Project Development Phase

Sprint-3

Team ID	PNT2022TMID51106
Project Name	Hazardous Area Monitoring for Industrial Plants Powered by IoT

Python Code:

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

#Provide your IBM Watson Device Credentials
organization = "ung925"
deviceType = "priya"
deviceId = "dharshini"
authMethod = "token"
authToken="hnKSFbZxL+FXQ)+65k"



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 anevent 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:

```
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\deeps\Desktop\IBM\ibmiotpublishsubscribe.py =======
2022-11-01 10:43:18,258   ibmiotf.device.Client      INFO    Connected successfully: d:iagqzu:Deepak:123
Published Temperature = 63 C Humidity = 71 % to IBM Watson
Published Temperature = 56 C Humidity = 91 % to IBM Watson
Published Temperature = 93 C Humidity = 66 % to IBM Watson
Published Temperature = 68 C Humidity = 3 % to IBM Watson
Published Temperature = 97 C Humidity = 57 % to IBM Watson
Published Temperature = 70 C Humidity = 9 % to IBM Watson
Published Temperature = 10 C Humidity = 66 % to IBM Watson
Published Temperature = 55 C Humidity = 72 % to IBM Watson
Published Temperature = 38 C Humidity = 50 % to IBM Watson
Published Temperature = 76 C Humidity = 22 % to IBM Watson
Published Temperature = 9 C Humidity = 30 % to IBM Watson
Published Temperature = 82 C Humidity = 5 % to IBM Watson
Published Temperature = 99 C Humidity = 7 % to IBM Watson
Published Temperature = 41 C Humidity = 75 % to IBM Watson
Published Temperature = 94 C Humidity = 66 % to IBM Watson
Published Temperature = 15 C Humidity = 32 % to IBM Watson
Published Temperature = 27 C Humidity = 86 % to IBM Watson
Published Temperature = 5 C Humidity = 68 % to IBM Watson
Published Temperature = 35 C Humidity = 93 % to IBM Watson
Published Temperature = 43 C Humidity = 55 % to IBM Watson
Published Temperature = 71 C Humidity = 68 % to IBM Watson
Published Temperature = 60 C Humidity = 45 % to IBM Watson
Published Temperature = 68 C Humidity = 18 % to IBM Watson
Published Temperature = 51 C Humidity = 61 % to IBM Watson
Published Temperature = 57 C Humidity = 43 % to IBM Watson
Published Temperature = 53 C Humidity = 5 % to IBM Watson
Published Temperature = 63 C Humidity = 19 % to IBM Watson
Published Temperature = 48 C Humidity = 11 % to IBM Watson
Published Temperature = 77 C Humidity = 13 % to IBM Watson
Published Temperature = 100 C Humidity = 95 % to IBM Watson
Published Temperature = 1 C Humidity = 99 % to IBM Watson
Published Temperature = 61 C Humidity = 89 % to IBM Watson
Published Temperature = 27 C Humidity = 100 % to IBM Watson
Published Temperature = 59 C Humidity = 34 % to IBM Watson
Published Temperature = 47 C Humidity = 14 % to IBM Watson
Published Temperature = 31 C Humidity = 36 % to IBM Watson
Published Temperature = 8 C Humidity = 44 % to IBM Watson
Published Temperature = 69 C Humidity = 65 % to IBM Watson
Published Temperature = 56 C Humidity = 86 % to IBM Watson
Published Temperature = 7 C Humidity = 59 % to IBM Watson
Published Temperature = 11 C Humidity = 49 % to IBM Watson
Published Temperature = 64 C Humidity = 8 % to IBM Watson
```