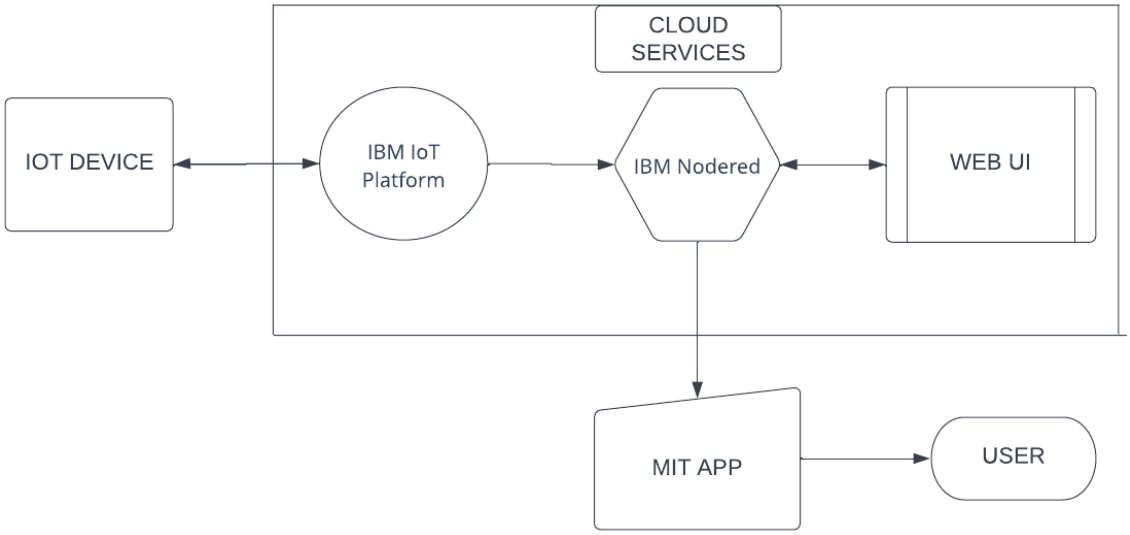
SPRINT 4

Date	16th November - 2022
Team ID	PNT2022TMID42737
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

Over All Flow chart:



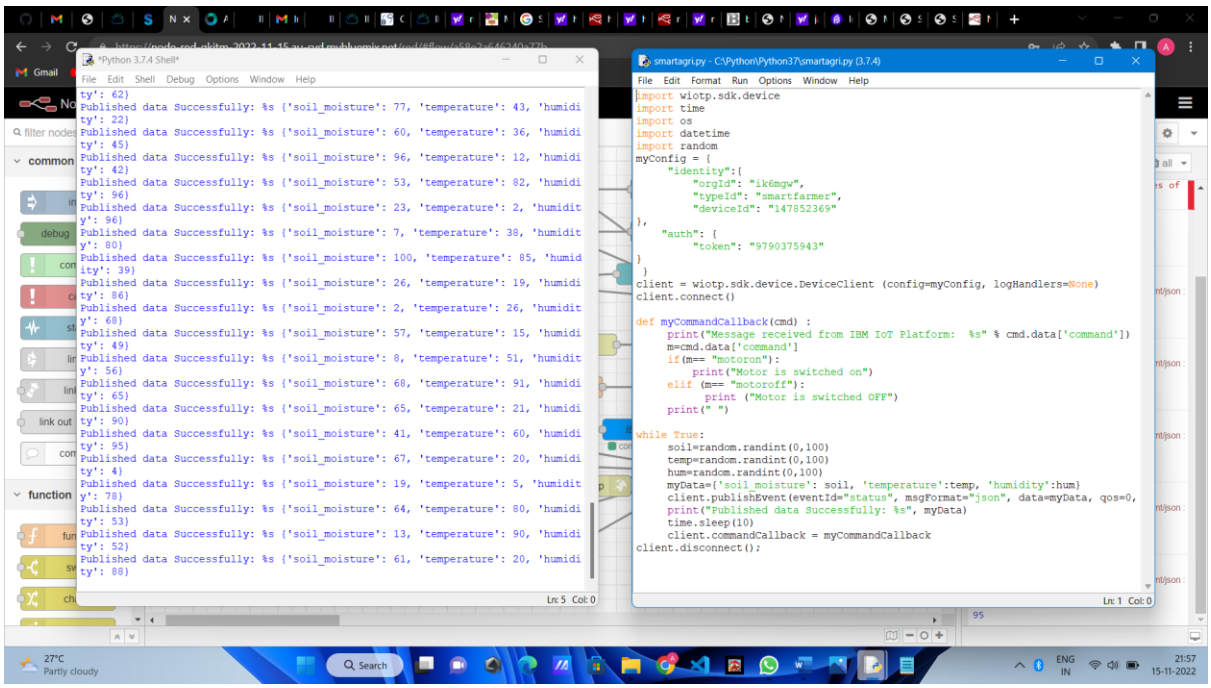
Python code :

```
        import wiotp.sdk.device
import time
import os
import datetime
import random
myConfig = {
    "identity":{
        "orgId": "ik6mgw",
```

