

# Final Deliverables

Team ID : PNT2022TMID29941

IBM ID : IBM-Project-31889-1660205917

GITHUB LINK : <https://github.com/IBM-EPBL/IBM-Project-31889-1660205917>

CODE:

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

#provide Your IBM Watson Device Credentials
organization = "6hr21b"
deviceType = "mainproject005"
deviceID = "finalproject"
authMethod = "token"
authToken = "1234567890"
#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" info the cloud as an event of
type"greetings"10 times
deviceCli.connect()

while True:
    #Get sensor Data from DHT11

    temp=random.randint(0,100)
    humid=random.randint(0,100)
    fleamlevel=random.randint(-296,97)

    data = { 'Temperature' : temp , 'Humidity': humid, 'Fleamlevel': fleamlevel }
```

```

#print data
def myOnPublishCallback():
    print ("published Temperature = %s C" % temp, "Humidity = is %s %" % humid,
"Fleamlevel= is %s %" % fleamlevel,"to IBM Watson")

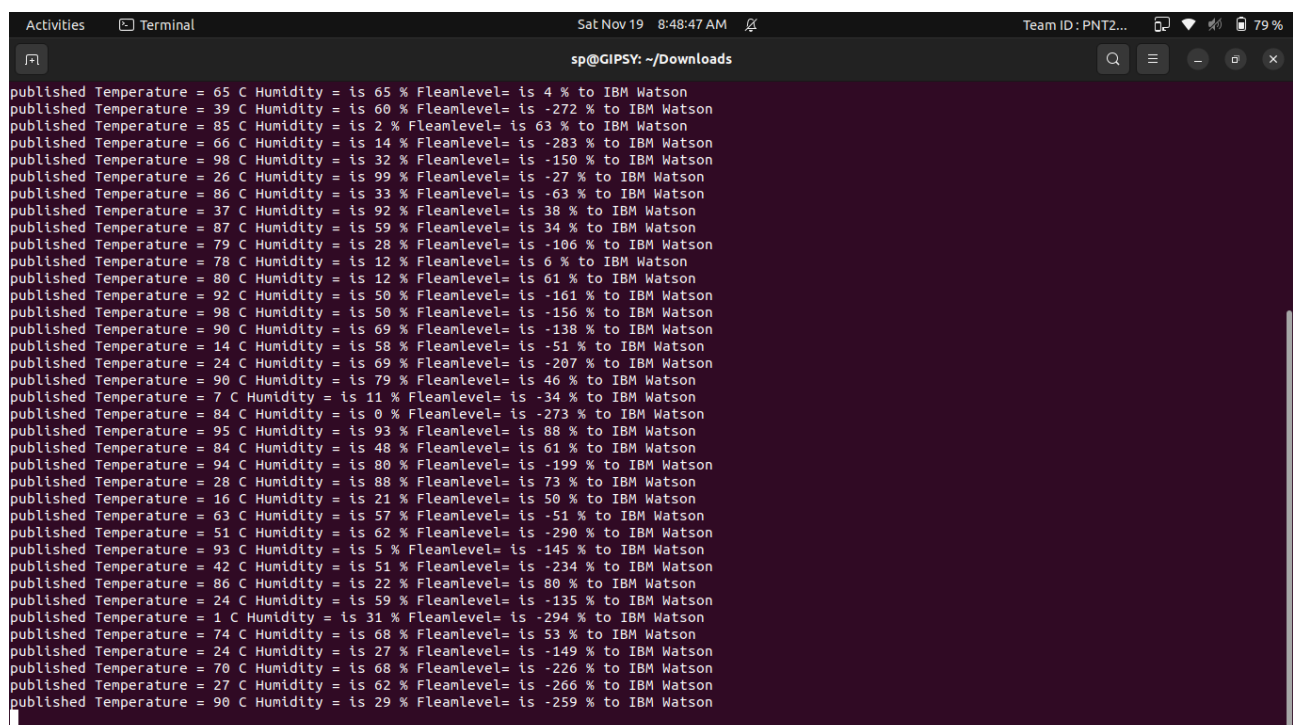
    success = deviceCli.publishEvent("IOTSensor",
"json",data,qos=0,on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IOTF")
    time.sleep(10)

deviceCli.commandCallback = myCommandCallback

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

```

Program&Output: Simulation:



