Sprint-4

TEAM ID	***PNT2022TMID34551***
PROJECT NAME	***Smart Farmer-IOT Enabled Smart Farming Application***

Code in Python IDLE:

PROGRAM:

smartfarmingiot.py - C:\Users\kavipriya devi\AppData\Local\Programs\Python\Python37\smartfarmingiot.py (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 = "b84wgs"
deviceType = "abi"
deviceId = "12345678"
authMethod = "token"
authToken = "87654321"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("Motor is ON")
    else :
        print ("Motor is OFF")

    #print(cmd)



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:
        #Get Sensor Data from DHT11

        Temp=random.randint(0,100)
        Humid=random.randint(0,100)
```

Ln: 17 Col: 0

smartfarmingiot.py - C:\Users\kavipriya devi\AppData\Local\Programs\Python\Python37\smartfarmingiot.py (3.7.0)

File Edit Format Run Options Window Help

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# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()

while True:
        #Get Sensor Data from DHT11

        Temp=random.randint(0,100)
        Humid=random.randint(0,100)

        data = { 'Temp' : Temp, 'Humid': Humid }
        #print data
        def myOnPublishCallback():
            print ("Published Temperature = %s C" % Temp, "Humidity = %s %%" % Humid, "to IBM Watson")

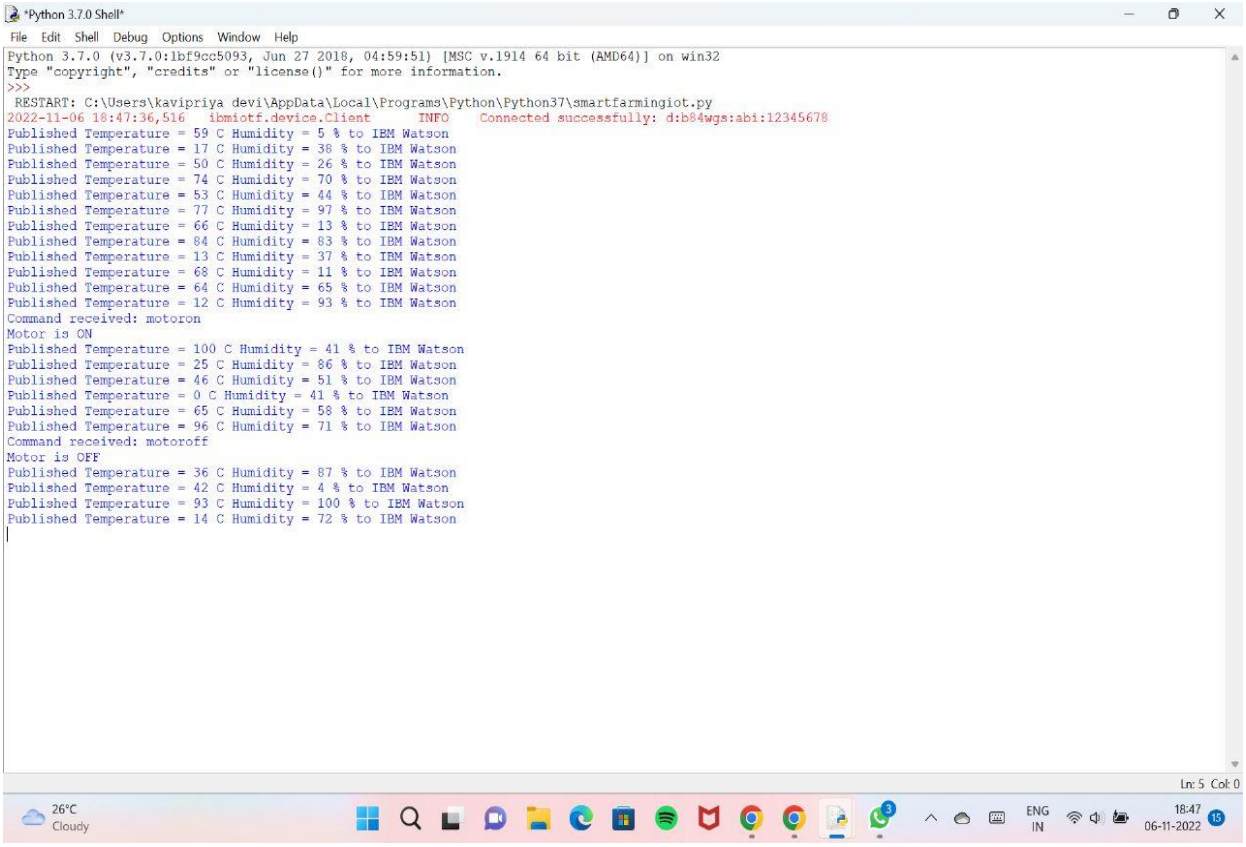
        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(1)

        deviceCli.commandCallback = myCommandCallback
```

