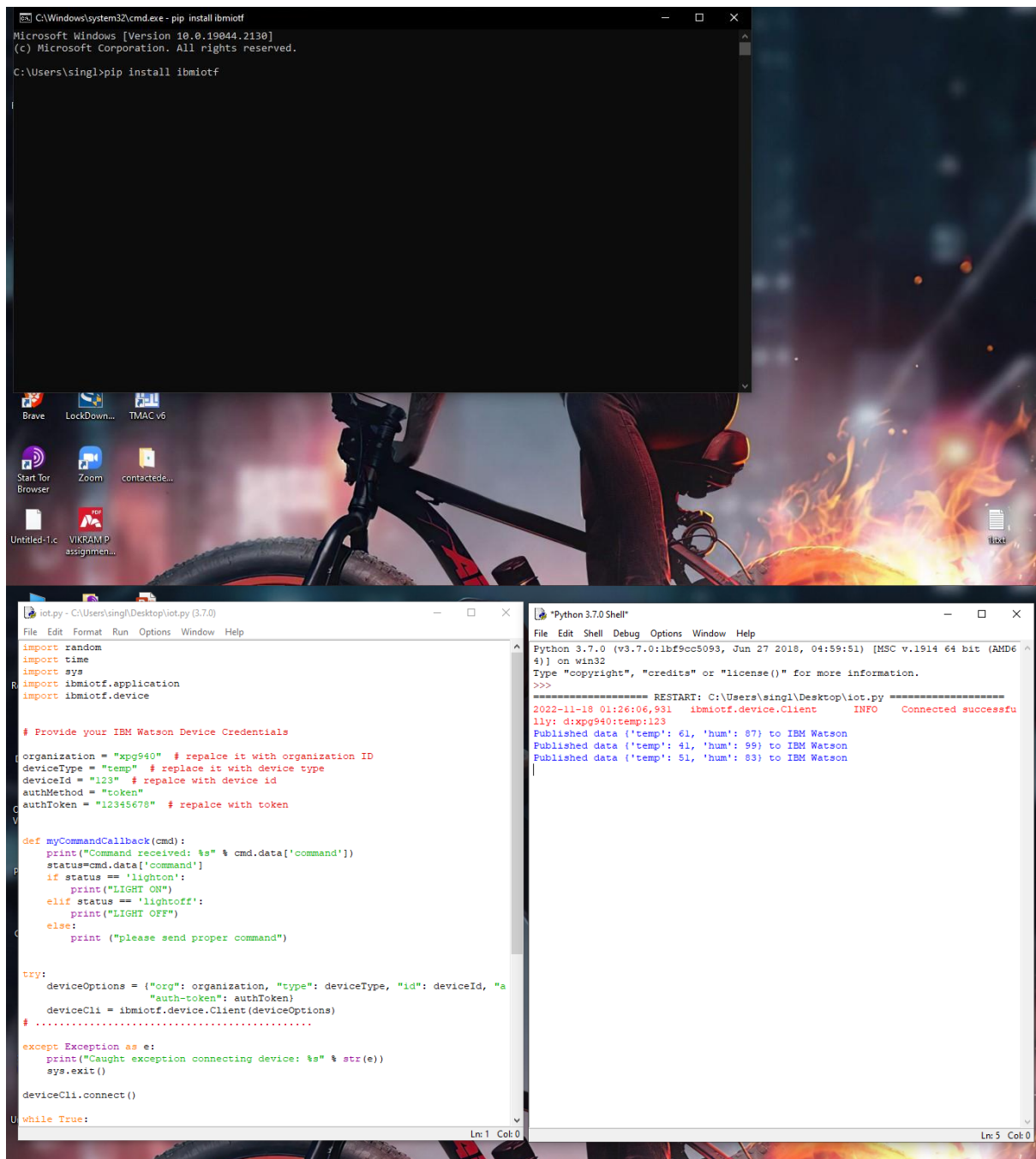


# PROJECT DEVELOPMENT PHASE

## Delivery Of sprint 4

Team ID	PNT2022TMID06971
Project Name	Hazardous Area Monitoring For Industrial Plant Powered By IoT