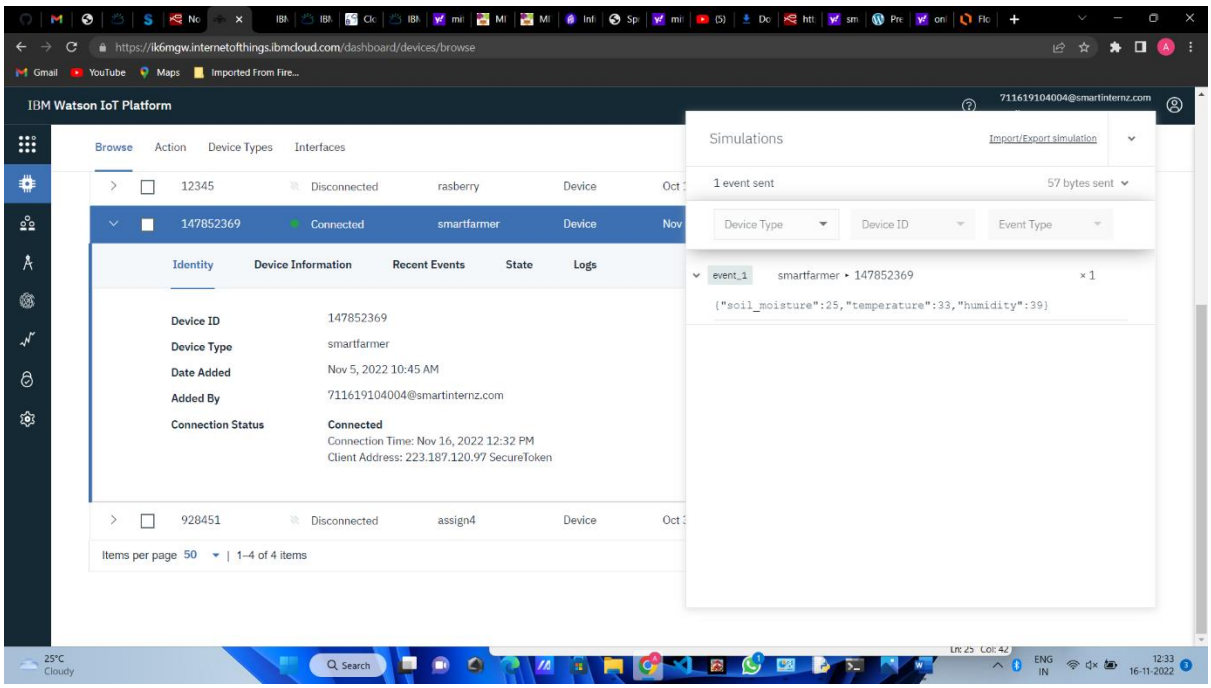
```
        "typeId": "smartfarmer",
        "deviceId": "147852369"
},
   "auth": {
        "token": "9790375943"
}
 }
client = wiotp.sdk.device.DeviceClient (config=myConfig, logHandlers=None)
client.connect()

def myCommandCallback(cmd) :
    print("Message received from IBM IoT Platform:  %s" %
cmd.data['command'])
    m=cmd.data['command']
    if(m== "motoron"):
       print("Motor is switched on")
    elif (m== "motoroff"):
         print ("Motor is switched OFF")
    print(" ")

while True:
    soil=random.randint(0,100)
    temp=random.randint(0,100)
    hum=random.randint(0,100)
    myData={'soil_moisture': soil,
 'temperature':temp,
'humidity':hum}
```

```
    client.publishEvent(eventId="status",
msgFormat="json",
data=myData,
qos=0,
onPublish=None)
    print("Published data Successfully: %s", myData)
    time.sleep(10)
    client.commandCallback = myCommandCallback
client.disconnect()
```

