

## PROJECT DEVELOPMENT - DELIVERY OF SPRINT 2

Date:	14 November 2022
Team ID:	PNT2022TMID08054
Name:	Real-Time River Water Quality Monitoring and Control System

### PYTHON CODE

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

#Provide your IBM Watson Device Credentials
organization = "uyyqeq"
deviceType = "12345"
deviceId = "12345"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="light on":
        print ("led is on")
    elif status == "light off":
        print ("led is off")
    else :
        print ("please send proper command")

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(90,110)
    Humid=random.randint(60,100)

    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 IoTTF")
        time.sleep(10)

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()

```

```

Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:01:48) [MSC v.1929 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\vinay\Downloads\ibmiotpublishsubscribe.py =====
2022-11-14 19:36:48,951 ibmiotf.device.Client INFO Connected successfully: d:uyyqeq:12345:12345
Published Temperature = 95 C Humidity = 68 % to IBM Watson
Published Temperature = 90 C Humidity = 92 % to IBM Watson
Published Temperature = 101 C Humidity = 99 % to IBM Watson
Published Temperature = 107 C Humidity = 89 % to IBM Watson
Published Temperature = 96 C Humidity = 63 % to IBM Watson
Published Temperature = 91 C Humidity = 81 % to IBM Watson
Published Temperature = 95 C Humidity = 67 % to IBM Watson
Published Temperature = 104 C Humidity = 83 % to IBM Watson
Published Temperature = 93 C Humidity = 99 % to IBM Watson
Published Temperature = 95 C Humidity = 72 % to IBM Watson
Published Temperature = 97 C Humidity = 99 % to IBM Watson
Published Temperature = 103 C Humidity = 65 % to IBM Watson
Published Temperature = 110 C Humidity = 64 % to IBM Watson
Published Temperature = 92 C Humidity = 93 % to IBM Watson
Published Temperature = 101 C Humidity = 87 % to IBM Watson
Published Temperature = 102 C Humidity = 67 % to IBM Watson
Published Temperature = 91 C Humidity = 94 % to IBM Watson
Published Temperature = 95 C Humidity = 68 % to IBM Watson
Published Temperature = 110 C Humidity = 71 % to IBM Watson
Published Temperature = 100 C Humidity = 79 % to IBM Watson
Published Temperature = 102 C Humidity = 61 % to IBM Watson
Published Temperature = 109 C Humidity = 68 % to IBM Watson
Published Temperature = 106 C Humidity = 79 % to IBM Watson
Published Temperature = 103 C Humidity = 82 % to IBM Watson
Published Temperature = 103 C Humidity = 70 % to IBM Watson
Published Temperature = 104 C Humidity = 75 % to IBM Watson
Published Temperature = 91 C Humidity = 81 % to IBM Watson
Published Temperature = 99 C Humidity = 98 % to IBM Watson
Published Temperature = 91 C Humidity = 95 % to IBM Watson
Published Temperature = 110 C Humidity = 98 % to IBM Watson
Published Temperature = 106 C Humidity = 86 % to IBM Watson
Published Temperature = 92 C Humidity = 72 % to IBM Watson
Published Temperature = 100 C Humidity = 80 % to IBM Watson
Published Temperature = 107 C Humidity = 97 % to IBM Watson
Published Temperature = 92 C Humidity = 62 % to IBM Watson
Published Temperature = 90 C Humidity = 68 % to IBM Watson
Published Temperature = 106 C Humidity = 65 % to IBM Watson
Published Temperature = 110 C Humidity = 80 % to IBM Watson
Published Temperature = 103 C Humidity = 68 % to IBM Watson
Published Temperature = 110 C Humidity = 94 % to IBM Watson
Published Temperature = 91 C Humidity = 67 % to IBM Watson
Published Temperature = 97 C Humidity = 73 % to IBM Watson
Published Temperature = 97 C Humidity = 84 % to IBM Watson
Published Temperature = 110 C Humidity = 97 % to IBM Watson
Published Temperature = 101 C Humidity = 99 % to IBM Watson
Published Temperature = 90 C Humidity = 69 % to IBM Watson
Published Temperature = 104 C Humidity = 92 % to IBM Watson
Published Temperature = 98 C Humidity = 99 % to IBM Watson
Published Temperature = 107 C Humidity = 84 % to IBM Watson
Published Temperature = 103 C Humidity = 68 % to IBM Watson
Published Temperature = 91 C Humidity = 88 % to IBM Watson

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