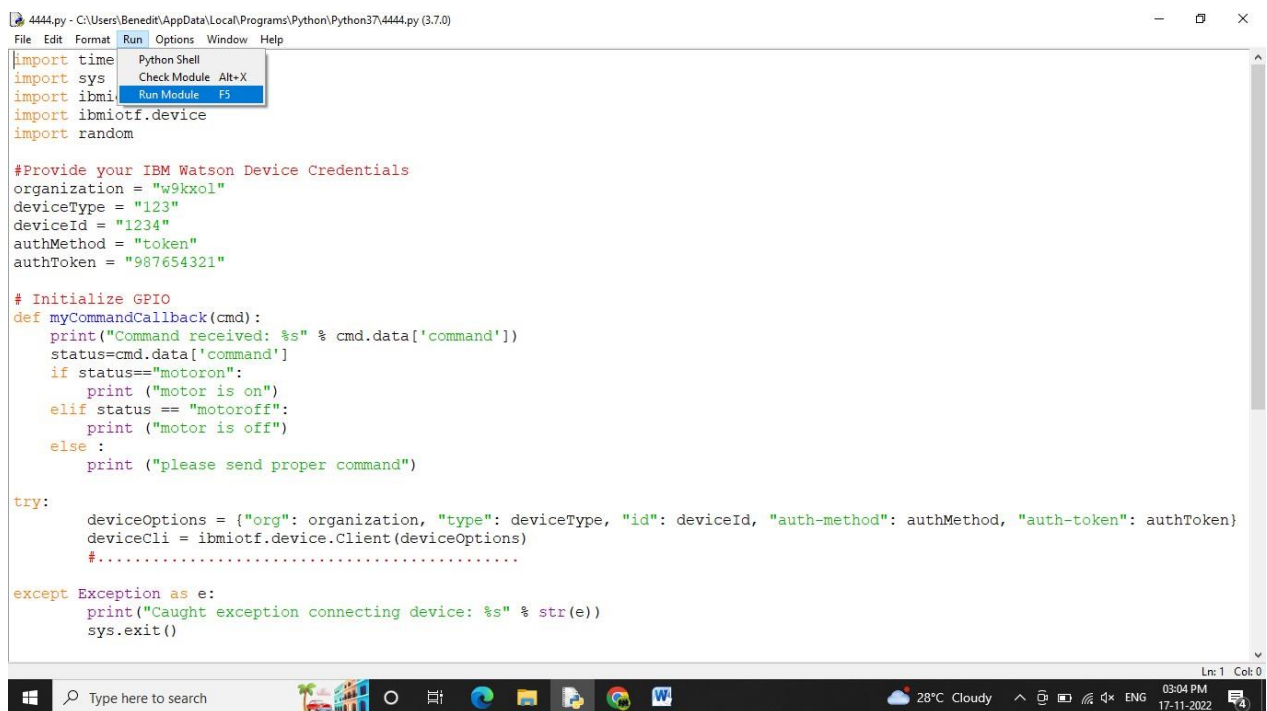


SPRINT DELIVERY-4

DATE	17 November 2022
TEAM ID	PNT2022TMID22142
PROJECT NAME	Smart Farmer - IoT Enabled Smart Farming Application

Testing developed application and working model of hardware

➤ **Run the python code and get the output:**



```
4444.py - C:\Users\Benedict\AppData\Local\Programs\Python\Python37\4444.py (3.7.0)
File Edit Format Run Options Window Help
import time
import sys
import ibmi
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "w9kxol"
deviceType = "123"
deviceId = "1234"
authMethod = "token"
authToken = "987654321"

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

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()
```

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
== RESTART: C:\Users\Benedict\AppData\Local\Programs\Python\Python37\4444.py ==
2022-11-17 15:05:16,353 ibmiotf.device.Client INFO Connected successfully: d:w9kxol:123:1234
Published Temperature = 95 C Humidity = 60 % soilmoisture=89 % to IBM Watson
Published Temperature = 100 C Humidity = 68 % soilmoisture=92 % to IBM Watson
Published Temperature = 96 C Humidity = 69 % soilmoisture=99 % to IBM Watson
