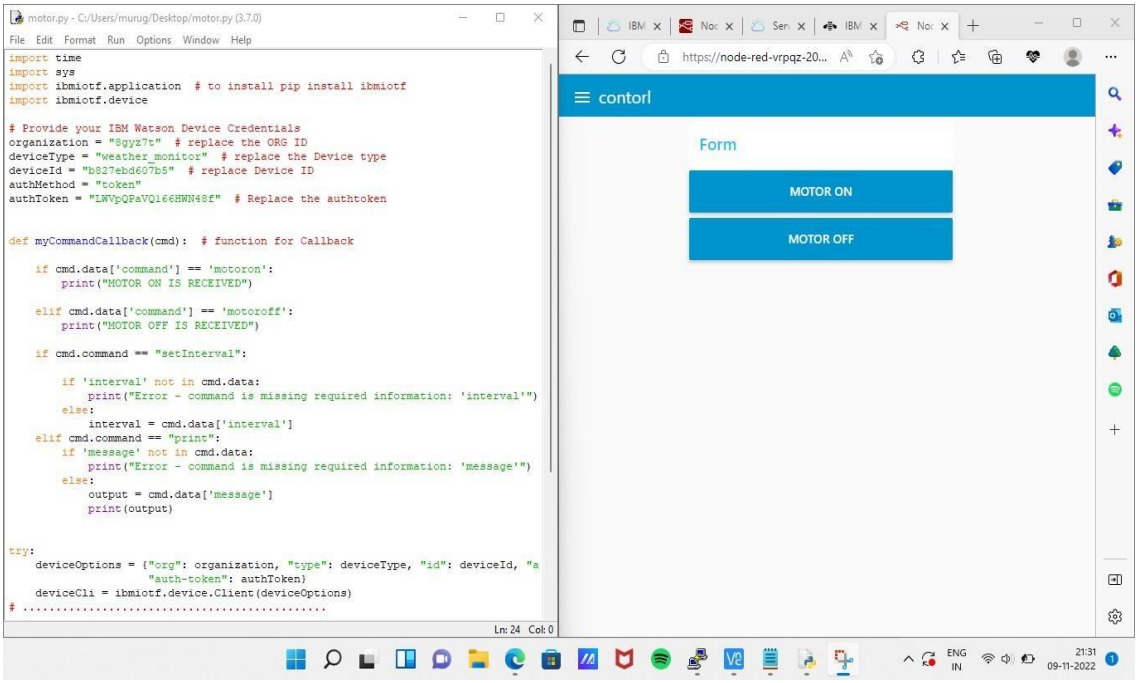
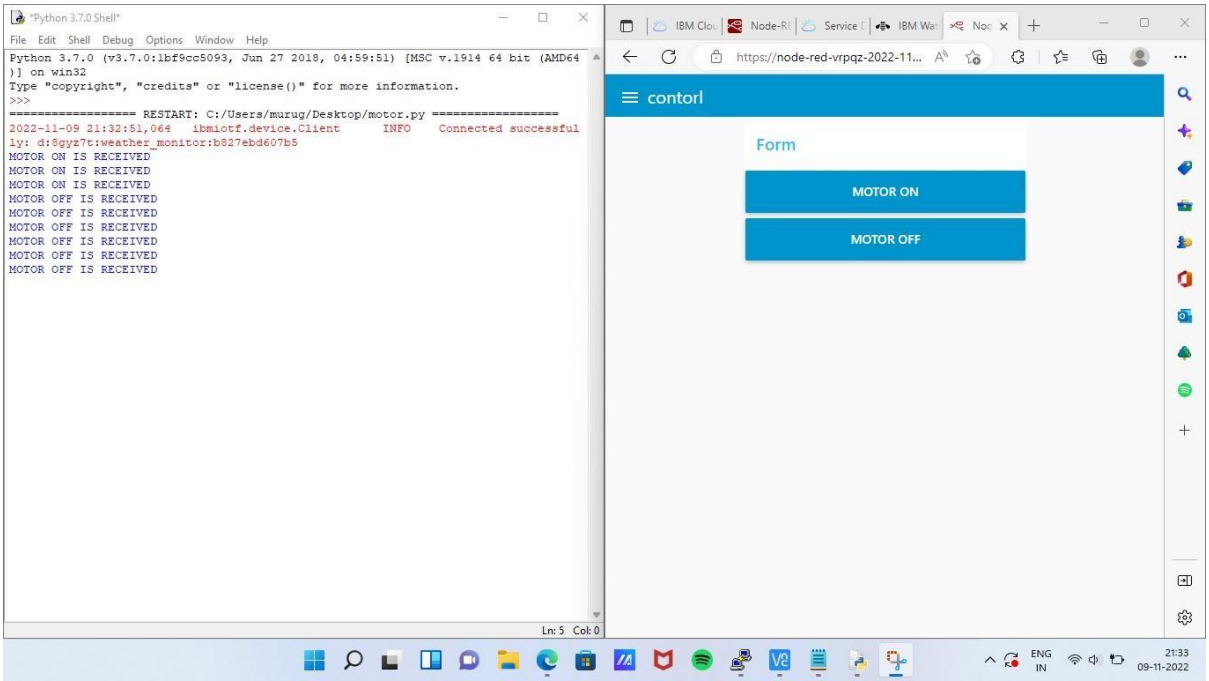
PROJECT DEVELOPMENT PHASE
SPRINT 1