### CONNECTING ALL SERVICE :



```
C:\Windows\system32\cmd.exe - pip install ibmiotf
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\singl>pip install ibmiotf

Brave LockDown... TMAC v6
Start Tor Browser Zoom contacted...
Untitled-1.c VIKRAM assignment...

File Edit Format Run Options Window Help
iot.py - C:\Users\singl\Desktop\iot.py (3.7.0)
import random
import time
import sys
import ibmiotf.application
import ibmiotf.device

# Provide your IBM Watson Device Credentials

organization = "xpg940" # replace it with organization ID
deviceType = "temp" # replace it with device type
deviceId = "123" # replace with device id
authMethod = "token"
authToken = "12345678" # replace with token

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status == 'lighton':
        print("LIGHT ON")
    elif status == 'lightoff':
        print("LIGHT OFF")
    else:
        print ("please send proper command")

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "a
        "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    # .....

except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

deviceCli.connect()

while True:
```

```
Python 3.7.0 Shell
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD6
4)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\singl\Desktop\iot.py =====
2022-11-18 01:26:06,931 ibmiotf.device.Client INFO Connected successfu
ily: d:xpg940:temp:123
Published data {'temp': 61, 'hum': 87} to IBM Watson
Published data {'temp': 41, 'hum': 99} to IBM Watson
Published data {'temp': 51, 'hum': 83} to IBM Watson
```

IBMProject-7220-16588501IBM Watson IoT PlatformNode-RED: node-red-minrMIT App Inventor

https://xpg940.internetofthings.ibmcloud.com/dashboard/devices/browse

vikr.1914114@gct.ac.inID: xpg940

IBM Watson IoT Platform

Device IDStatusDevice TypeClass IDDate Added

123DisconnectedtempDeviceNov 16, 2022 11:41 AM

IdentityDevice InformationRecent EventsStateLogs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event	["temp":71,"hum":93]	json	a few seconds ago
event	["temp":54,"hum":85]	json	a few seconds ago
event	["temp":41,"hum":89]	json	a few seconds ago

Items per page 50 | 1-1 of 1 item1 of 1 page

Node-RED

Flow 1

filter nodes

common

function

IBM IoT

temp

hum

[get]/sensor

sen

http

msg payload

debug

all nodes

all

18/11/2022, 1:27:18 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : Object  
{ temp: 40, hum: 81 }

18/11/2022, 1:27:18 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : number  
40

18/11/2022, 1:27:18 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : number  
81

18/11/2022, 1:27:22 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : Object  
{ temp: 64, hum: 90 }

18/11/2022, 1:27:22 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : number  
64

18/11/2022, 1:27:22 am node: 3b4763b51fe5314  
iot-2/type/tempid/123/ev/event/fmt/json : msg.payload : number  
90

Node-RED interface showing a flow editor and a function node configuration.

**Flow 1:** A flow starting with an **inject** node, followed by a **debug** node, and then a **function** node.

**Edit function node:**

- Name:** sen
- Properties:** Setup, On Start, On Message, On Stop
- Code:**

```
1 msg.payload = {"temp": global.get("t"), "hum": global.get("h")}
2
3 return msg;
```
- Enabled:** ☐

**debug console:**

- 18/11/2022, 1:27:27 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : Object  
{ temp: 46, hum: 91 }
- 18/11/2022, 1:27:27 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : number  
46
- 18/11/2022, 1:27:28 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : number  
91
- 18/11/2022, 1:27:32 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : Object  
{ temp: 49, hum: 87 }
- 18/11/2022, 1:27:33 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : number  
49
- 18/11/2022, 1:27:33 am node: 3b4763b51fe5314  
iot-2/type/temperature/123/ev/temperature : msg.payload : number  
87

MIT App Inventor interface showing a screen editor and a code block configuration.

