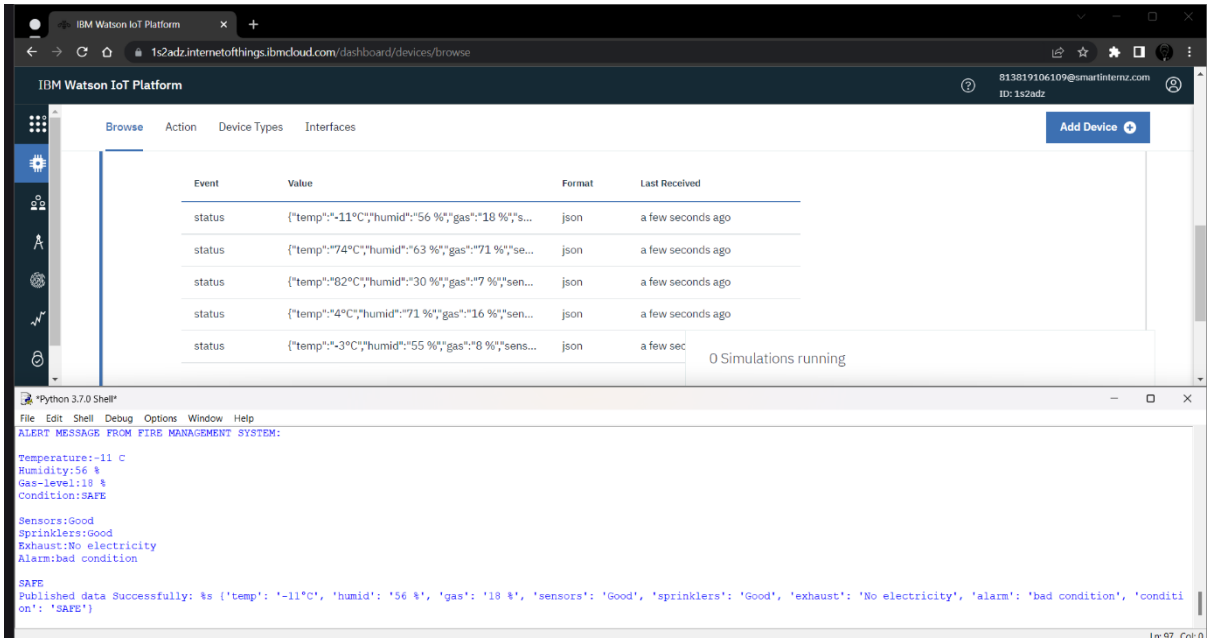
PROJECT DEVELOPMENT PHASE

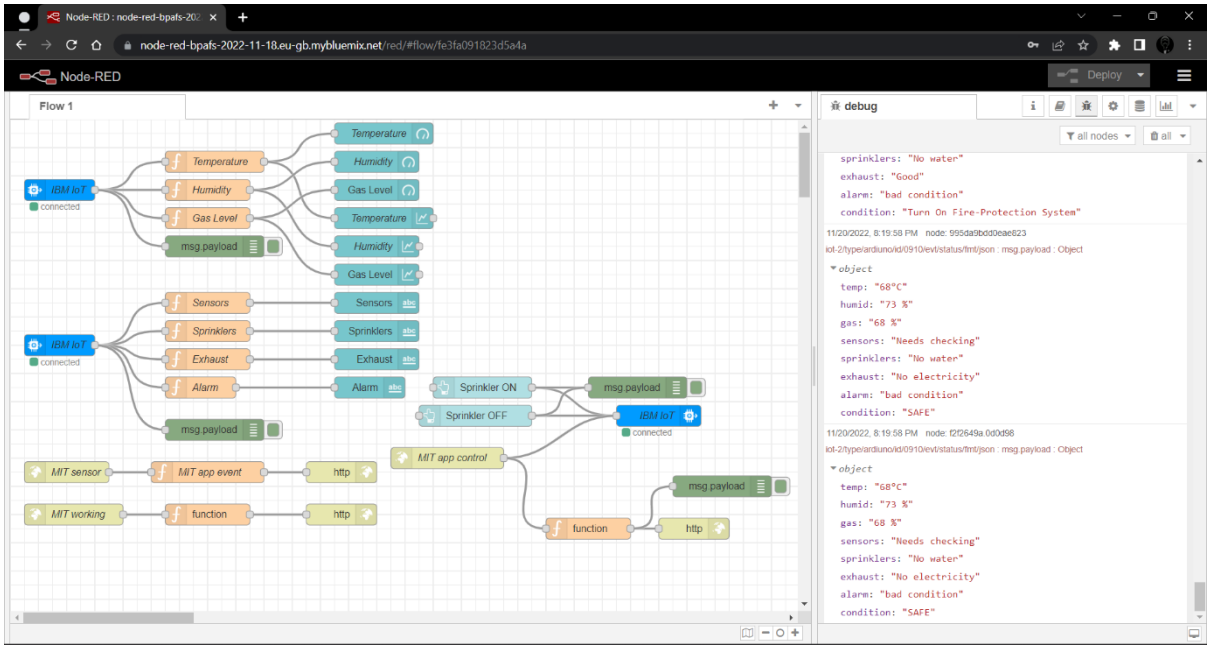
SPRINT-4

Team ID	PNT2022TMID32813