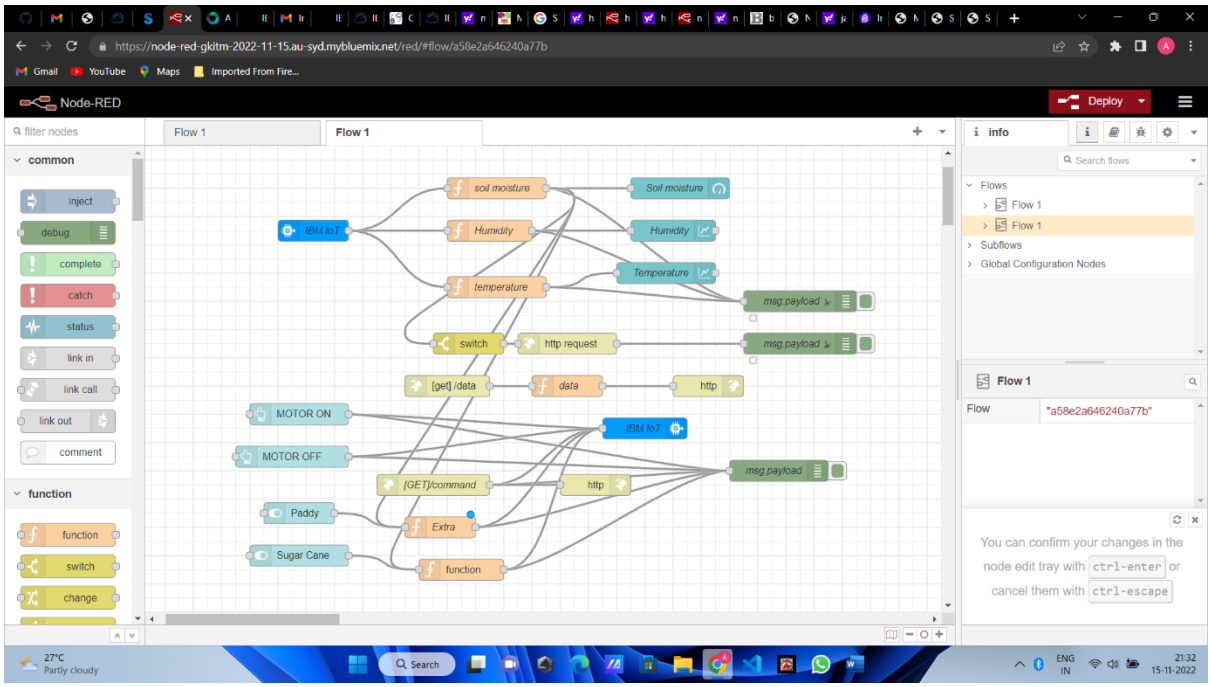
Python Code Simulation:



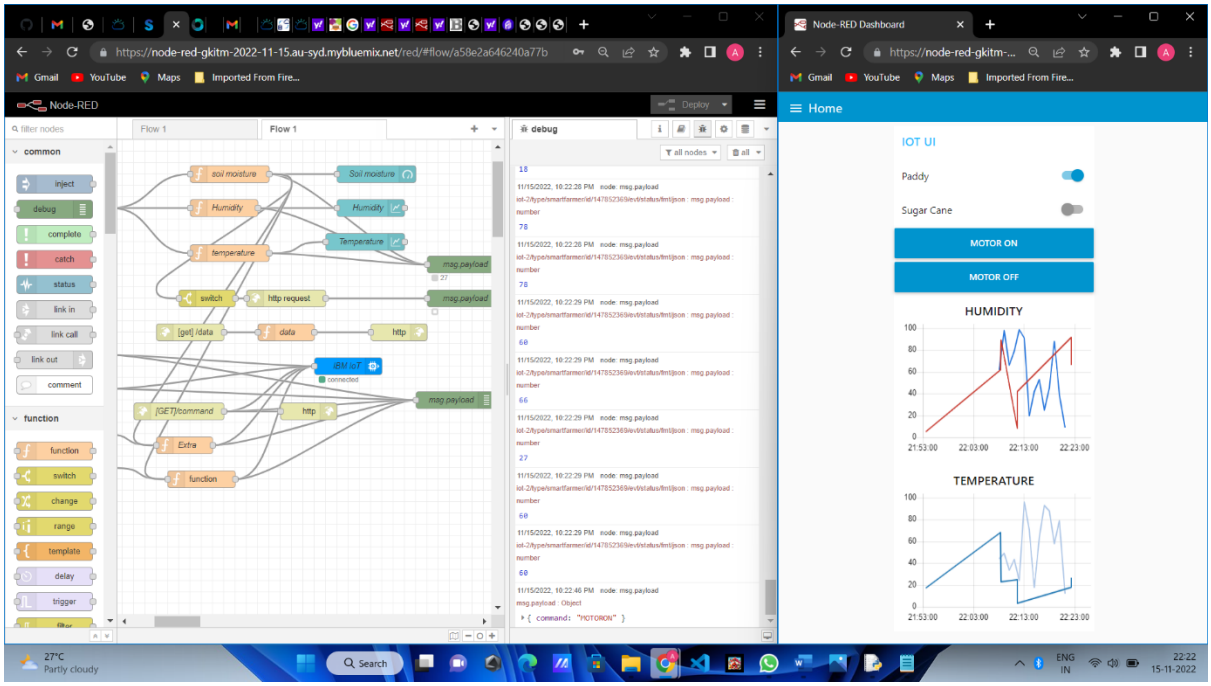
IBM IoT Watson Platform:

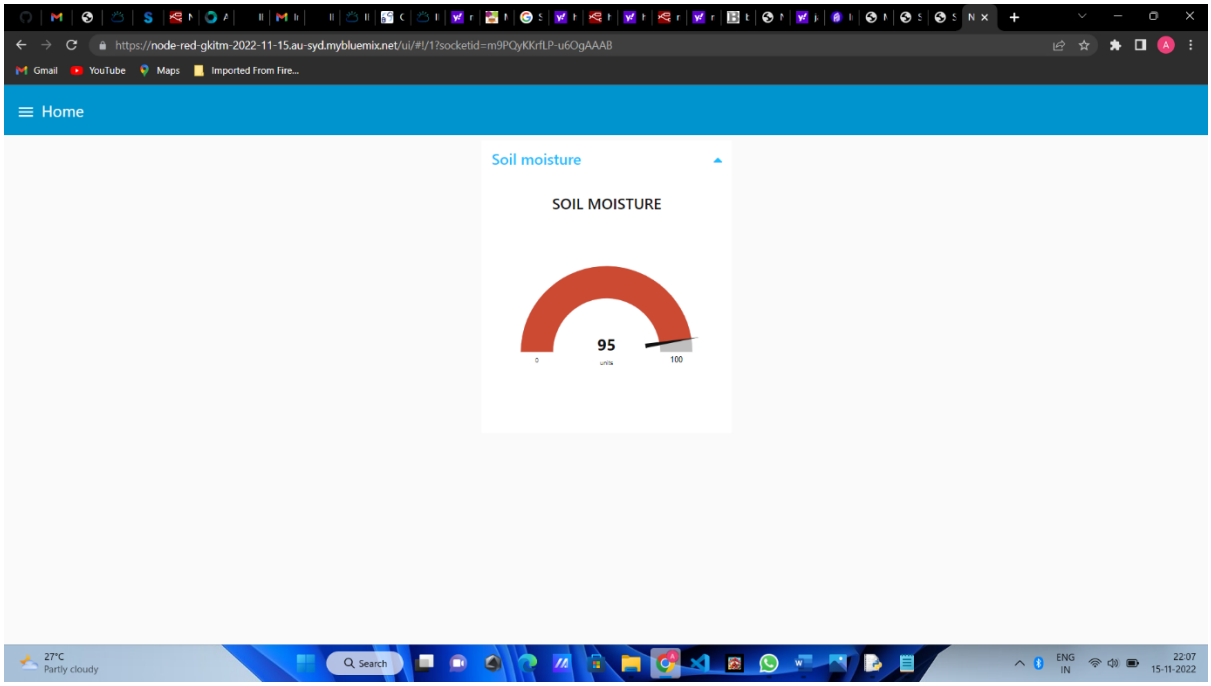


Node Red to Collect Data From IBM Cloud:

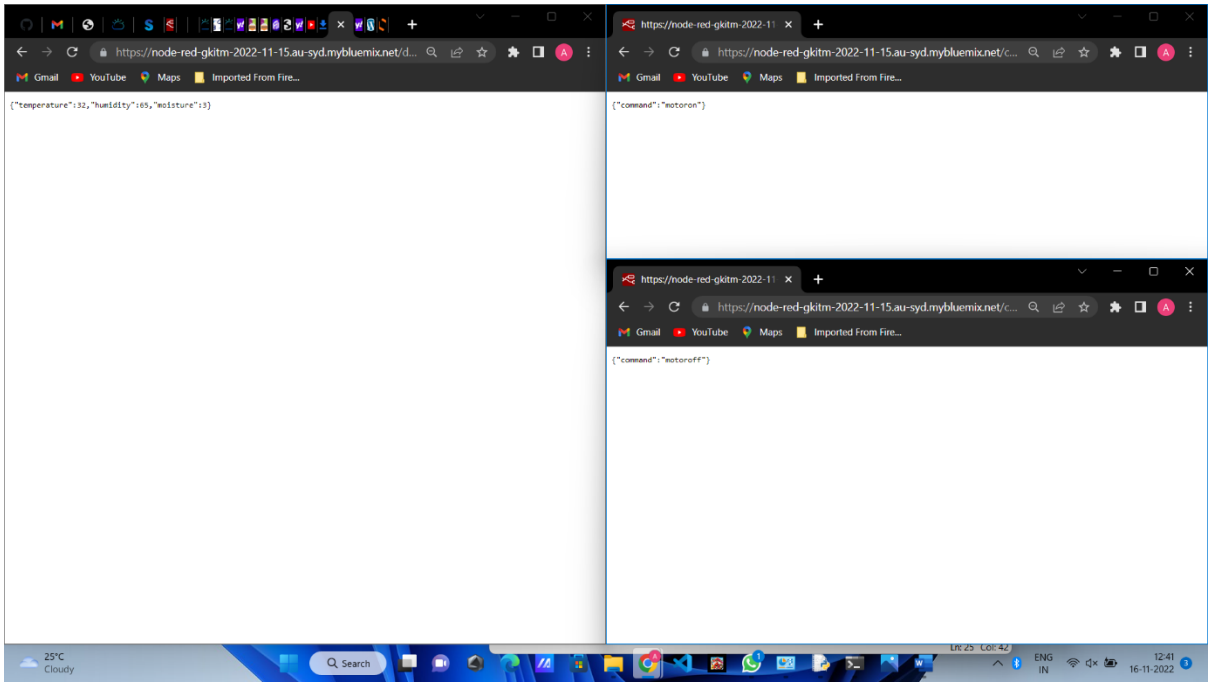


Node Red Web UI:



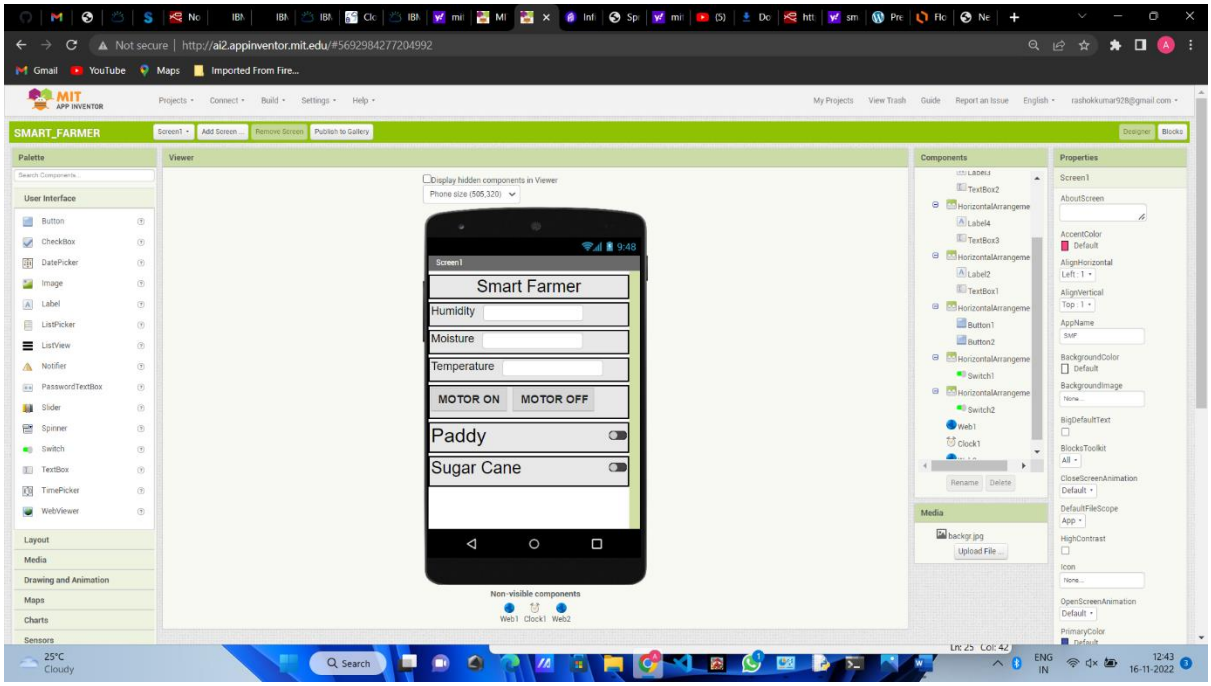


Node Red Web UI Command Lines:

