SPRINT-1:

Date	29 October 2022
Team ID	PNT2022TMID04463
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

PYTHON PROGRAM TO GET CONNECTED WITH IBM IOT WATSON PLATFORM:

credentials given to simulator are:

OrgID: **f1rqoy**

api: **a-f1rqoy-gmmftorctd**

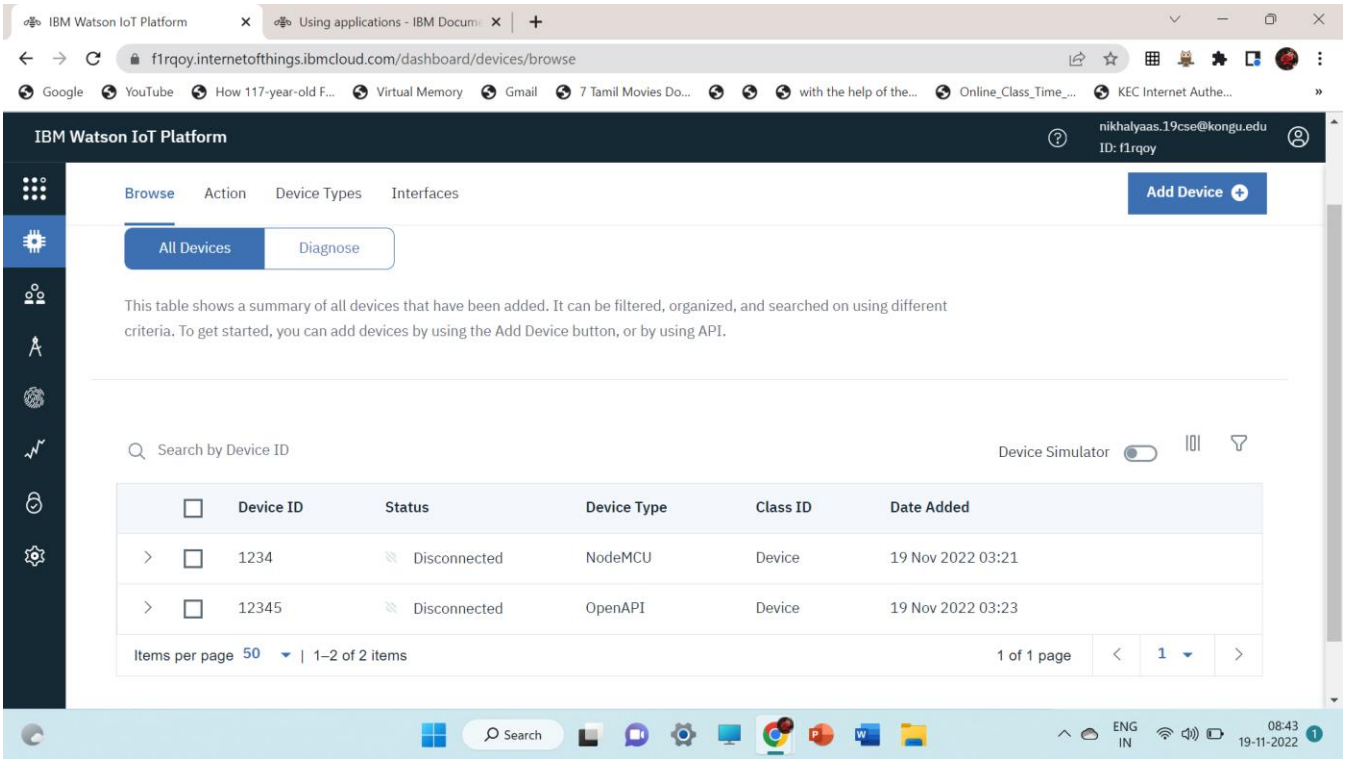
Device type: **NodeMCU**

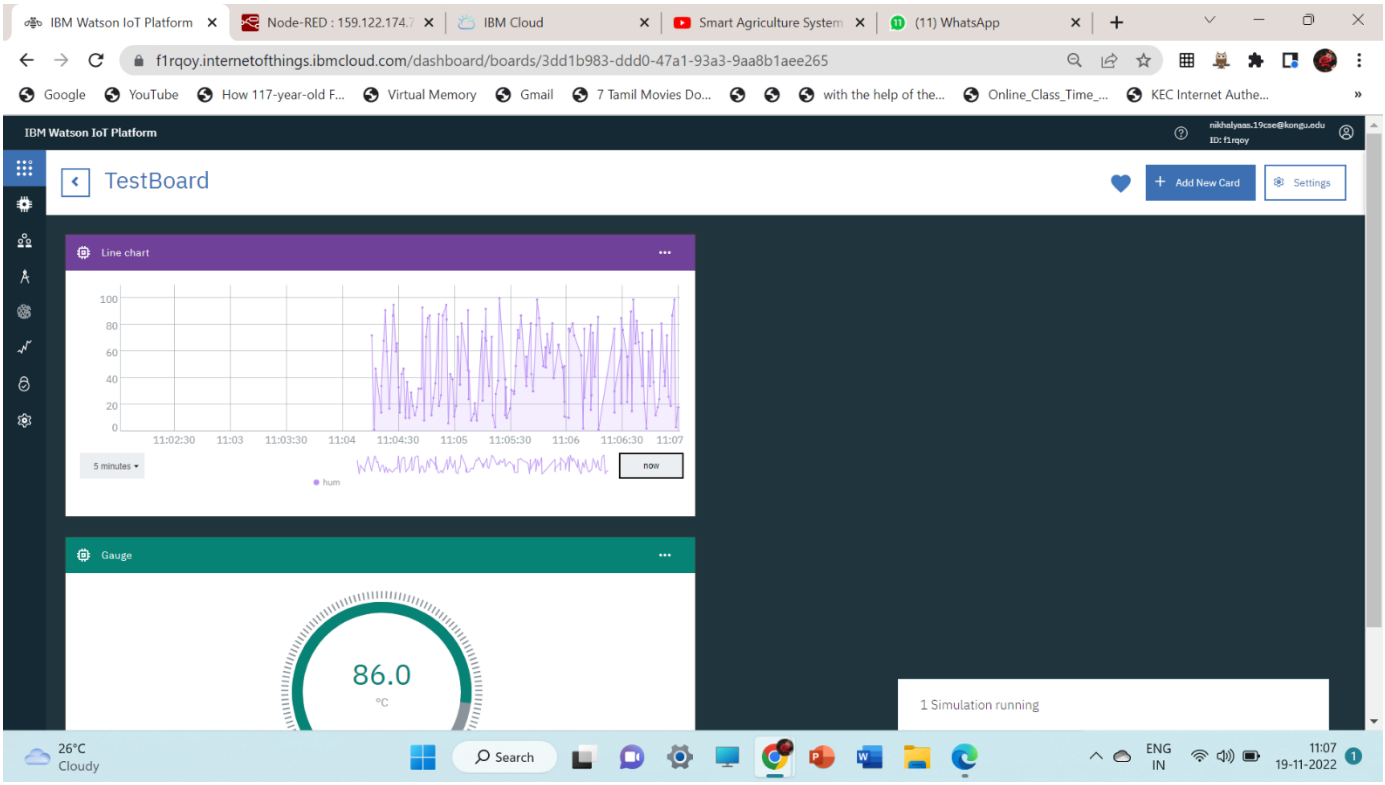
token:**yfRSWq(ZTc&im7D8uv**

Device ID : **1234**

Device Token : **12345**

IBM WATSON PLATFORM





You can see the received data in graphs by creating cards in Boards tab

➢ You will receive the simulator data in cloud

➢ You can see the received data in Recent Events under your device

➢ Data received in this format(json)