Project Name	Project - INDUSTRY-SPECIFIC INTELLIGENCE FIRE MANAGEMENT SYSTEM

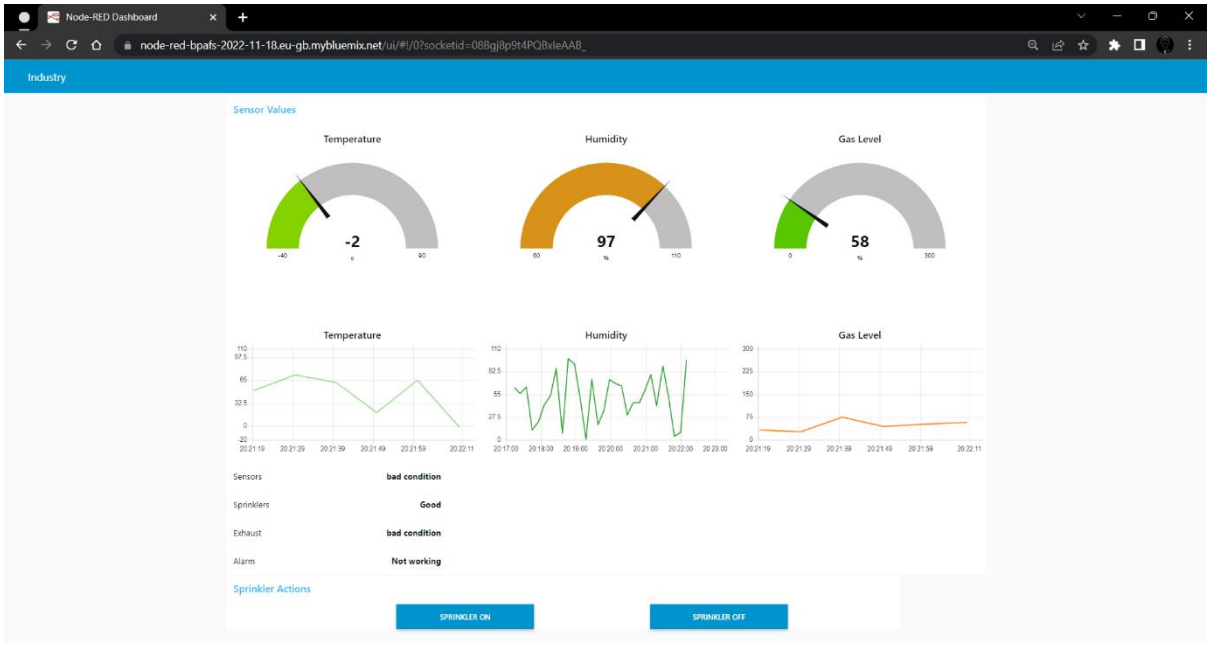
USER STORY :