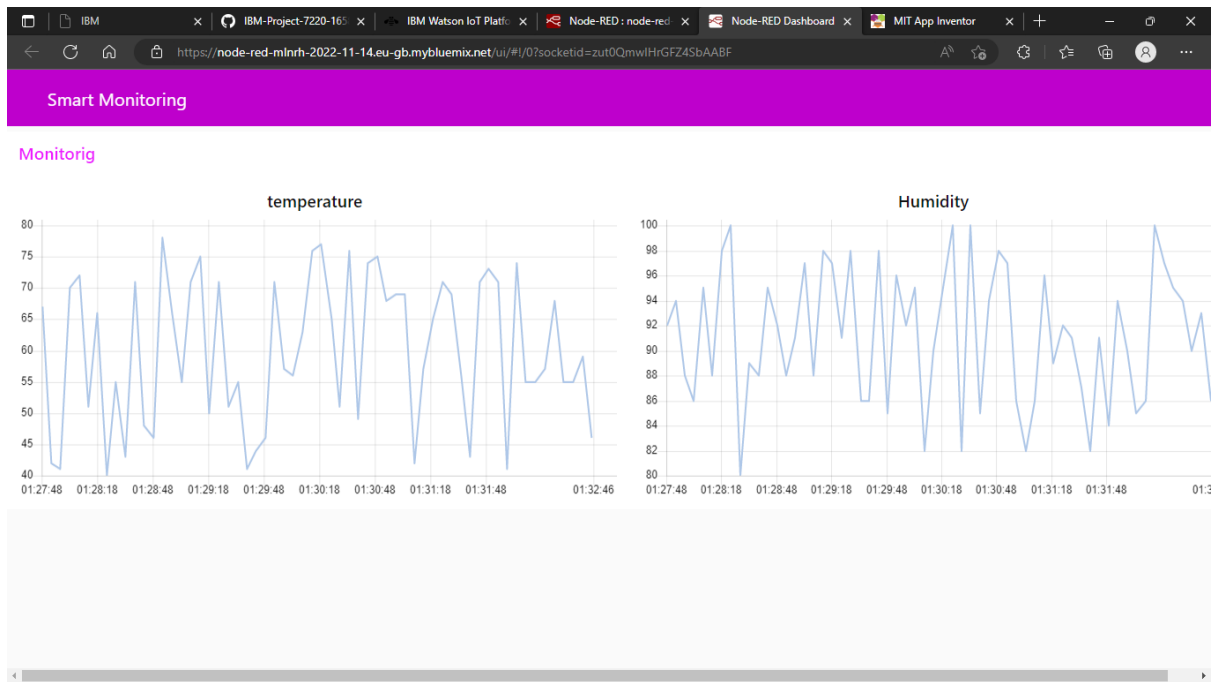
**test** | Screen3 | Add Screen | Remove Screen | Publish to Gallery | Designer | Blocks

**Blocks:**

- Built-in
  - Control
    - when Clock1.Timer
  - Logic
    - do set Web1.Url to https://node-red-mlnrh-2022-11-14.eu-gb.mybluemix.net
    - call Web1.Get
  - Text
    - when Web1.GetText
    - do set Label9.Text to look up in pairs key temp
    - call Web1.JsonTextDecode jsonText get responseContent
    - not found
    - set Label8.Text to look up in pairs key hum
    - call Web1.JsonTextDecode jsonText get responseContent
    - not found
- Screen3
  - VerticalArrangement1
    - Label7
    - VerticalArrangement
      - VerticalArrangement
        - Image1

