

**GOVERNMENT COLLEGE OF ENGINEERING
CHETTIKARAI, DHARMAPURI**



**SMART FARMER – IOT ENABLED SMART FARMING
APPLICATION**

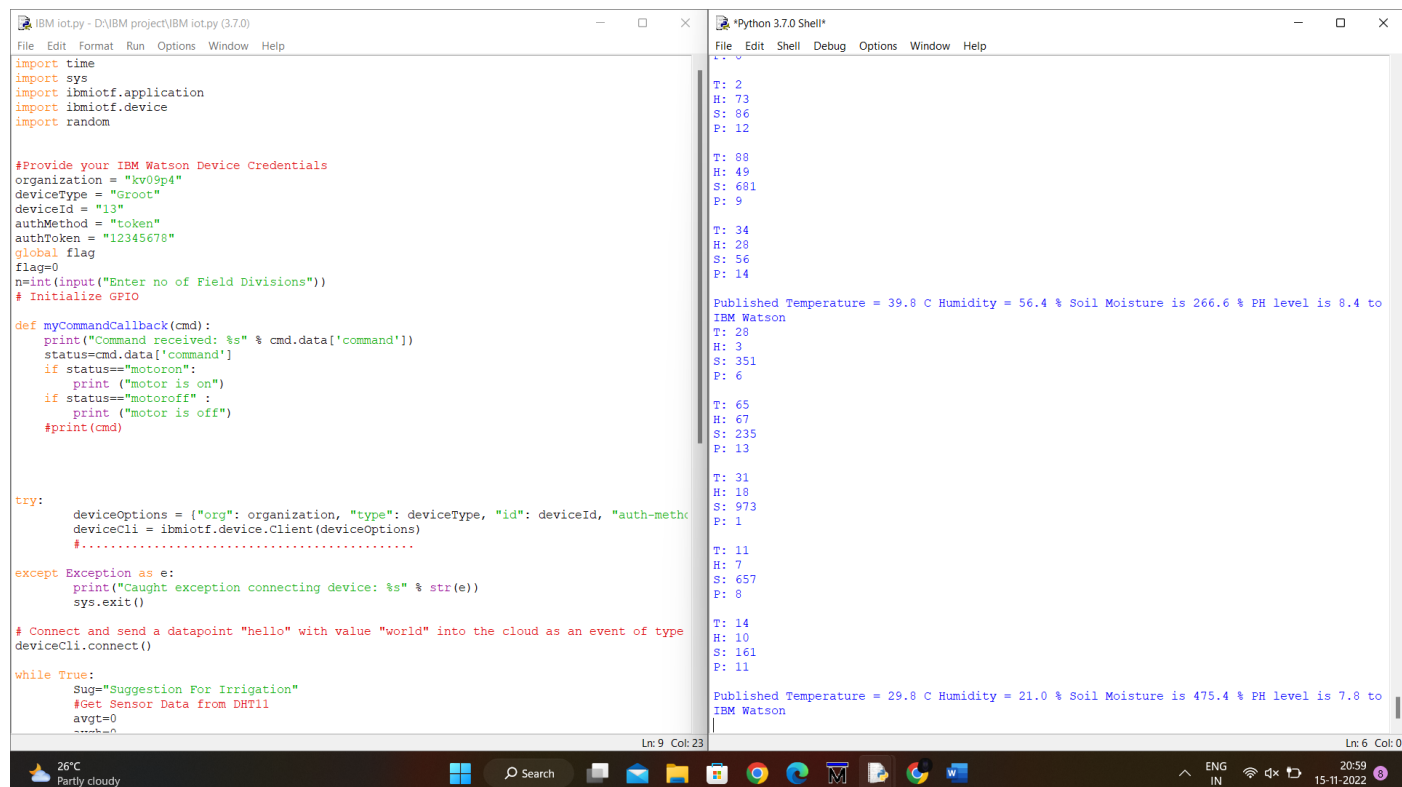
IBM NALAIYATHIRAN

Project Development-Delivery of Sprint 4

Connecting and configuring the services and debug the errors

| | |
|-------------------------|---|
| TITLE | Smart Farmer IoT Enabled Smart Farming Application |
| DOMAIN NAME | INTERNET OF THINGS |
| TEAM ID | PNT2022TMID41287 |
| TEAM LEADERNAME | MITHUN SRINIVASAN S |
| TEAM MEMBER NAME | ARUN KUMAR M AJITH KUMAR S RAVIN G |
| MENTOR NAME | Dr. DINESH G |