Published Temperature = 93 C Humidity = 61 % soilmoisture=111 % to IBM Watson
Published Temperature = 106 C Humidity = 79 % soilmoisture=71 % to IBM Watson
Published Temperature = 100 C Humidity = 78 % soilmoisture=98 % to IBM Watson
Published Temperature = 106 C Humidity = 71 % soilmoisture=59 % to IBM Watson
Published Temperature = 90 C Humidity = 77 % soilmoisture=85 % to IBM Watson
Published Temperature = 106 C Humidity = 63 % soilmoisture=110 % to IBM Watson
Published Temperature = 108 C Humidity = 60 % soilmoisture=65 % to IBM Watson
Published Temperature = 105 C Humidity = 96 % soilmoisture=118 % to IBM Watson
Published Temperature = 94 C Humidity = 71 % soilmoisture=93 % to IBM Watson
Published Temperature = 92 C Humidity = 94 % soilmoisture=77 % to IBM Watson
Published Temperature = 90 C Humidity = 67 % soilmoisture=96 % to IBM Watson
Published Temperature = 98 C Humidity = 68 % soilmoisture=61 % to IBM Watson
Published Temperature = 99 C Humidity = 85 % soilmoisture=90 % to IBM Watson
Published Temperature = 90 C Humidity = 90 % soilmoisture=51 % to IBM Watson
Published Temperature = 99 C Humidity = 80 % soilmoisture=104 % to IBM Watson