```

Activities Terminal Sat Nov 19 8:48:47 AM Team ID: PNT2...
sp@GIPSY: ~/Downloads
published Temperature = 65 C Humidity = is 65 % Fleamlevel= is 4 % to IBM Watson
published Temperature = 39 C Humidity = is 60 % Fleamlevel= is -272 % to IBM Watson
published Temperature = 85 C Humidity = is 2 % Fleamlevel= is 63 % to IBM Watson
published Temperature = 66 C Humidity = is 14 % Fleamlevel= is -283 % to IBM Watson
published Temperature = 98 C Humidity = is 32 % Fleamlevel= is -150 % to IBM Watson
published Temperature = 26 C Humidity = is 99 % Fleamlevel= is -27 % to IBM Watson
published Temperature = 86 C Humidity = is 33 % Fleamlevel= is -63 % to IBM Watson
published Temperature = 37 C Humidity = is 92 % Fleamlevel= is 38 % to IBM Watson
published Temperature = 87 C Humidity = is 59 % Fleamlevel= is 34 % to IBM Watson
published Temperature = 79 C Humidity = is 28 % Fleamlevel= is -106 % to IBM Watson
published Temperature = 78 C Humidity = is 12 % Fleamlevel= is 6 % to IBM Watson
published Temperature = 80 C Humidity = is 12 % Fleamlevel= is 61 % to IBM Watson
published Temperature = 92 C Humidity = is 50 % Fleamlevel= is -161 % to IBM Watson
published Temperature = 98 C Humidity = is 50 % Fleamlevel= is -156 % to IBM Watson
published Temperature = 90 C Humidity = is 69 % Fleamlevel= is -138 % to IBM Watson
published Temperature = 14 C Humidity = is 58 % Fleamlevel= is -51 % to IBM Watson
published Temperature = 24 C Humidity = is 69 % Fleamlevel= is -207 % to IBM Watson
published Temperature = 90 C Humidity = is 79 % Fleamlevel= is 46 % to IBM Watson