Ln: 17 Col: 0

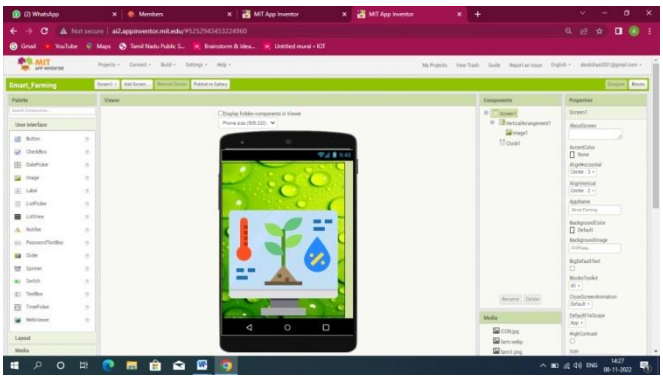
26°C Cloudy ENG IN 18:48 06-11-2022

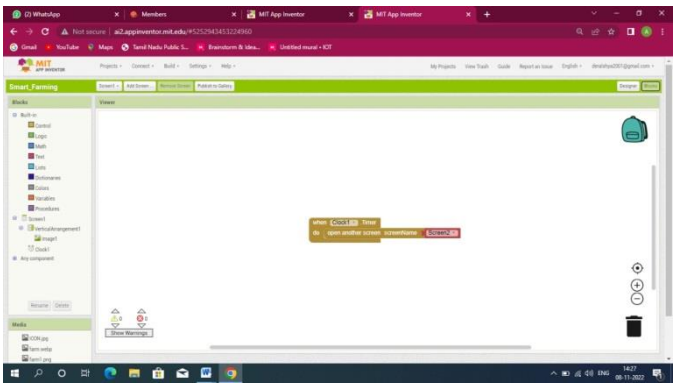
OUTPUT:


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\kavipriya devi\AppData\Local\Programs\Python\Python37\smartfarmingiot.py
2022-11-06 18:47:36,516 ibmiotf.device.Client INFO Connected successfully: d:b84wgs:abi:12345678
Published Temperature = 59 C Humidity = 5 % to IBM Watson
Published Temperature = 17 C Humidity = 38 % to IBM Watson
Published Temperature = 50 C Humidity = 26 % to IBM Watson
Published Temperature = 74 C Humidity = 70 % to IBM Watson
Published Temperature = 53 C Humidity = 44 % to IBM Watson
Published Temperature = 77 C Humidity = 97 % to IBM Watson
Published Temperature = 66 C Humidity = 13 % to IBM Watson
Published Temperature = 84 C Humidity = 83 % to IBM Watson
Published Temperature = 13 C Humidity = 37 % to IBM Watson
Published Temperature = 68 C Humidity = 11 % to IBM Watson
Published Temperature = 64 C Humidity = 65 % to IBM Watson
Published Temperature = 12 C Humidity = 93 % to IBM Watson
Command received: motoron
Motor is ON
Published Temperature = 100 C Humidity = 41 % to IBM Watson
Published Temperature = 25 C Humidity = 86 % to IBM Watson
Published Temperature = 46 C Humidity = 51 % to IBM Watson
Published Temperature = 0 C Humidity = 41 % to IBM Watson
Published Temperature = 65 C Humidity = 58 % to IBM Watson
Published Temperature = 96 C Humidity = 71 % to IBM Watson
Command received: motoroff
Motor is OFF
Published Temperature = 36 C Humidity = 87 % to IBM Watson
Published Temperature = 42 C Humidity = 4 % to IBM Watson
Published Temperature = 93 C Humidity = 100 % to IBM Watson
Published Temperature = 14 C Humidity = 72 % to IBM Watson
Ln: 5 Col: 0
26°C
Cloudy
ENG
IN
18:47
06-11-2022