Published Temperature = 98 C Humidity = 79 % soilmoisture=68 % to IBM Watson
Published Temperature = 104 C Humidity = 68 % soilmoisture=114 % to IBM Watson
Published Temperature = 99 C Humidity = 99 % soilmoisture=51 % to IBM Watson
Published Temperature = 92 C Humidity = 71 % soilmoisture=51 % to IBM Watson
Published Temperature = 108 C Humidity = 100 % soilmoisture=66 % to IBM Watson
Published Temperature = 110 C Humidity = 99 % soilmoisture=59 % to IBM Watson
Published Temperature = 103 C Humidity = 81 % soilmoisture=107 % to IBM Watson
Published Temperature = 94 C Humidity = 73 % soilmoisture=119 % to IBM Watson
Published Temperature = 106 C Humidity = 60 % soilmoisture=56 % to IBM Watson
Published Temperature = 106 C Humidity = 90 % soilmoisture=99 % to IBM Watson
Published Temperature = 110 C Humidity = 82 % soilmoisture=83 % to IBM Watson
```

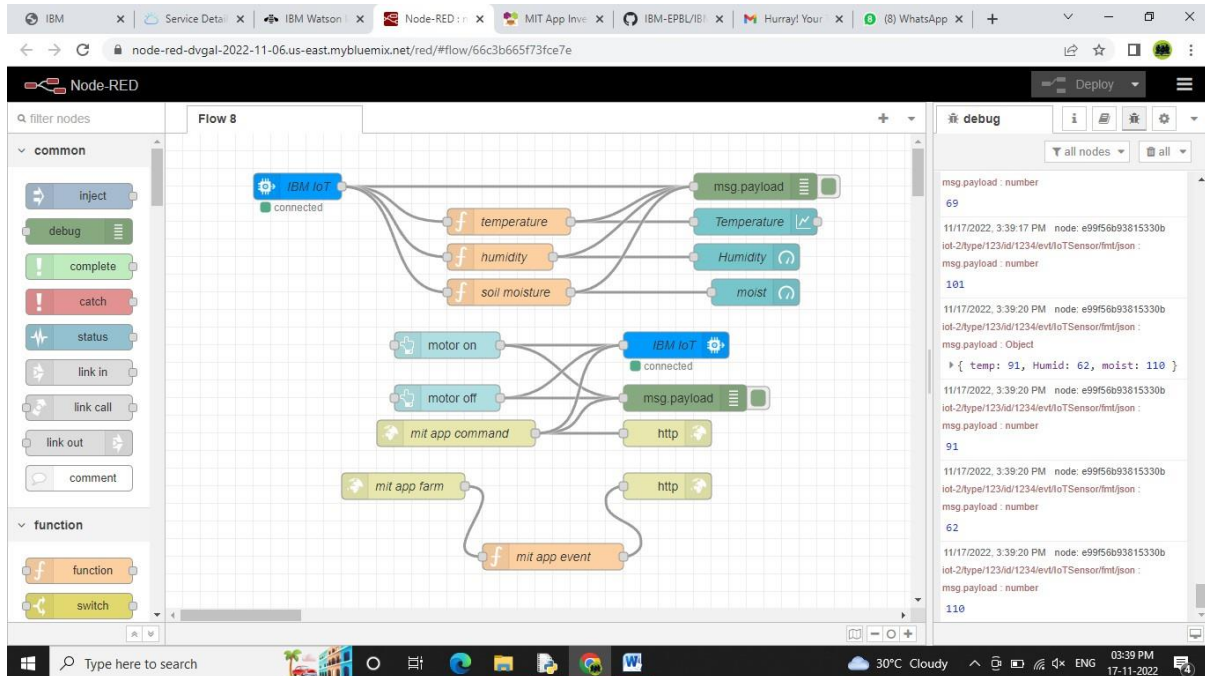
Out put data for python

➤ Get the output data in IBM Watson IoT Platform:

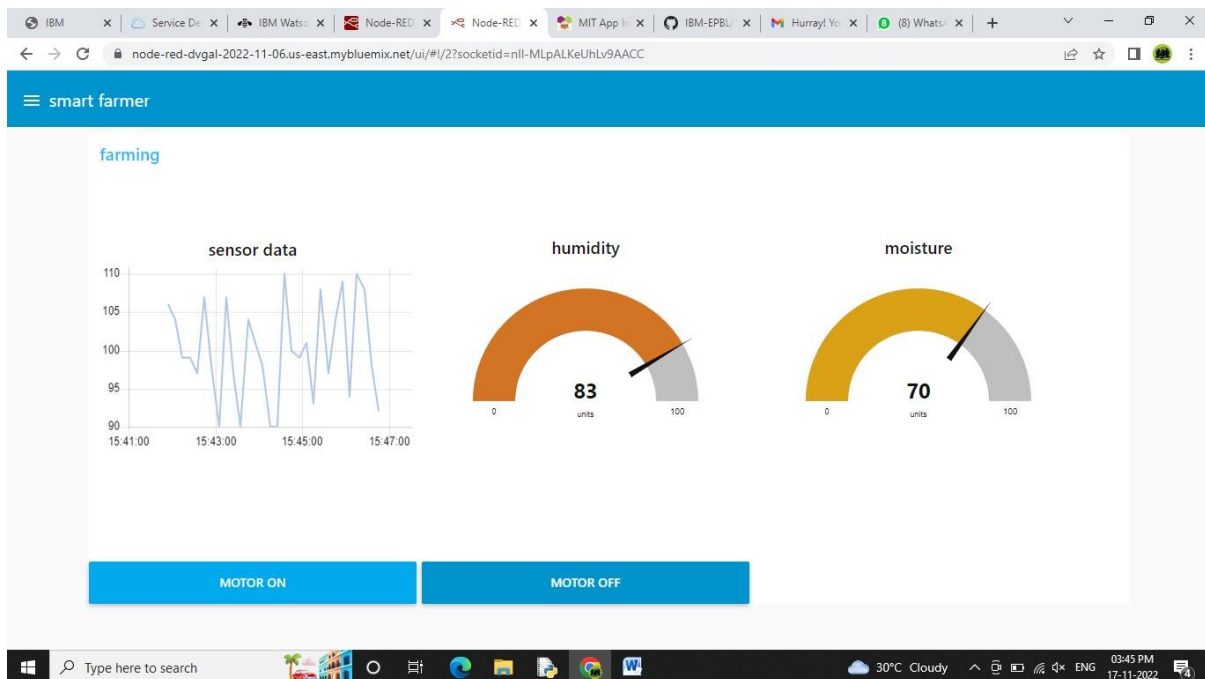
The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area displays a table of devices. The device with ID 1234 is selected, and its details are shown in a sub-panel. The sub-panel includes tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a list of events with columns for 'Event', 'Value', 'Format', and 'Last Received'.