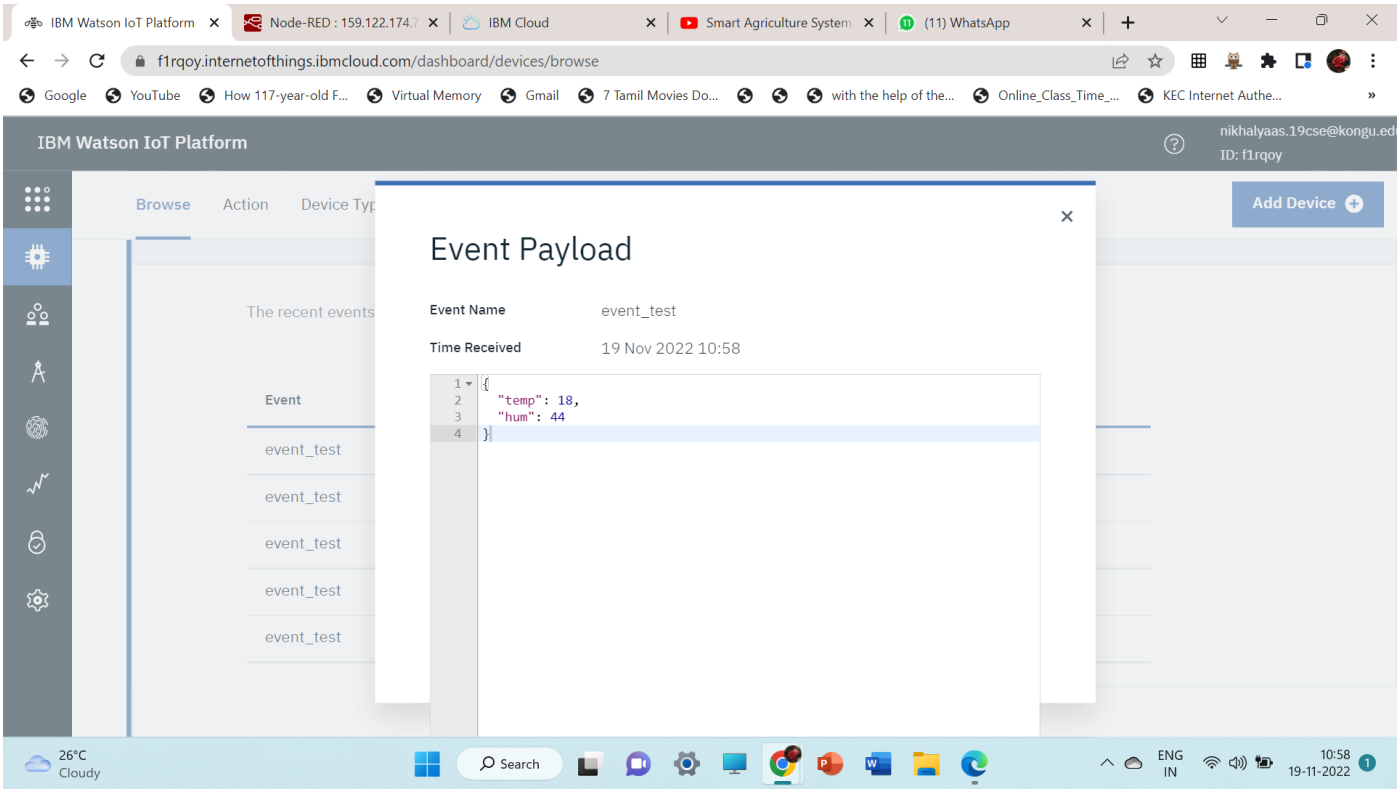
{

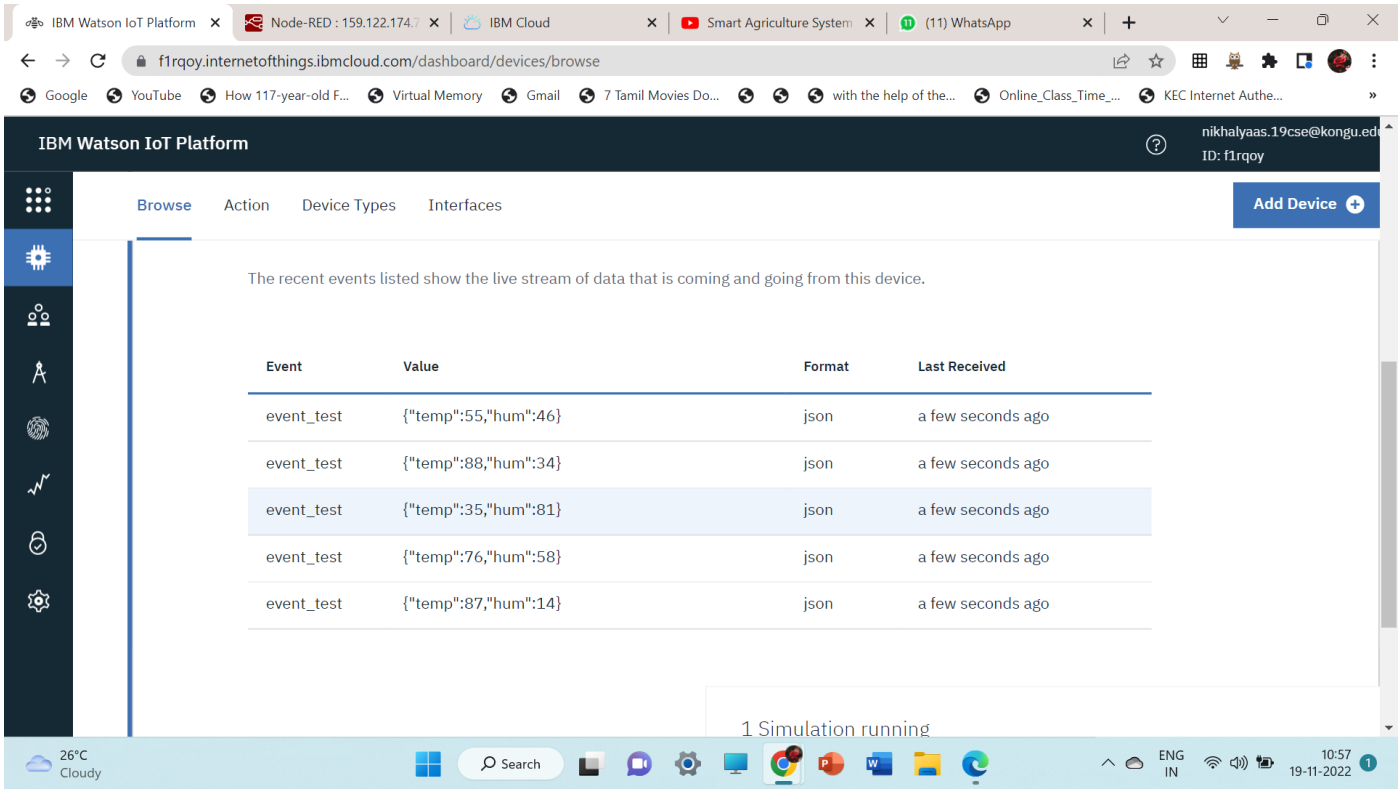
"d": {

- "name": "abcd",
- "temperature": 17,
- "humidity": 76,
- "Moisture ": 25

}

}

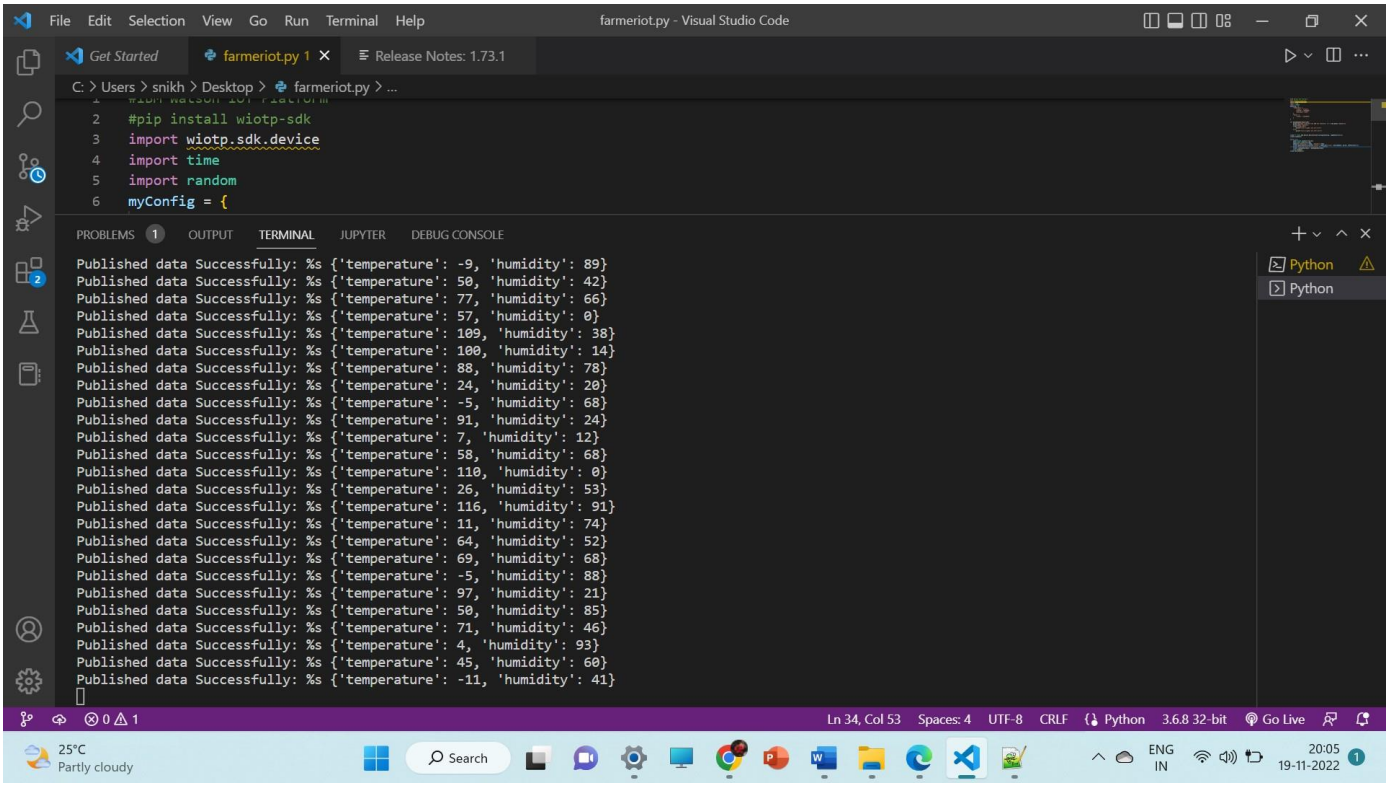

IBM Watson IoT Platform
Node-RED : 159.122.174.7
IBM Cloud
Smart Agriculture System
(11) WhatsApp
f1rqoy.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
nikhalyaas.19cse@kongu.ed
ID: f1rqoy
Browse
Action
Add Device
Event Payload
Event Name
event_test
Time Received
19 Nov 2022 10:58
{
"temp": 18,
"hum": 44
}
Event
event_test
26°C
Cloudy
Search
ENG
IN
10:58
19-11-2022