**Viewer:**

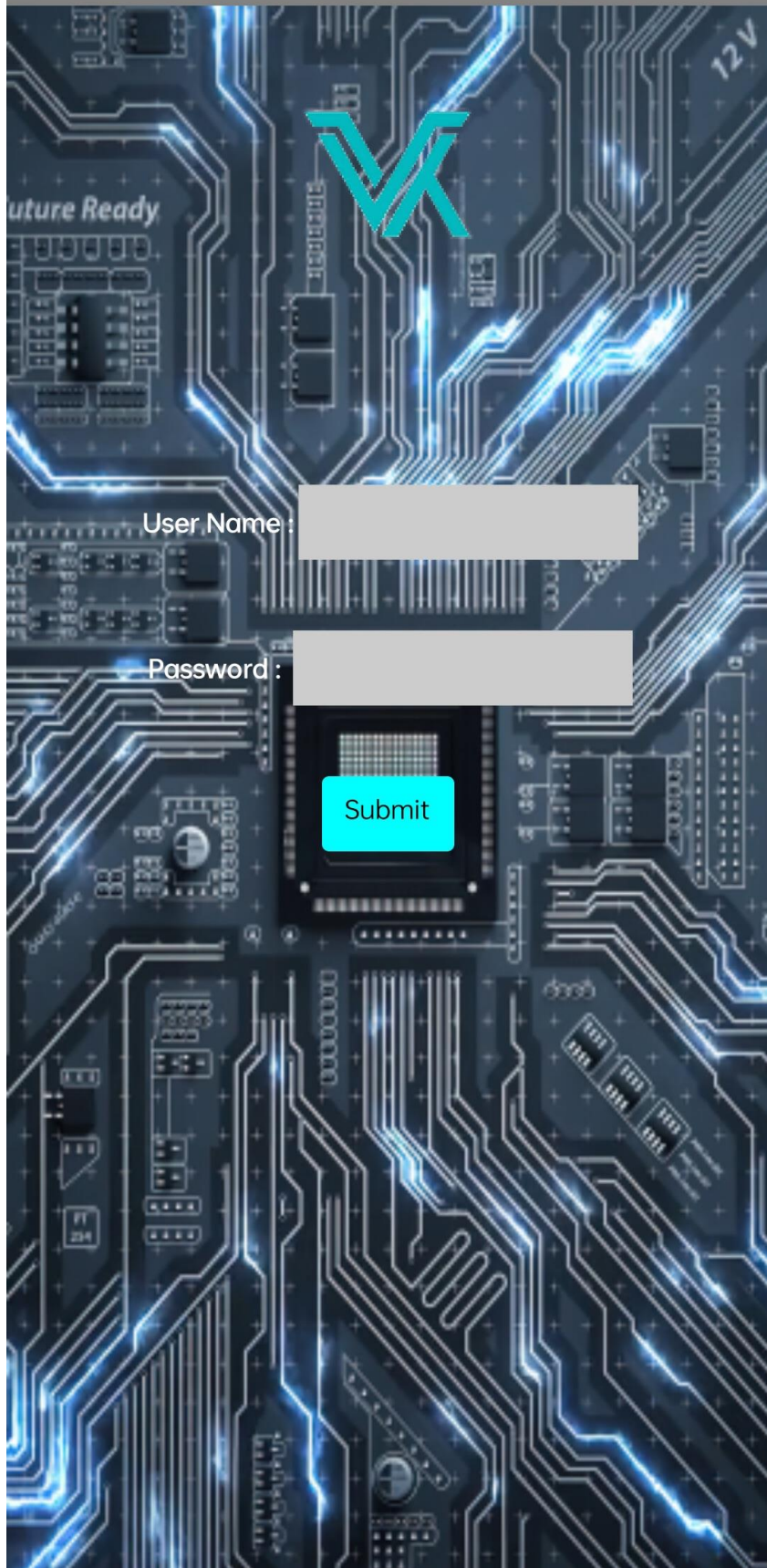
0 1 Show Warnings



1:29

9:00 KB/S 4G 29

Screen2





1:29

4.00 KB/S 4G 29

Screen3

# Hazardous Area Monitoring for Industrial Plant powered by IoT



## Plant Status

Temperature : 71°C

Humidity : 96%