FINAL DELIVERABLE

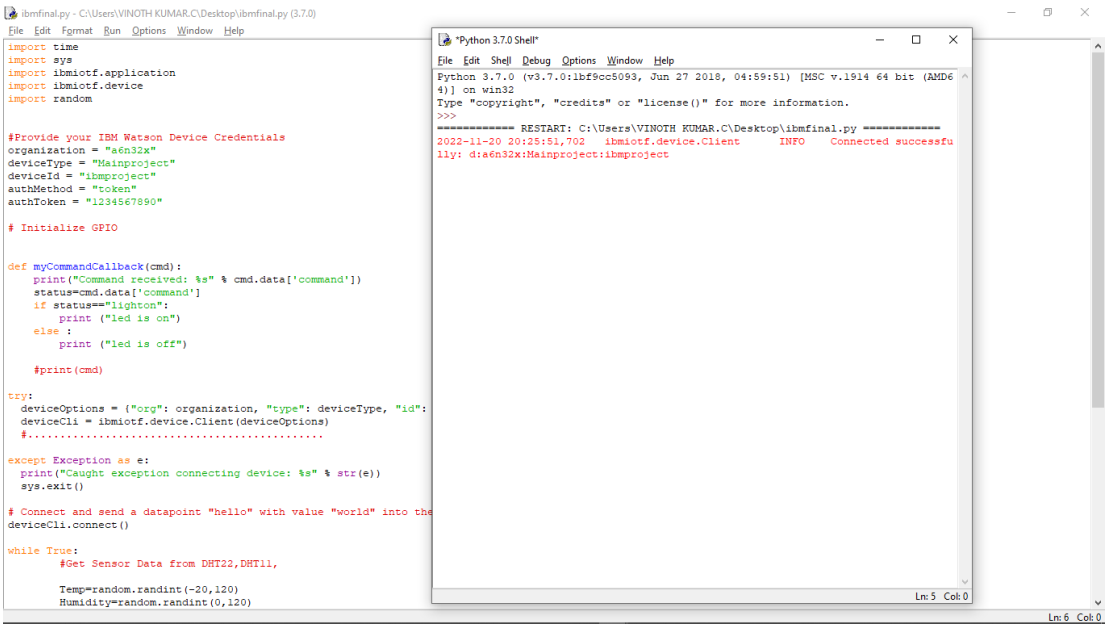
TEAM ID	PNT2022TMID29910
PROJECT TITLE	INDUDTRY-SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM

PYTHON PROGRAM:

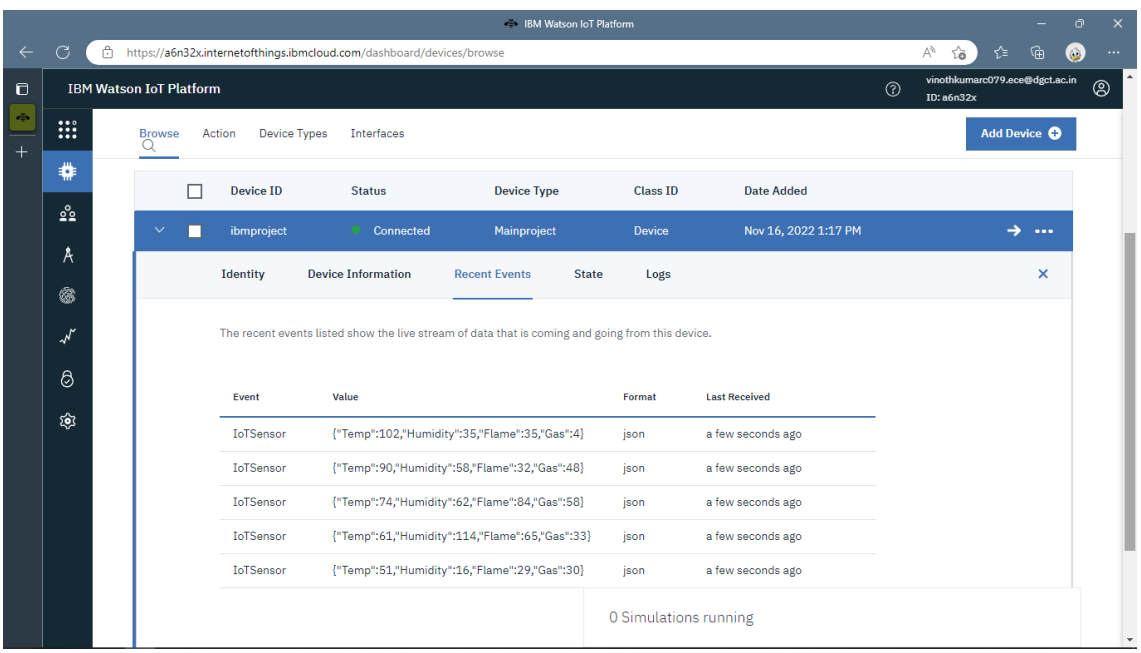
```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random


#Provide your IBM Watson Device Credentials
organization = "a6n32x"
deviceType = "Mainproject"
deviceId = "ibmproject"