Python Code:



```
IBM iotpy - D:\IBM project\IBM iotpy (3.7.0)
File Edit Format Run Options Window Help

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

#Provide your IBM Watson Device Credentials
organization = "kv09p4"
deviceType = "Groot"
deviceId = "13"
authMethod = "token"
authToken = "12345678"
global flag
flag=0
n=int(input("Enter no of Field Divisions"))
# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    if status=="motoroff" :
        print ("motor is off")
    #print(cmd)

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod}
    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
deviceCli.connect()

while True:
    Sug="Suggestion For Irrigation"
    #Get Sensor Data from DHT11
    avgt=0
    avgh=0
    avgs=0
    avph=0

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help

T: 2
H: 73
S: 86
P: 12

T: 88
H: 49
S: 681
P: 9

T: 34
H: 28
S: 56
P: 14

Published Temperature = 39.8 C Humidity = 56.4 % Soil Moisture is 266.6 % PH level is 8.4 to IBM Watson
T: 28
H: 3
S: 351
P: 6

T: 65
H: 67
S: 235
P: 13

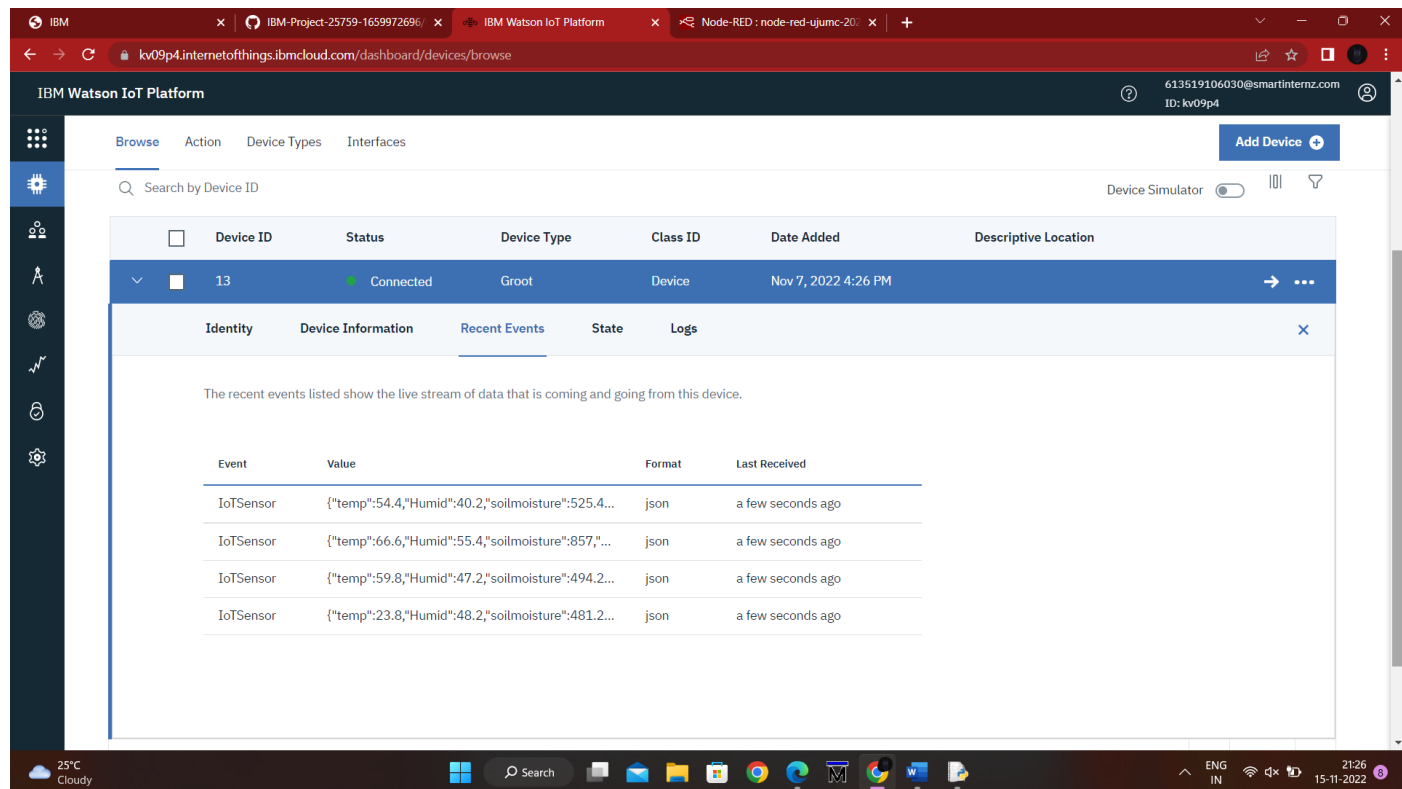
T: 31
H: 18
S: 973
P: 1

T: 11
H: 7
S: 657
P: 8

T: 14
H: 10
S: 161
P: 11

Published Temperature = 29.8 C Humidity = 21.0 % Soil Moisture is 475.4 % PH level is 7.8 to IBM Watson
```

IBM Watson Cloud:



IBM Watson IoT Platform

kv09p4.internetofthings.ibmcloud.com/dashboard/devices/browse

613519106030@smartinternz.com
ID: kv09p4

Browse Action Device Types Interfaces

Search by Device ID

Device Simulator

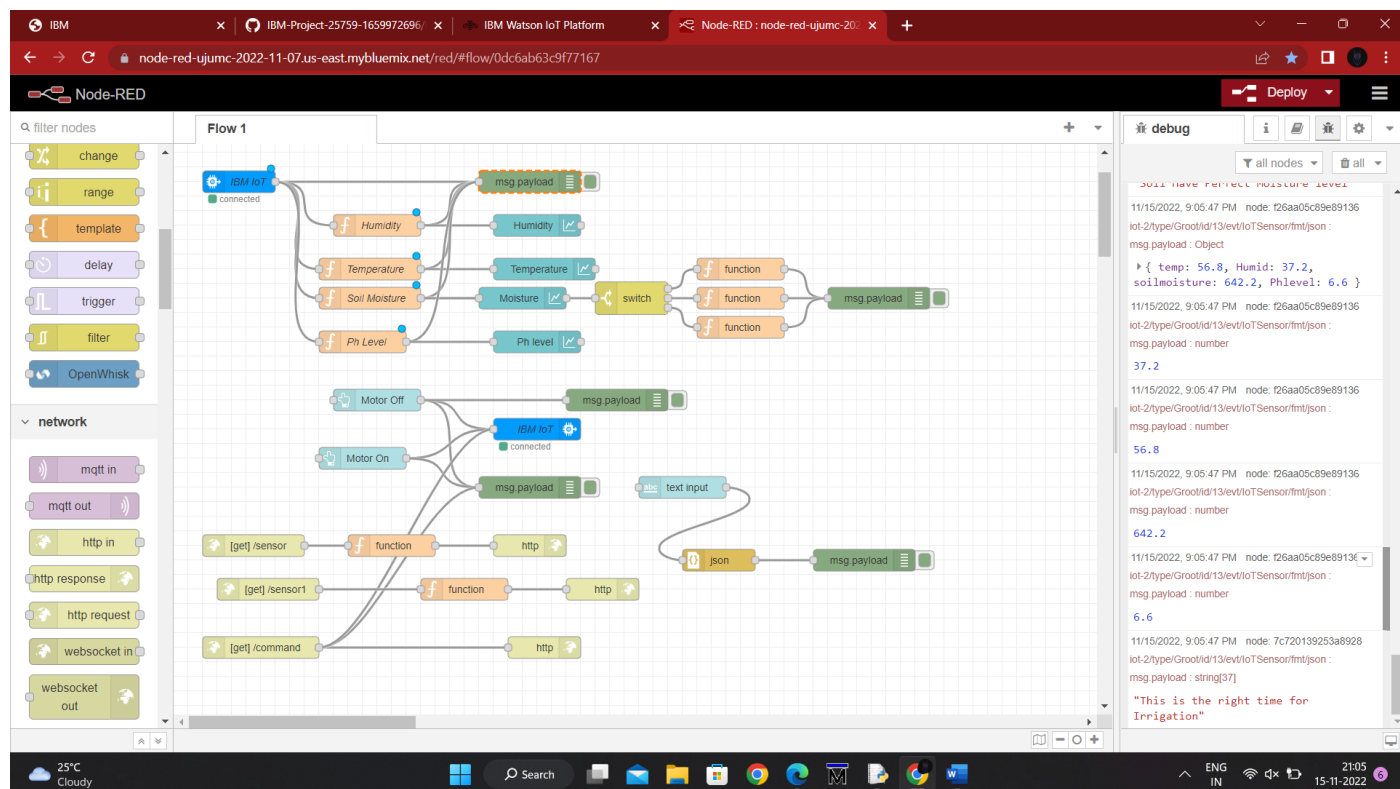
| Device ID | Status | Device Type | Class ID | Date Added | Descriptive Location |
|-----------|-----------|-------------|----------|---------------------|----------------------|
| 13 | Connected | Groot | Device | Nov 7, 2022 4:26 PM | |

Identity Device Information **Recent Events** State Logs

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

| Event | Value | Format | Last Received |
|-----------|---|--------|-------------------|
| IoTSensor | {"temp":54.4,"Humid":40.2,"soilmoisture":525.4... | json | a few seconds ago |
| IoTSensor | {"temp":66.6,"Humid":55.4,"soilmoisture":857,"... | json | a few seconds ago |
| IoTSensor | {"temp":59.8,"Humid":47.2,"soilmoisture":494.2... | json | a few seconds ago |
| IoTSensor | {"temp":23.8,"Humid":48.2,"soilmoisture":481.2... | json | a few seconds ago |

Node-Red:



MIT App Inventor:

