SPRINT 2

Team ID	PNT2022TMID52802
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IoT

Python code

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


#Provide your IBM Watson Device Credentials
organization = "iagqzu"
deviceType = "Hari”
deviceId = "123"
authMethod = "token"
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(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)


      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(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
```