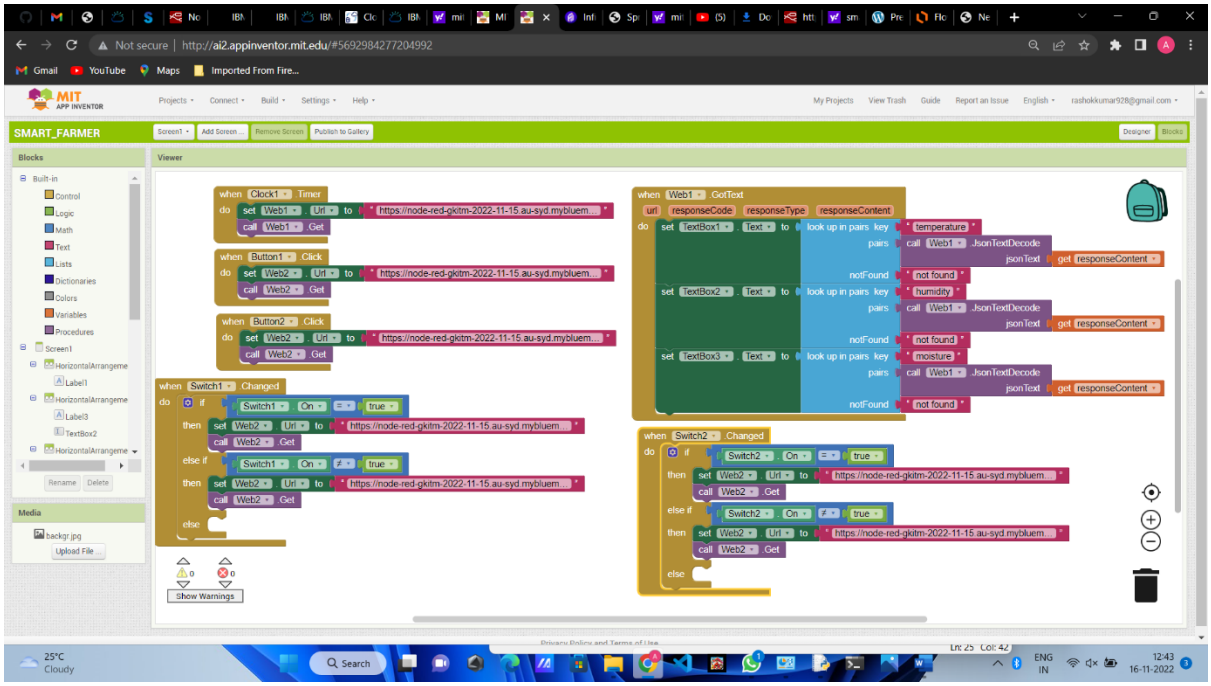


MIT APP INVENTOR :

User Interface:



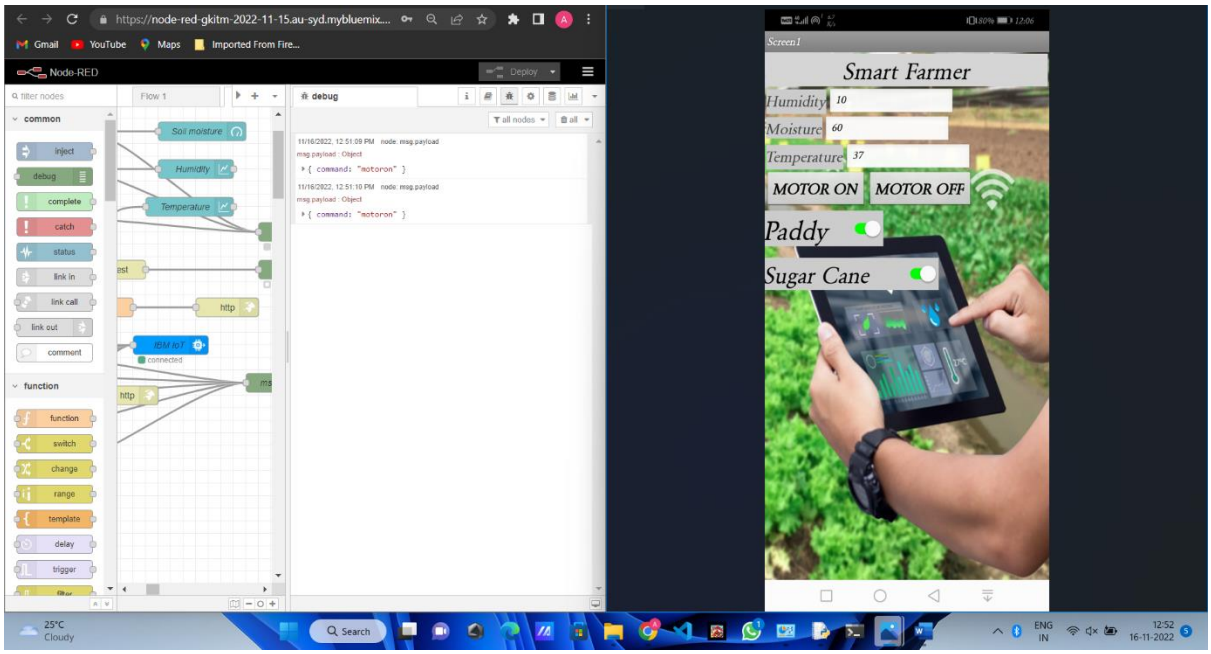
MIT APP – Blocks Coding:



Working Of MIT APPLICATION :


80% 12:06
Screen1
Smart Farmer
Humidity
10
Moisture
60
Temperature
37
MOTOR ON
MOTOR OFF
Paddy
Sugar Cane

Result :


Node-RED
Flow 1
debug
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
template
delay
trigger
Soil moisture
Humidity
Temperature
http
IBM IoT
connected
{ command: "motoron" }
{ command: "motoron" }
Screen1
Smart Farmer
Humidity
10
Moisture
60
Temperature
37
MOTOR ON
MOTOR OFF
Paddy
Sugar Cane
25°C
Cloudy
Search
ENG
IN
12:52
16-11-2022