

# Sprint 1

Date	19 Nov 2022
Team ID	PNT2022TMID08189
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 = "05eb28"

deviceType = "abcd"

deviceId = "1234"

authMethod = "token"

authToken = "12345678"


# Initialize GPIO


def myCommandCallback(cmd):

    print("Command received: %s" % cmd.data['command'])

    status=cmd.data['command']

    if status=="Relayon":

        print ("Relay is on")

    elif status=="Relayoff":

        print ("Relay 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(80,100)
```

```
    Humid=random.randint(60,80)
```

```
    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")
```

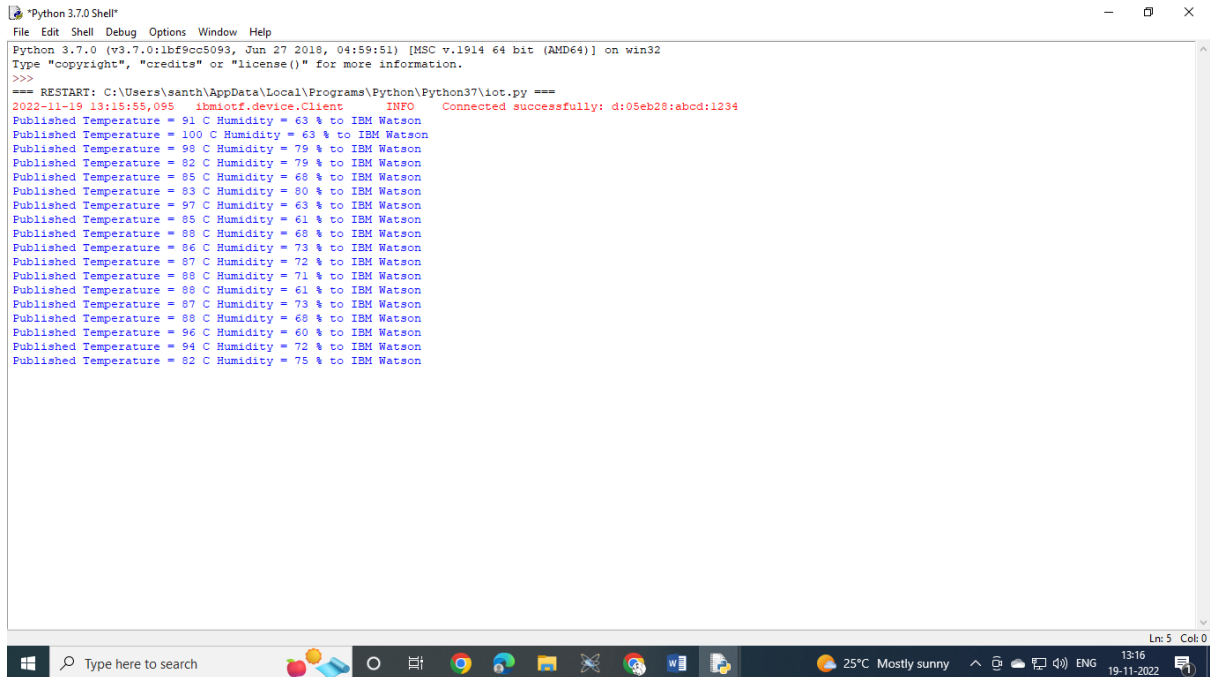
```
    time.sleep(10)
```

```
    deviceCli.commandCallback = myCommandCallback
```

# Disconnect the device and application from the cloud

```
deviceCli.disconnect()
```

## Sprint 1 Delivery



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (tags/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\santh\AppData\Local\Programs\Python\Python37\iot.py ===
2022-11-19 13:15:55,095 ibmiotf.device.Client INFO Connected successfully: d:05eb28:abod:1234
Published Temperature = 91 C Humidity = 63 % to IBM Watson
Published Temperature = 100 C Humidity = 63 % to IBM Watson
Published Temperature = 99 C Humidity = 79 % to IBM Watson
Published Temperature = 82 C Humidity = 79 % to IBM Watson
Published Temperature = 85 C Humidity = 69 % to IBM Watson
Published Temperature = 83 C Humidity = 80 % to IBM Watson
Published Temperature = 97 C Humidity = 63 % to IBM Watson
Published Temperature = 85 C Humidity = 61 % to IBM Watson
Published Temperature = 88 C Humidity = 68 % to IBM Watson
Published Temperature = 86 C Humidity = 73 % to IBM Watson
Published Temperature = 87 C Humidity = 72 % to IBM Watson
Published Temperature = 88 C Humidity = 71 % to IBM Watson
Published Temperature = 88 C Humidity = 61 % to IBM Watson
Published Temperature = 87 C Humidity = 73 % to IBM Watson
Published Temperature = 88 C Humidity = 68 % to IBM Watson
Published Temperature = 96 C Humidity = 60 % to IBM Watson
Published Temperature = 94 C Humidity = 72 % to IBM Watson
Published Temperature = 82 C Humidity = 75 % to IBM Watson
```