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")
else :
print ("led 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 DHT22,DHT11,

Temp=random.randint(-20,120)
Humidity=random.randint(0,120)
Flame=random.randint(0,100)
Gas=random.randint(0,80)

data = {'Temp' :Temp ,'Humidity' : Humidity,'Flame' : Flame,'Gas' : Gas}


def myOnPublishCallback():
if Flame > 100:
data = {'Flame' : Flame}


print ("Temperature =%s c" % Temp ,"Humidity =%s u" % Humidity,"Flame =%s ir" % Flame ,"Gas
=%s ppm" % Gas )
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)

if not success:
print("Not connected to IoTF")
time.sleep(1)

deviceCli.commandCallback = myCommandCallback

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

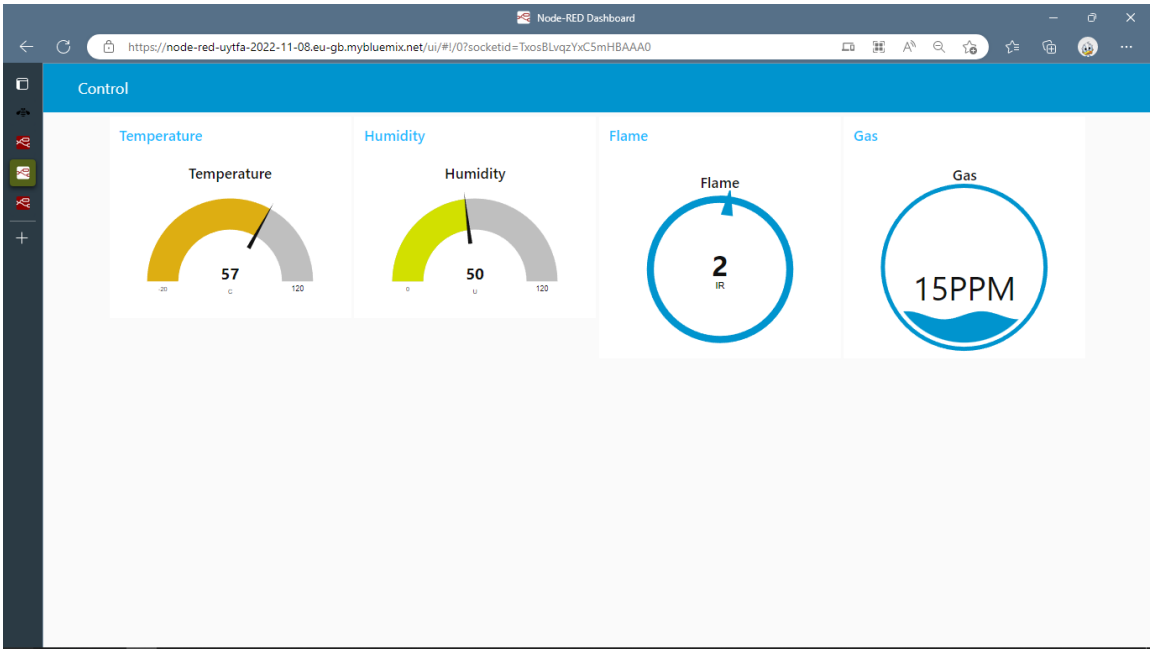
PYTHON CODE OUTPUT:



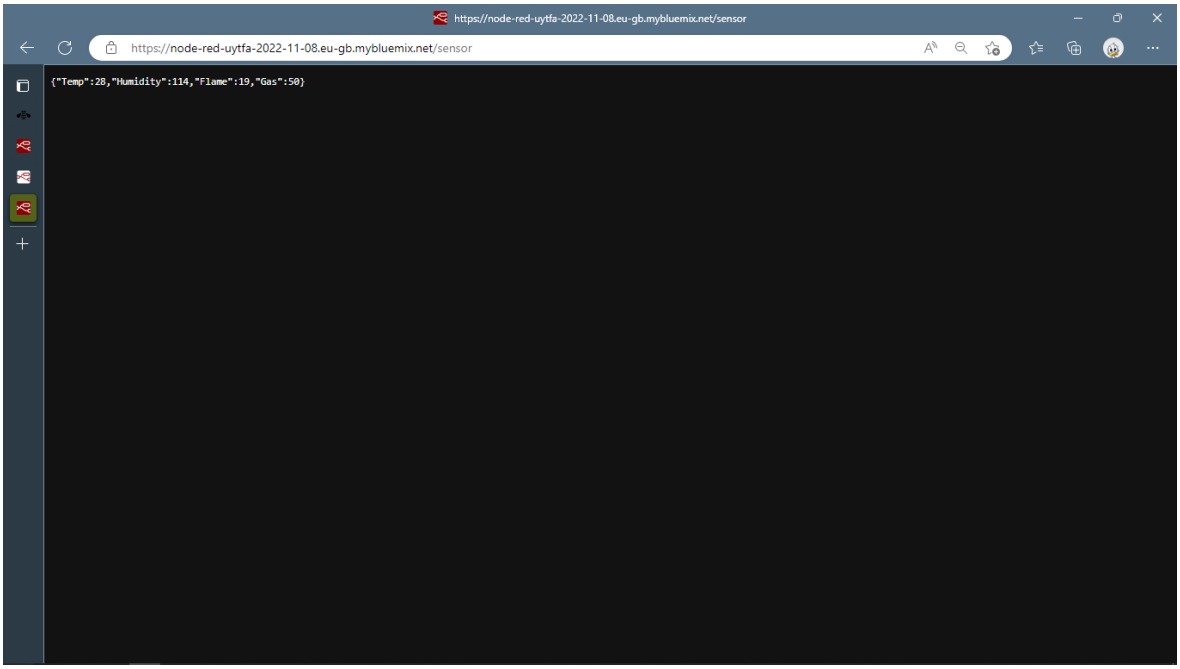
IBM WATSON OUTPUT:



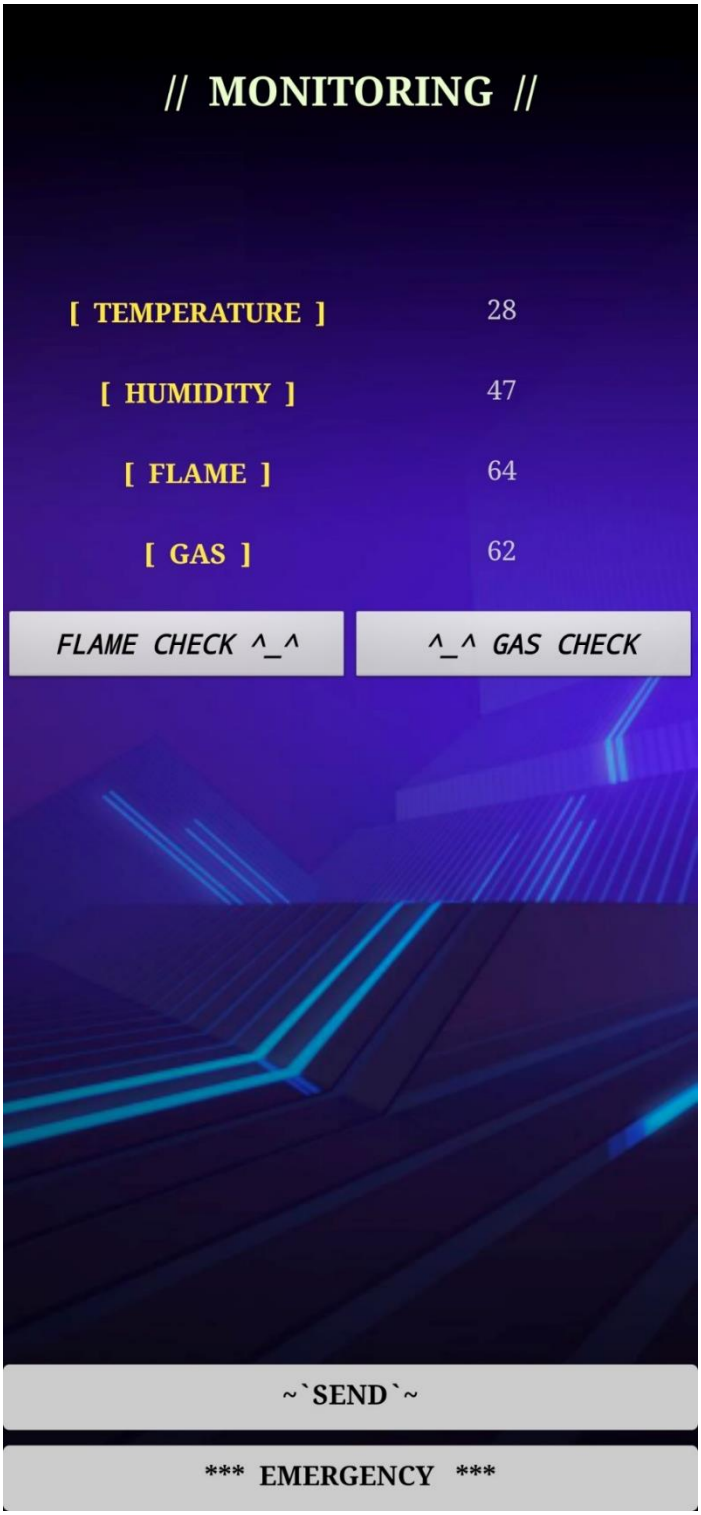
NODERED UI OUTPUT:

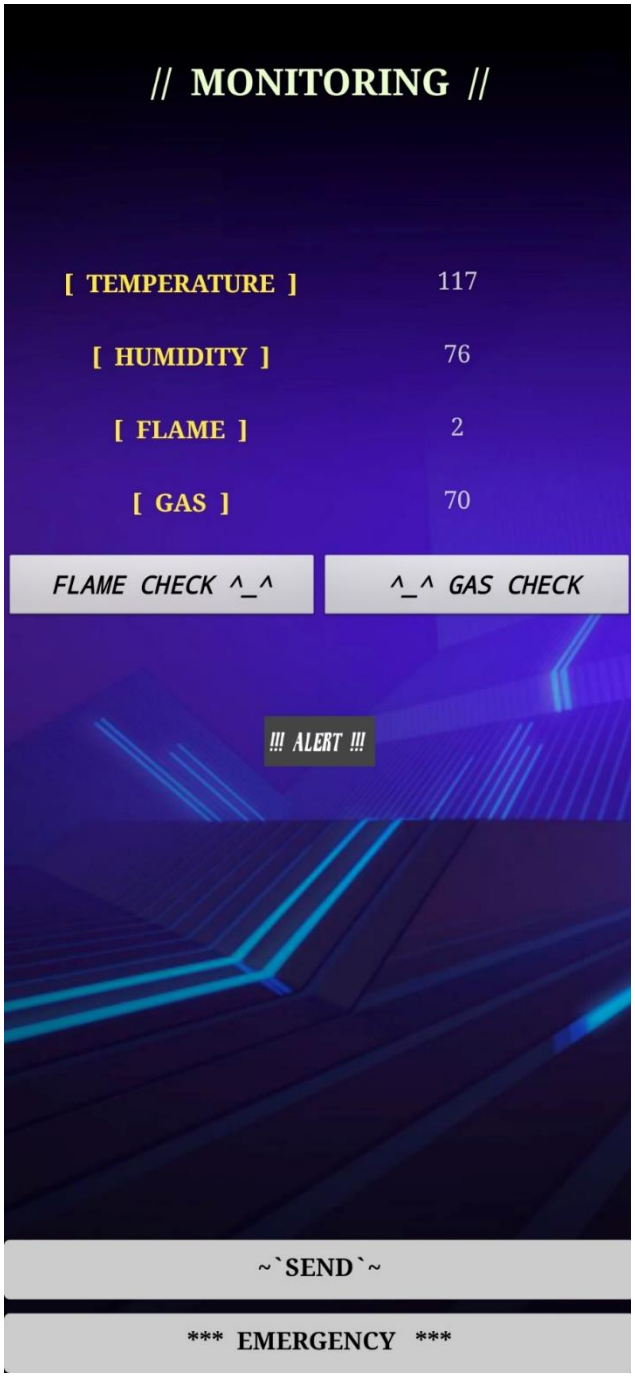


NODE RED SENSOR READING:



MIT APP OUTPUT:




// MONITORING //
[TEMPERATURE] 117
[HUMIDITY] 76
[FLAME] 2
[GAS] 70
FLAME CHECK ^_^
^_^ GAS CHECK
!!! ALERT !!!
~`SEND`~
*** EMERGENCY ***


// MONITORING //
[TEMPERATURE] 38
[HUMIDITY] 58
[FLAME] 20
[GAS] 45
FLAME CHECK ^_^
^_^ GAS CHECK
FINE:)
~`SEND`~
*** EMERGENCY ***