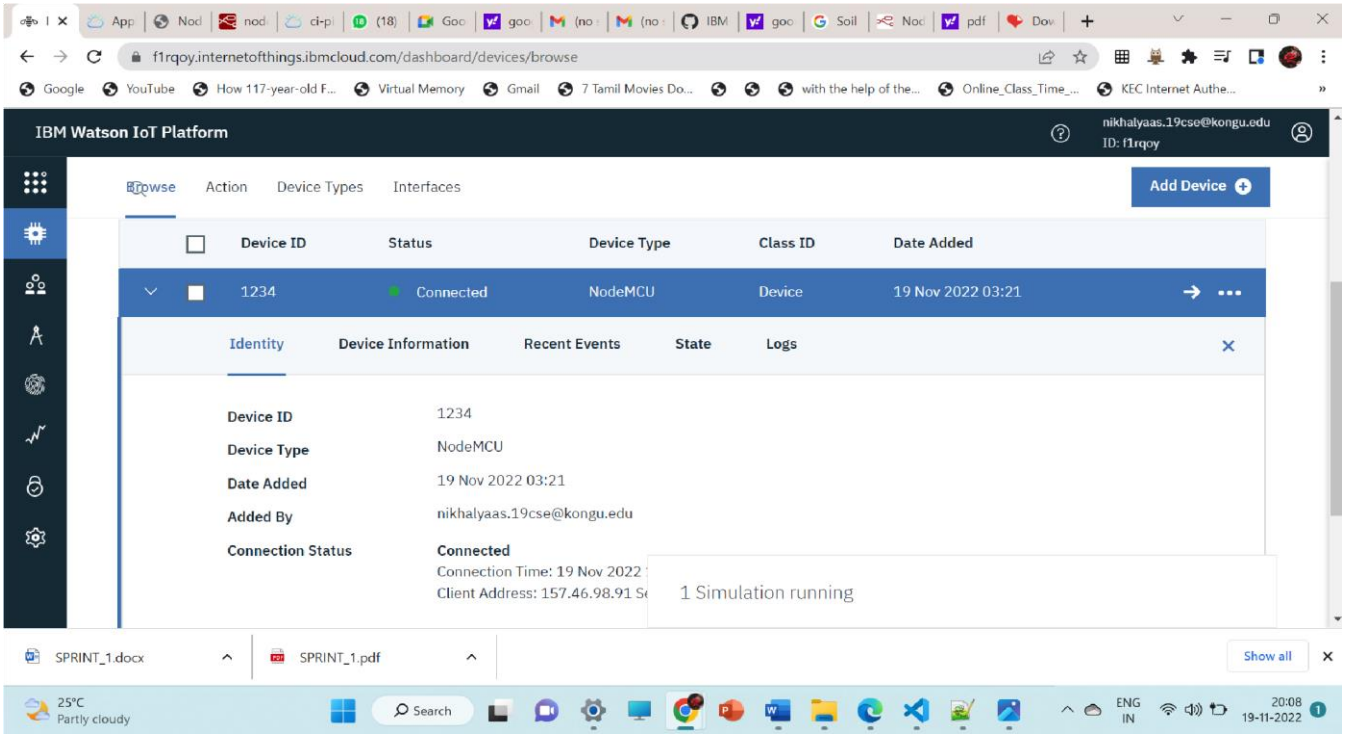

IBM Watson IoT Platform
Node-RED : 159.122.174.7
IBM Cloud
Smart Agriculture System
(11) WhatsApp
f1rqoy.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
nikhalyaas.19cse@kongu.ed
ID: f1rqoy
Browse
Action
Device Types
Interfaces
Add Device
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
event_test
{"temp":55,"hum":46}
json
a few seconds ago
event_test
{"temp":88,"hum":34}
json
a few seconds ago
event_test
{"temp":35,"hum":81}
json
a few seconds ago
event_test
{"temp":76,"hum":58}
json
a few seconds ago
event_test
{"temp":87,"hum":14}
json
a few seconds ago
1 Simulation running
26°C
Cloudy
Search
ENG
IN
10:57
19-11-2022

Python code:

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "f1rqoy",
        "typeId": "NodeMCU",
        "deviceId":"1234"
    },
    "auth": {
        "token": "12345678"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    if(m=="Light ON"):
        print("****///Lights are on///***")
    else:
        print("****///Lights are off///***")


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

OUTPUT:





THE DEVICE SHOWS CONNECTED STATUS AFTER RUNNING THE CODE