

DATE	17 NOV 2022
TEAM ID	PNT2022TMID48690
PROJECT NAME	HAZARDOUS AREA MONITORING FOR INDUSTRIAL PLANT

SPRINT 3

Python code for temprature and humidity check

```
IBM project.py - C:\Users\dives\AppData\Local\Programs\Python\Python37\IBM project.py (3.7.0)
File Edit Format Run Options Window Help

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

#Provide your IBM Watson Device Credentials
organization = "6b732o"
deviceType = "NodeMCU"
deviceId = "12345"
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")
    elif status == "lightoff":
        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")
```

Fetch data's from iot platform and showing in node-red:

The screenshot displays the Node-RED web interface in a browser. The top navigation bar shows several open tabs: 'Resource list - IBM Cloud', 'Node-RED : 159.122.178.48', 'Node-RED Dashboard', 'IBM', and '(17) WhatsApp'. The browser address bar indicates the URL '159.122.178.48:32014/red/#flow/2ad01968cfd6ccdde'. The Node-RED interface itself is divided into several sections:

- Left Panel (Nodes):** Contains a search bar and two categories of nodes: 'common' (inject, debug, complete, catch, status, link in, link call, link out, comment) and 'function' (function, switch).
- Flow 1 Canvas:** The central workspace where a flow is being built. It includes:
 - A 'Humid' function node connected to a 'Humidity' output node.
 - A sequence of nodes: '[get] /data' (inject), 'webpage' (function), and 'http' (output).
 - An 'Alert' node connected to an 'IBM IoT' node (labeled 'connected').
 - A 'msg.payload' node connected to the 'IBM IoT' node.
 - Another sequence of nodes: '[get] /command' (inject), 'command' (function), and 'http' (output).
- Right Panel (Debug Console):** Shows a log of messages. The 'msg.payload' is an object containing temperature and humidity data. The log entries show the following data points:
 - 11/17/2022, 2:55:24 PM: node: f2f2649a.0d0d98, iot-2/type/demo-1/id/12345/evt/IoTSensor/rmt/json, msg.payload: number 64
 - 11/17/2022, 2:55:25 PM: node: f2f2649a.0d0d98, iot-2/type/demo-1/id/12345/evt/IoTSensor/rmt/json, msg.payload: number 95
 - 11/17/2022, 2:55:34 PM: node: f2f2649a.0d0d98, iot-2/type/demo-1/id/12345/evt/IoTSensor/rmt/json, msg.payload: Object { temp: 107, Humid: 87 }
 - 11/17/2022, 2:55:34 PM: node: f2f2649a.0d0d98, iot-2/type/demo-1/id/12345/evt/IoTSensor/rmt/json, msg.payload: number 87
 - 11/17/2022, 2:55:34 PM: node: f2f2649a.0d0d98, iot-2/type/demo-1/id/12345/evt/IoTSensor/rmt/json, msg.payload: number 107

The bottom of the image shows a Windows taskbar with the system clock at 14:55 on 17-11-2022, and a weather widget indicating 31°C and Haze.

Node-red UI;

IoT-B3-3MSE (M... x IBM x (18) WhatsApp x Service Details - I x IBM Watson IoT x Node-RED : 159... x 159.122.178.48:3... x Node-RED Dashl... x

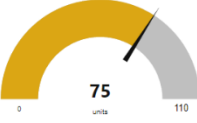
Not secure | 159.122.178.48:32014/ui/#/0?socketid=i39RpoE4ys2pi2VaAAAK

Gmail YouTube IBM IBM Cloud Webmail Sign up for My IBM... Tinkercad

Hazardous Area Monitoring for Industrial Plant

[Hazardous Area Monitoring for Industrial Plant]Group

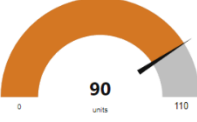
Humidity



75 units

ALERT

Temperature



90 units

30°C Haze

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ENG IN

13:59 17-11-2022