published Temperature = 7 C Humidity = is 11 % Fleamlevel= is -34 % to IBM Watson
published Temperature = 84 C Humidity = is 0 % Fleamlevel= is -273 % to IBM Watson
published Temperature = 95 C Humidity = is 93 % Fleamlevel= is 88 % to IBM Watson
published Temperature = 84 C Humidity = is 48 % Fleamlevel= is 61 % to IBM Watson
published Temperature = 94 C Humidity = is 80 % Fleamlevel= is -199 % to IBM Watson
published Temperature = 28 C Humidity = is 88 % Fleamlevel= is 73 % to IBM Watson
published Temperature = 16 C Humidity = is 21 % Fleamlevel= is 50 % to IBM Watson
published Temperature = 63 C Humidity = is 57 % Fleamlevel= is -51 % to IBM Watson
published Temperature = 51 C Humidity = is 62 % Fleamlevel= is -290 % to IBM Watson
published Temperature = 93 C Humidity = is 5 % Fleamlevel= is -145 % to IBM Watson
published Temperature = 42 C Humidity = is 51 % Fleamlevel= is -234 % to IBM Watson
published Temperature = 86 C Humidity = is 22 % Fleamlevel= is 80 % to IBM Watson
published Temperature = 24 C Humidity = is 59 % Fleamlevel= is -135 % to IBM Watson
published Temperature = 1 C Humidity = is 31 % Fleamlevel= is -294 % to IBM Watson
published Temperature = 74 C Humidity = is 68 % Fleamlevel= is 53 % to IBM Watson
published Temperature = 24 C Humidity = is 27 % Fleamlevel= is -149 % to IBM Watson
published Temperature = 70 C Humidity = is 68 % Fleamlevel= is -226 % to IBM Watson
published Temperature = 27 C Humidity = is 62 % Fleamlevel= is -266 % to IBM Watson
published Temperature = 90 C Humidity = is 29 % Fleamlevel= is -259 % to IBM Watson

```