Event	Value	Format	Last Received
IoTSensor	{"temp":110,"Humid":68,"moist":111}	json	a few seconds ago
IoTSensor	{"temp":110,"Humid":88,"moist":87}	json	a few seconds ago
IoTSensor	{"temp":90,"Humid":90,"moist":72}	json	a few seconds ago
IoTSensor	{"temp":94,"Humid":88,"moist":64}	json	a few seconds ago

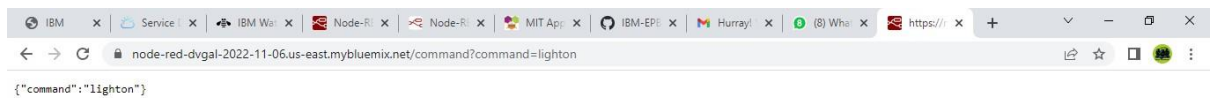
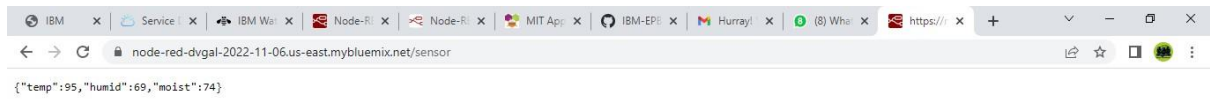
➤ Send the data's from IBM Watson IoT Platform to Node-red:



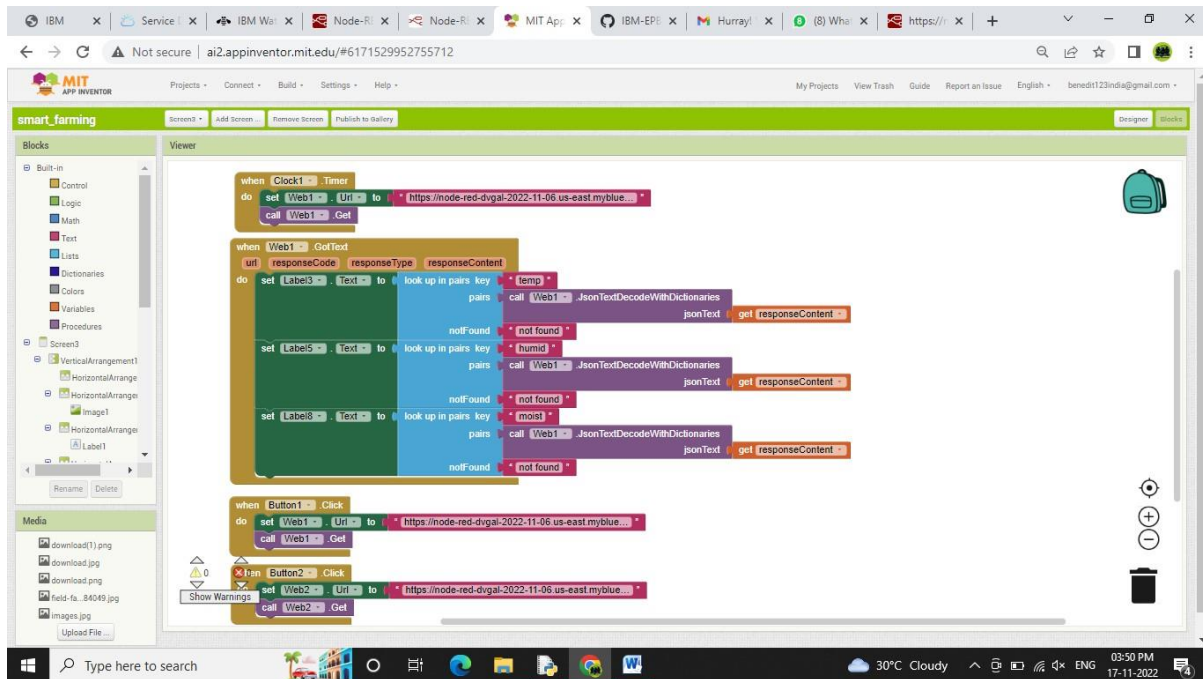
➤ Node-red Dashboard to give the commands:



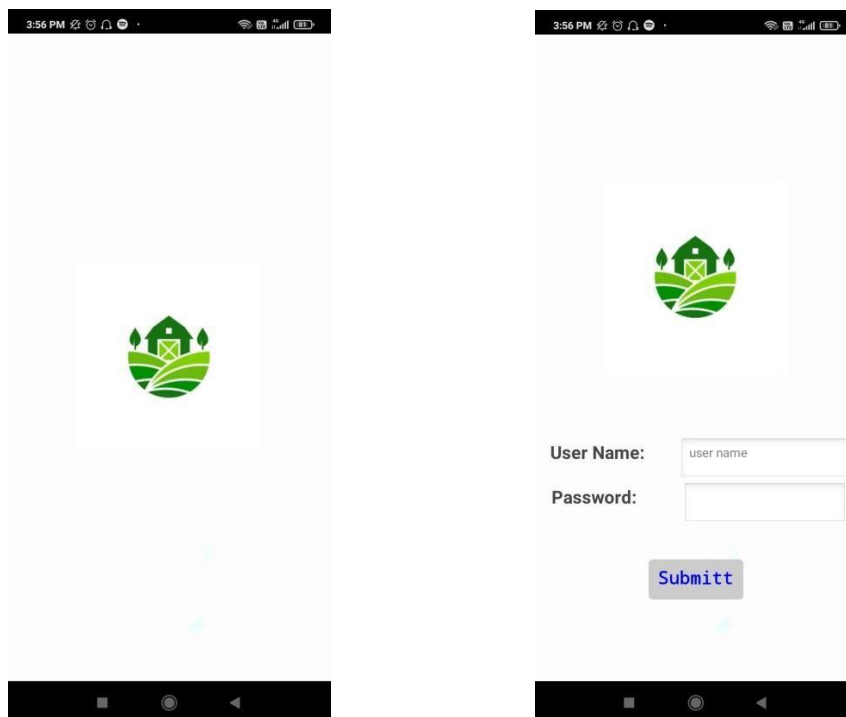
➤ Get the commands and sensor values in website:




➤ Link the Node-red to Mit app:



➤ MIT app inventor Mobile View:



3:56 PM



User Name: bene

Password: ...

1 2 3 4 5 6 7 8 9 0


q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

?123 ☺ , < TA-EN > . ? ✓

3:56 PM




User Name: bene

Password: ...

Submit

3:57 PM



Field details

Temperature(c): 100

Humidity(%): 99

Soilmoisture(%): 101

switch board

Motor on Motor off