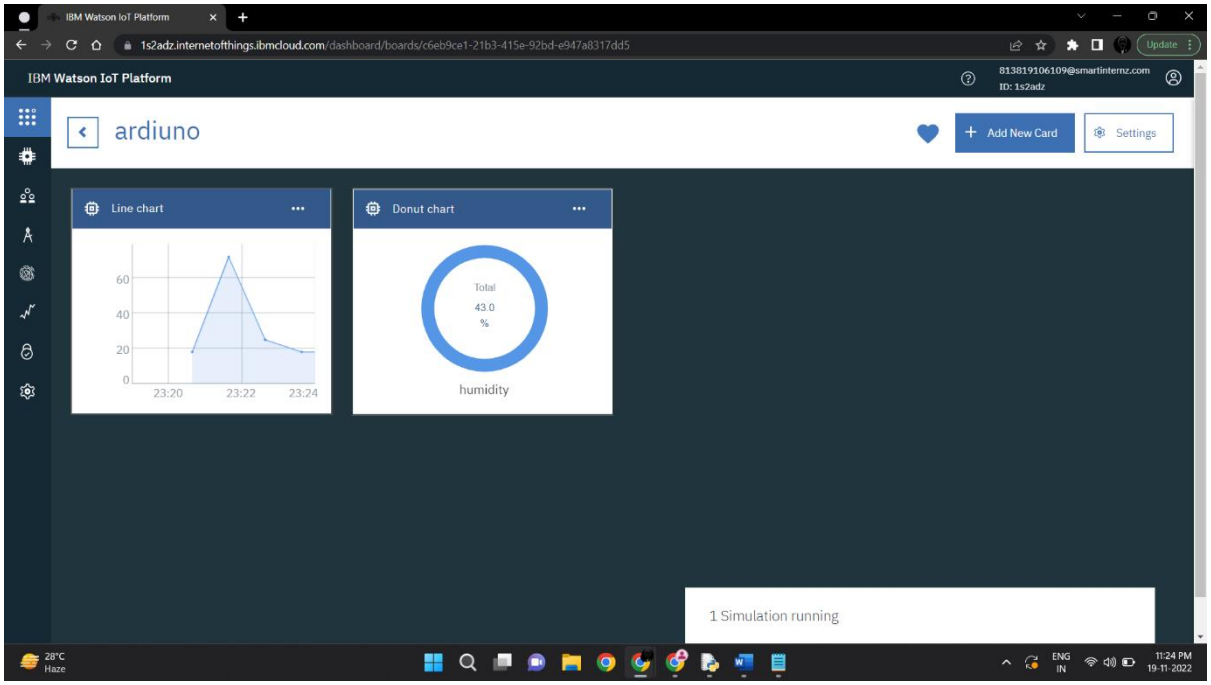
AS a user, I will be able to store the parameter values in the cloud and check the system performance and condition.