## Ibm watson iot platform connection:

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. The main content area shows a list of devices. The 'mainproject' device is selected, and its details are expanded. The 'Device Information' tab is active, showing the following details:

Property	Value
Device ID	mainproject
Device Type	sprint004
Date Added	Nov 13, 2022 1:37 PM
Added By	kiruthikas028.ece@dgct.ac.in
Connection Status	Connected Connection Time: Nov 13, 2022 1:52 PM Client Address: 50.31.197.64 Insecure

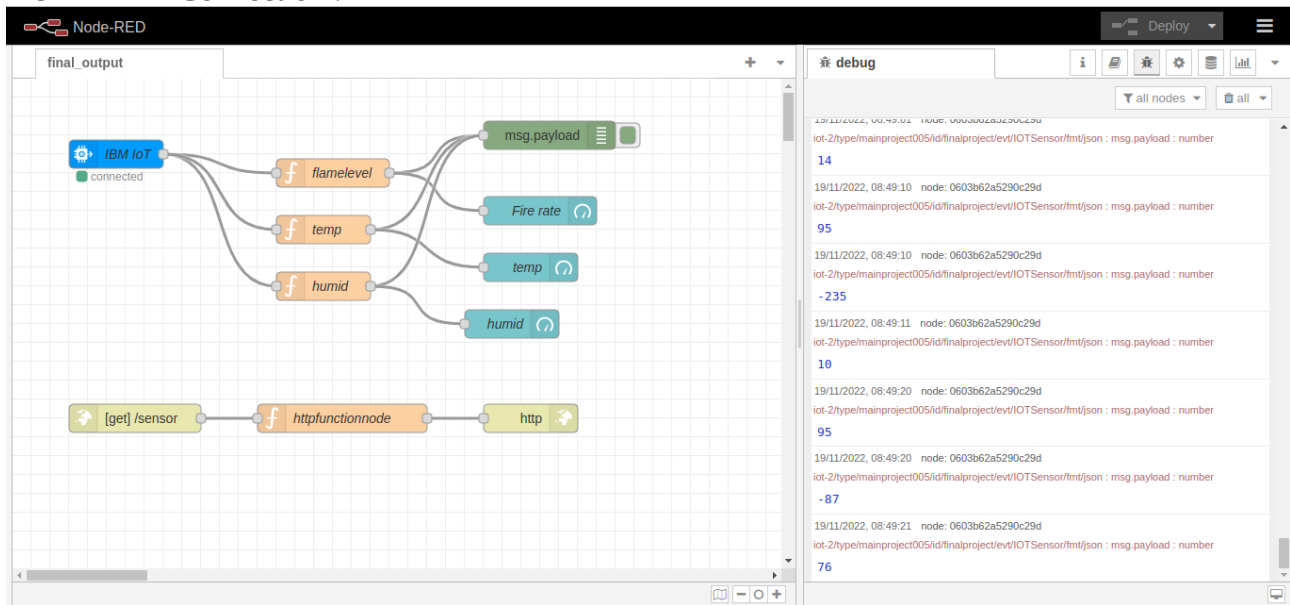
The bottom of the interface shows pagination information: 'Items per page 50' and '1-3 of 3 items'.

## Watson output event:

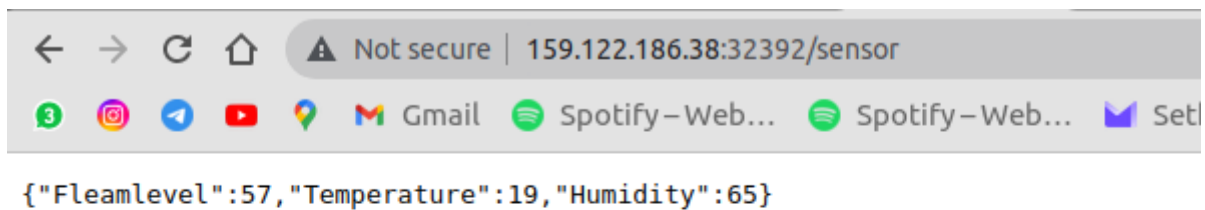
The screenshot displays the IBM Watson IoT Platform interface, focusing on the 'Recent Events' tab for the 'mainproject' device. The tab shows a live stream of data events. The events are listed in a table with the following columns: Event, Value, Format, and Last Received.

Event	Value	Format	Last Received
Data	{"flamelevel":3,"msg":"chill"}	json	a few seconds ago
Data	{"flamelevel":3,"msg":"chill"}	json	a few seconds ago
Data	{"flamelevel":3,"msg":"chill"}	json	a few seconds ago
Data	{"flamelevel":3,"msg":"chill"}	json	a few seconds ago
Data	{"flamelevel":3,"msg":"chill"}	json	a few seconds ago

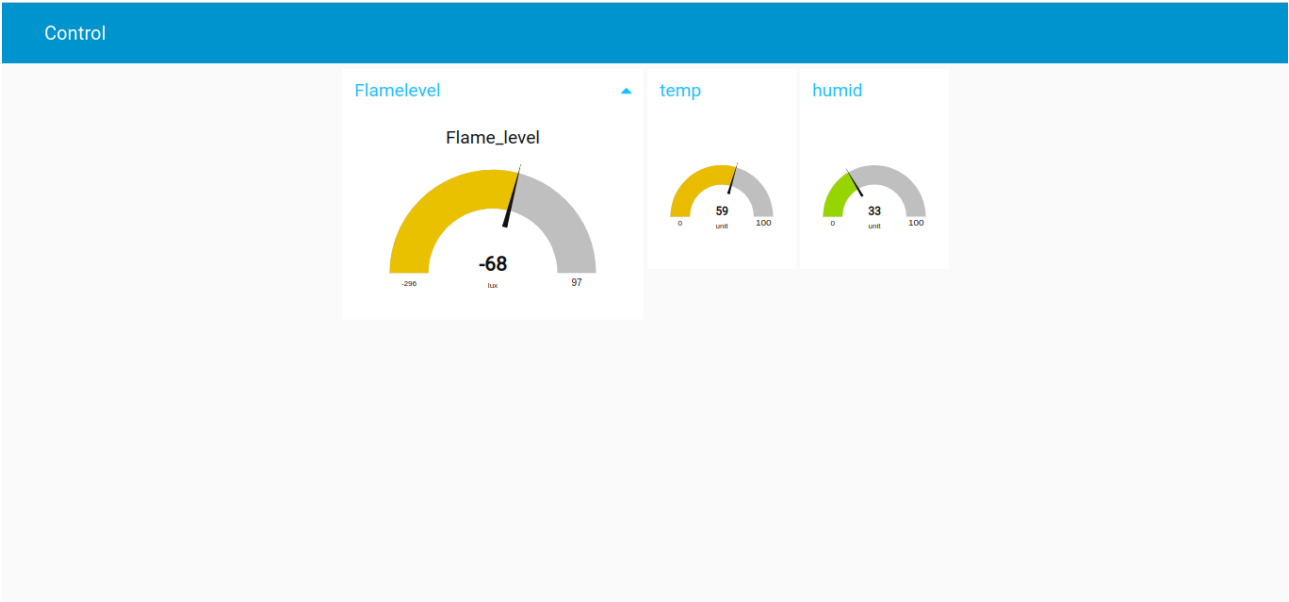
## NODE-RED Connection :



## NODE-RED /sensor output:



NODE-RED UI output :



MIT APP OUTPUT :



Flamelevel : -144

Temprature: 48

Humidity: 69



NODE\_RED Link :

[https://t.me/movems\\_storeBOT?start=Z2V0LTQ2NTc2NTc3NzA2MDU1ODE0](https://t.me/movems_storeBOT?start=Z2V0LTQ2NTc2NTc3NzA2MDU1ODE0)