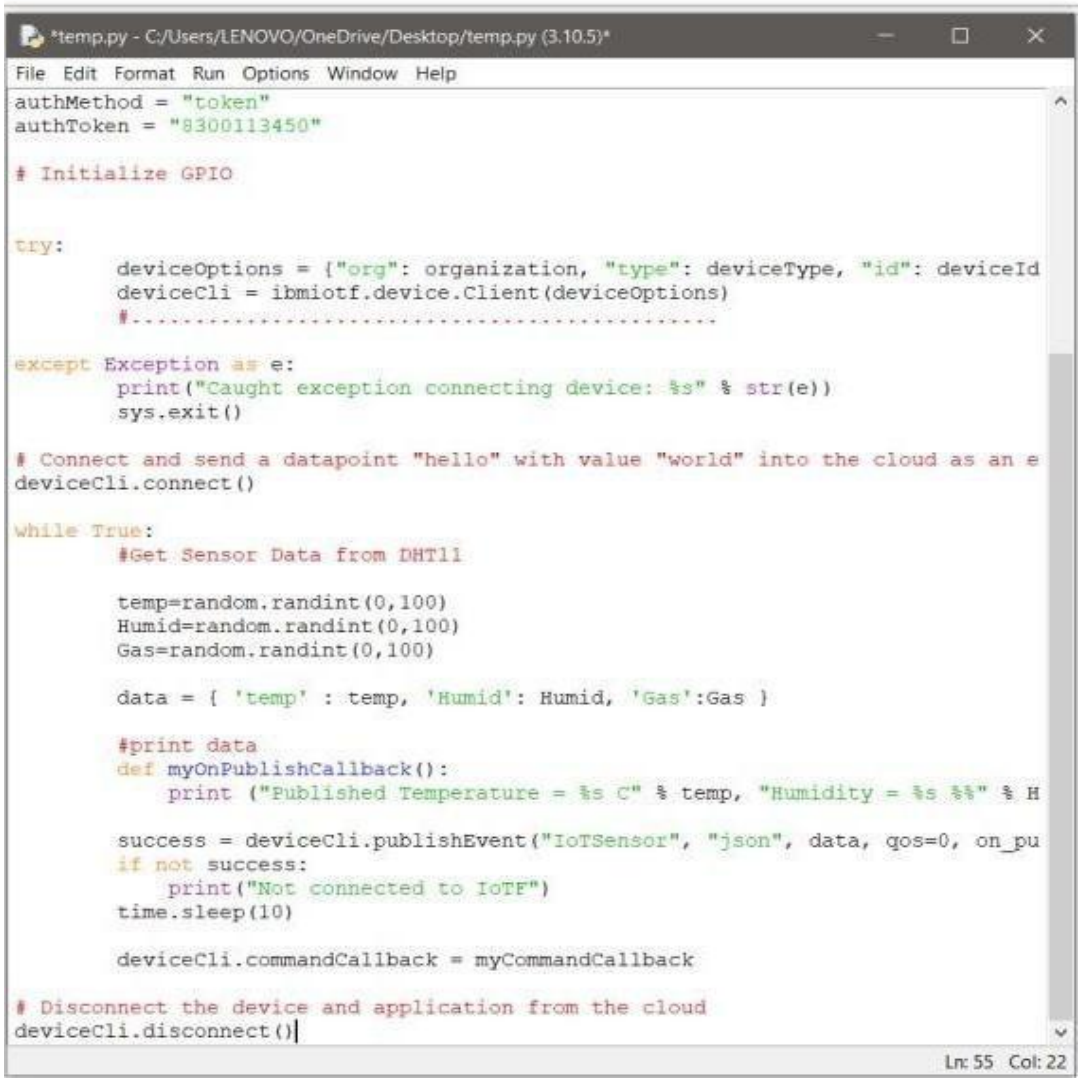
Project: *Gas Leakage Monitoring and Alerting System using IOT.*

Python Code:

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

#Provide your IBM Watson Device Credentials
organization = "u0b4fr"
deviceType = "TestdriveDevice"
deviceId = "TestdriveDevice_1"
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()

 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()
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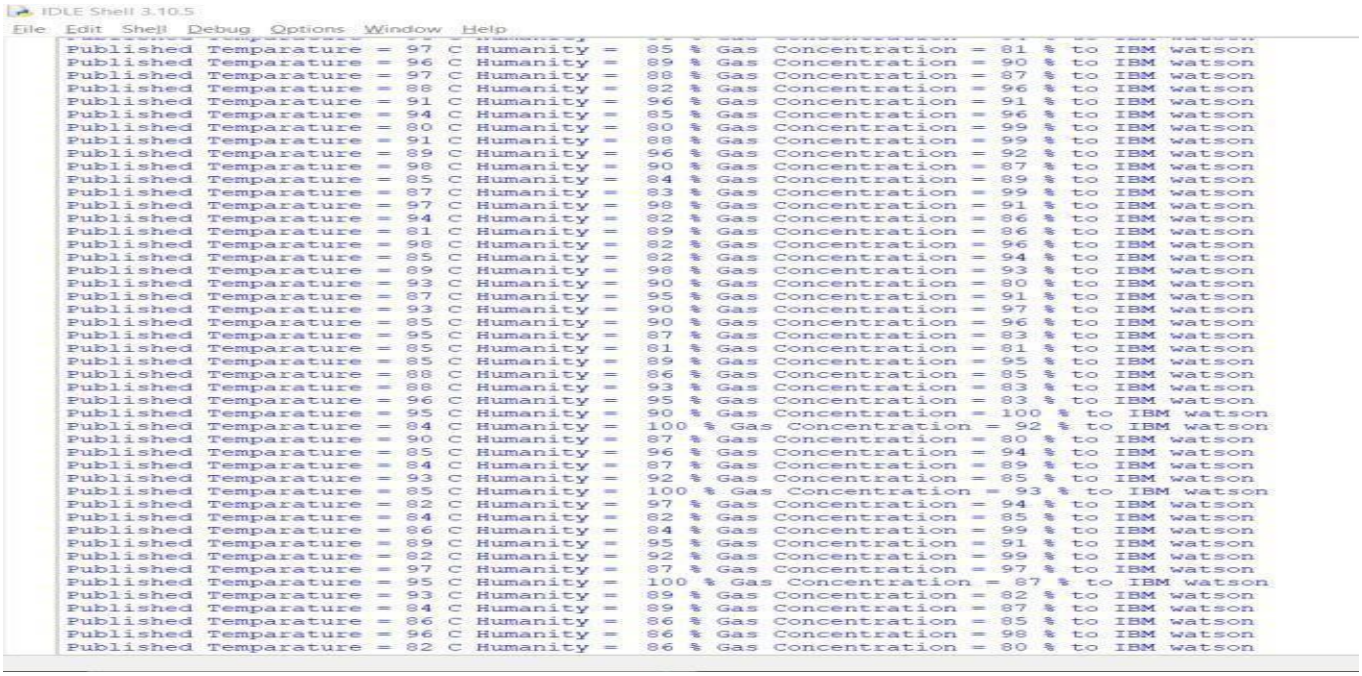
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