TEAM ID	**PNT2022TMID26689**
PROJECT NAME	**IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE**
DATE	**26 OCTOBER 2022**

STEP 1: First open python IDLE .Then create a new file called motor.py and write a python code. Then open Node-RED flow for motor status. And open motor user interface.



STEP 2: Then run the python code then press motor on or motor off using Node-RED user interface. This shows the result in python output window.



PYTHON CODE:

```
import time import sys import ibmiotf.application # to
install pip install ibmiotf import ibmiotf.device

# Provide your IBM Watson Device Credentials
organization = "8gyz7t" # replace the ORG ID deviceType
= "weather_monitor" # replace the Device type deviceId =
"b827ebd607b5" # replace Device ID authMethod = "token"
authToken = "LWVpQPaVQ166HWN48f" # Replace the authtoken


def myCommandCallback(cmd): # function for Callback

    if cmd.data['command'] == 'motoron': print("MOTOR
        ON IS RECEIVED")
elif   cmd.data['command']   ==   'motoroff':
    print("MOTOR OFF IS RECEIVED")

    if cmd.command == "setInterval":

        if 'interval' not in cmd.data:
            print("Error - command is missing required information: 'interval'")
        else:
            interval = cmd.data['interval']
    elif cmd.command == "print": if
        'message' not in cmd.data:
            print("Error - command is missing required information: 'message'")
        else:
            output          =          cmd.data['message']
            print(output)
```

```
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:

deviceCli.commandCallback = myCommandCallback

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

Node-RED:

[{"id":"625574ead9839b34","type":"ibmiot out","z":"630c8601c5ac3295","authentication":"apiKey","apiKey":"ef74 5d48e395ccc0","outputType":"cmd","deviceId":"b827ebd607b5","device Type":"weather_monitor","eventCommandType":"data","format":"json ","data":"data","qos":0,"name":"IBM IoT","service":"registered","x":680,"y":220,"wires":[]},{"id":"4cff18c32 74cccc4","type":"ui_button","z":"630c8601c5ac3295","name":"","grou p":"716e956.00eed6c","order":2,"width":"0","height":"0","passthru":fa l se,"label":"Motor ON","tooltip":"","color":"","bgcolor":"","className":"","icon":"","p ayload":"{\"command\":\"motoron\"}","payloadType":"str","topic":" m otoron","topicType":"str","x":360,"y":160,"wires":[["625574ead9839b3 4"]]},{"id":"659589baceb4e0b0","type":"ui_button","z":"630c8601c5ac 3 295","name":"","group":"716e956.00eed6c","order":3,"width":"0","he i ght":"0","passthru":true,"label":"Motor OFF","tooltip":"","color":"","bgcolor":"","className":"","icon":"", " payload":"{\"command\":\"motoroff\"}","payloadType":"str","topic":" motoroff","topicType":"str","x":350,"y":220,"wires":[["625574ead9839 b 34"]]},{"id":"ef745d48e395ccc0","type":"ibmiot","name":"weather_mo n itor","keepalive":"60","serverName":"","cleansession":true,"appId":" ",

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o
rm","tab":"7e62365e.b7e6b8","order":1,"disp":true,"width":"6","colla
p
se":false},{"id":"7e62365e.b7e6b8","type":"ui_tab","name":"contorl","
i con":"dashboard","order":1,"disabled":false,"hidden":false}]