CHECKING SYSTEN CONDITION AND VALUES:





PYTHON CODE:

```
import wiotp.sdk.device
import time
import random
import requests
myConfig = {
    "identity": {
        "orgId": "1s2adz",
        "typeId": "ardiuno",
        "deviceId":"0910"
    },
    "auth": {
        "token": "12345678"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
count=0
while True:

    s1=['Good','Need maintannce','bad condition','Needs checking']
    s2=['Good','Need maintanence','bad condition','Low water level','No water']
    s3=['Good','No electricity','bad condition','Needs checking']
    s4=['Good','Not working','bad condition','Needs checking']
```

```
random.shuffle(s1)

random.shuffle(s2)

random.shuffle(s3)

random.shuffle(s4)


temp=random.randint(-40,84)

humid=random.randint(0,100)

gas=random.randint(0,100)


if(temp>68 and gas>80):

    print("\n")

    myData={'temp':str(temp)+chr(176)+"C", 'humid':str(humid)+" %", 'gas':str(gas)+" %", 'sensors':str(s1[0]), 'sprinklers':str(s2[0]), 'exhaust':str(s3[0]), 'alarm':str(s4[0]), 'condition':"Turn On Harzard-Protection System" }

    message="ALERT MESSAGE FROM FIRE MANAGEMENT SYSTEM:\n\n"+'Temperature:'+str(temp)+" C"+'\nHumidity:'+str(humid)+" %"+'\nGas-level:'+str(gas)+" %"+"\nCondition:Turn On Harzard-Protection System\n\n"+"Sensors:"+str(s1[0])+"\n"+"Sprinklers:"+str(s2[0])+"\n"+"Exhaust:"+str(s3[0])+"\n"+"Alarm:"+str(s4[0])+"\n"

    url = "https://www.fast2sms.com/dev/bulkV2?authorization=oxXvdFwBIzPDuOfpJnALG0VhUkj2YSQN6cTRie8qtZrglbK491tgWTBzkZclr4mPLwOp2nfEKDqoFAGH&route=q&message="+message+"%0A%0AHIGH%20TEMPERATURE%20AND%20GAS%20DETECTED!%0ATURN%20ON%20SAFTEY%20PROTECTION%20SYSTEM&language=english&flash=0&numbers=9500490577 "

    #response = requests.request("GET", url)

    #print(response.text)

    print(message)

    print("Turn On Harzard-Protection System")


elif(temp>68 and gas<80):

    print("\n")

    myData={'temp':str(temp)+chr(176)+"C", 'humid':str(humid)+" %", 'gas':str(gas)+" %", 'sensors':str(s1[0]), 'sprinklers':str(s2[0]), 'exhaust':str(s3[0]), 'alarm':str(s4[0]), 'condition':"Turn On Fire-Protection System" }
```

```
        message="ALERT MESSAGE FROM FIRE MANAGEMENT
SYSTEM:\n\n"+'Temperature:'+str(temp)+" C"+'\nHumidity:'+str(humid)+" %"+'\nGas-
level:'+str(gas)+" %"+"\nCondition:Turn On Fire-Protection
System\n\n"+"Sensors:"+str(s1[0])+"\n"+"Sprinklers:"+str(s2[0])+"\n"+"Exhaust:"+str(s3[0])+"\n"+"A
larm:"+str(s4[0])+"\n"

        url = "
https://www.fast2sms.com/dev/bulkV2?authorization=oxXvdFwBIzPDuOfpJnALG0VhUkj2YSQN6cTRi
e8qtZrglbK491tgWTBzkZclr4mPLwOp2nfEKDqoFAGH&route=q&message="+message+"%0A%0AHIG
H%20TEMPERATURE%20DETECTED!%0ATURN%20ON%20FIRE-
PROTECTION%20SYSTEM&language=english&flash=0&numbers=9500490577"

        #response = requests.request("GET", url)

        #print(response.text)

        print(message)

        print("Turn On Fire-Protection System")


    elif(temp<68 and gas>80):

        print("\n")

        myData={'temp':str(temp)+chr(176)+"C", 'humid':str(humid)+" %", 'gas':str(gas)+" %",
'sensors':str(s1[0]), 'sprinklers':str(s2[0]), 'exhaust':str(s3[0]), 'alarm':str(s4[0]), 'condition':"Turn On
Ventilation System" }

        message="ALERT MESSAGE FROM FIRE MANAGEMENT
SYSTEM:\n\n"+'Temperature:'+str(temp)+" C"+'\nHumidity:'+str(humid)+" %"+'\nGas-
level:'+str(gas)+" %"+"\nCondition:Turn On Ventilation
System\n\n"+"Sensors:"+str(s1[0])+"\n"+"Sprinklers:"+str(s2[0])+"\n"+"Exhaust:"+str(s3[0])+"\n"+"A
larm:"+str(s4[0])+"\n"

        url = "
https://www.fast2sms.com/dev/bulkV2?authorization=oxXvdFwBIzPDuOfpJnALG0VhUkj2YSQN6cTRi
e8qtZrglbK491tgWTBzkZclr4mPLwOp2nfEKDqoFAGH&route=q&message="+message+"%0A%0AHIG
H%20GAS%20DETECTED!%0ATURN%20ON%20VENTILATION%20SYSTEM&language=english&flash=0
&numbers=9500490577"

        #response = requests.request("GET", url)

        #print(response.text)

        print(message)

        print("Turn On Ventilation-Protection System")


    else:
```

```
        print("\n")

        myData={'temp':str(temp)+chr(176)+"C", 'humid':str(humid)+" %", 'gas':str(gas)+" %",
'sensors':str(s1[0]), 'sprinklers':str(s2[0]), 'exhaust':str(s3[0]), 'alarm':str(s4[0]), 'condition':"SAFE" }

        message="ALERT MESSAGE FROM FIRE MANAGEMENT
SYSTEM:\n\n"+'Temperature:'+str(temp)+" C"+'\nHumidity:'+str(humid)+" %"+'\nGas-
level:'+str(gas)+"
%"+"\nCondition:SAFE\n\n"+"Sensors:"+str(s1[0])+"\n"+"Sprinklers:"+str(s2[0])+"\n"+"Exhaust:"+str
(s3[0])+"\n"+"Alarm:"+str(s4[0])+"\n"

        url =
"https://www.fast2sms.com/dev/bulkV2?authorization=oxXvdFwBIzPDuOfpJnALG0VhUkj2YSQN6cT
Rie8qtZrglbK491tgWTBzkZclr4mPLwOp2nfEKDqoFAGH&route=q&message="+message+"%0A%0AN
O%20HAZARD%20DETECTED%0A%22EVERYTHING%20IS%20IN%20SAFE%20CONDITION%22&langua
ge=english&flash=0&numbers=9500490577"

        #response = requests.request("GET", url)

        #print(response.text)

        print(message)

        print("SAFE")


    def myOnPublishCallback():

        print("Publish Temperature = %s c" % temp,"Humidity = %s %%" % humid,"Gas Level =%s %%"%
gas,"to IBM Watson\n")

        print("sensors: %s" %s1[0])

        print("sprinklers %s" %s2[0])

        print("exhaust: %s" %s3[0])

        print("alarm %s" %s4[0])


    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)

    print("Published data Successfully: %s", myData)

    client.commandCallback = myCommandCallback

    time.sleep(10)


client.disconnect()
```

OUTPUT:


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/acer/AppData/Local/Programs/Python/Python37/ibm with fast2sms.py
2022-11-20 20:01:39,420 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:ls2adz:ardiuno:0910
ALERT MESSAGE FROM FIRE MANAGEMENT SYSTEM:
Temperature:-16 C
Humidity:60 %
Gas-level:14 %
Condition:SAFE
Sensors:Need maintannce
Sprinklers:bad condition
Exhaust:bad condition
Alarm:Good
SAFE
Published data Successfully: %s {'temp': '-16°C', 'humid': '60 %', 'gas': '14 %', 'sensors': 'Need maintannce', 'sprinklers': 'bad condition', 'exhaust': 'bad condition', 'alarm': 'Good', 'condition': 'SAFE'}
ALERT MESSAGE FROM FIRE MANAGEMENT SYSTEM:
Temperature:-31 C
Humidity:69 %
Gas-level:33 %
Condition:SAFE
Sensors:Need maintannce
Sprinklers:No water
Exhaust:Needs checking
Alarm:Good
SAFE
Published data Successfully: %s {'temp': '-31°C', 'humid': '69 %', 'gas': '33 %', 'sensors': 'Need maintannce', 'sprinklers': 'No water', 'exhaust': 'Needs checking', 'alarm': 'Good', 'condition': 'SAFE'}
ALERT MESSAGE FROM FIRE MANAGEMENT SYSTEM:
Temperature:10 C
Humidity:66 %
Gas-level:29 %
Condition:SAFE
Ln: 54 Col: 0