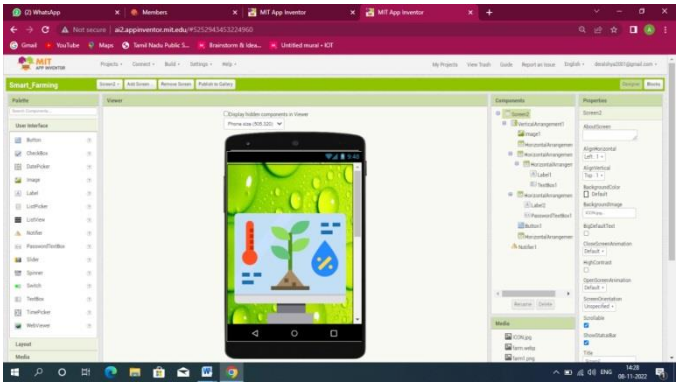
MIT APP INVENTOR: ***ICON PAGE***:

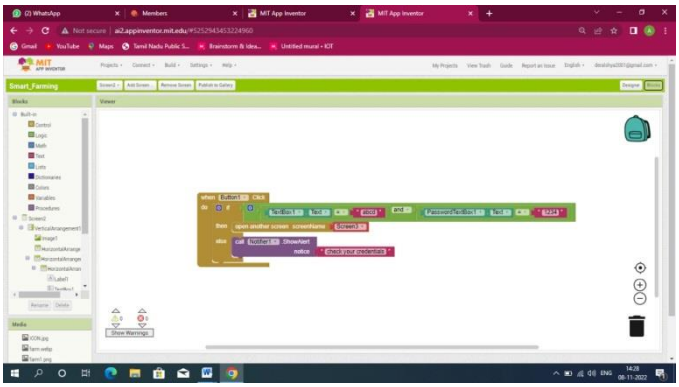
For Screen 1:



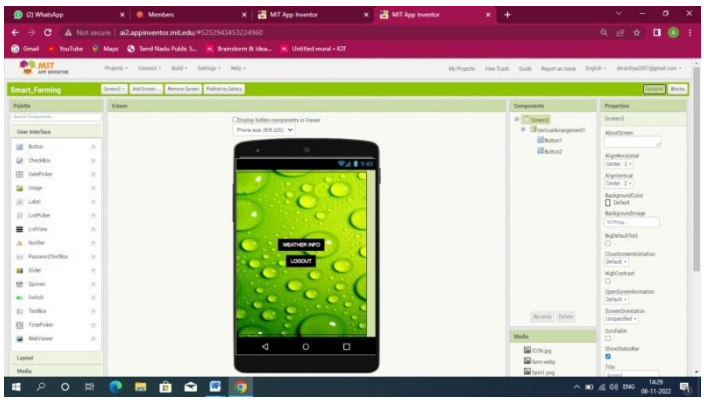


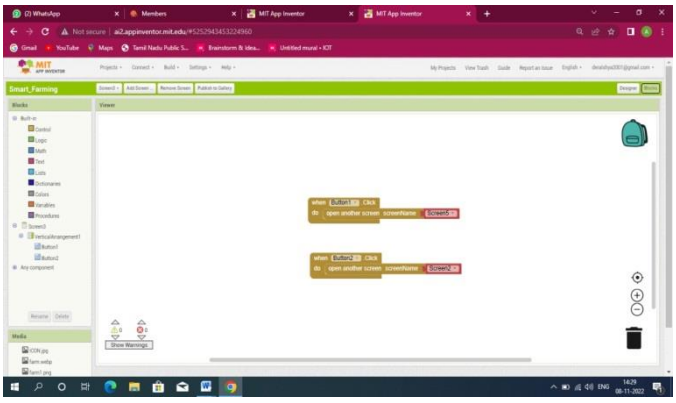
For Screen 2:



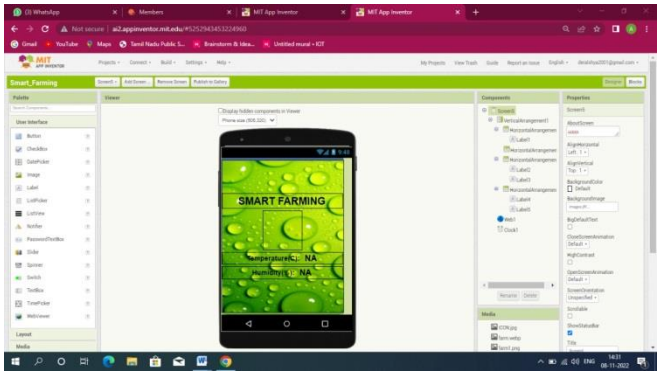


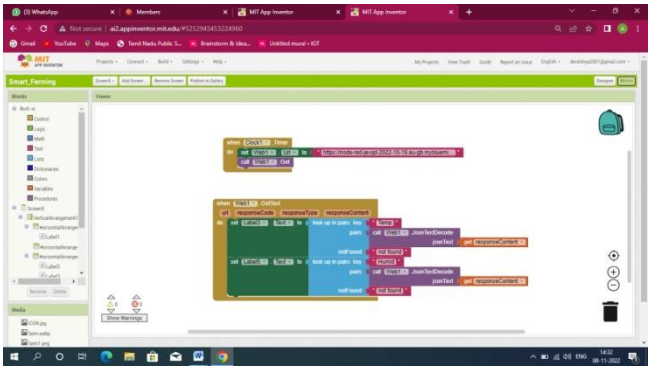
For Screen 3:



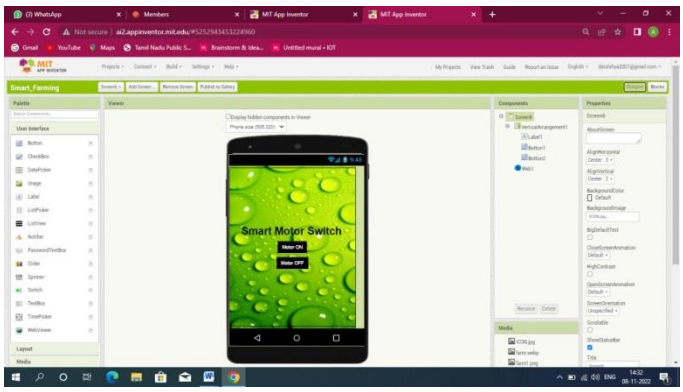


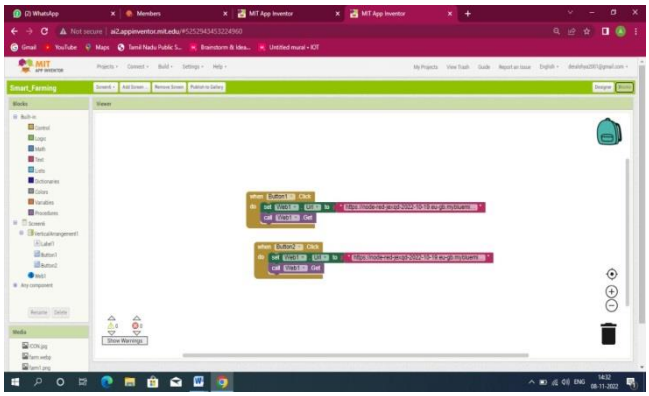
For Screen 4:



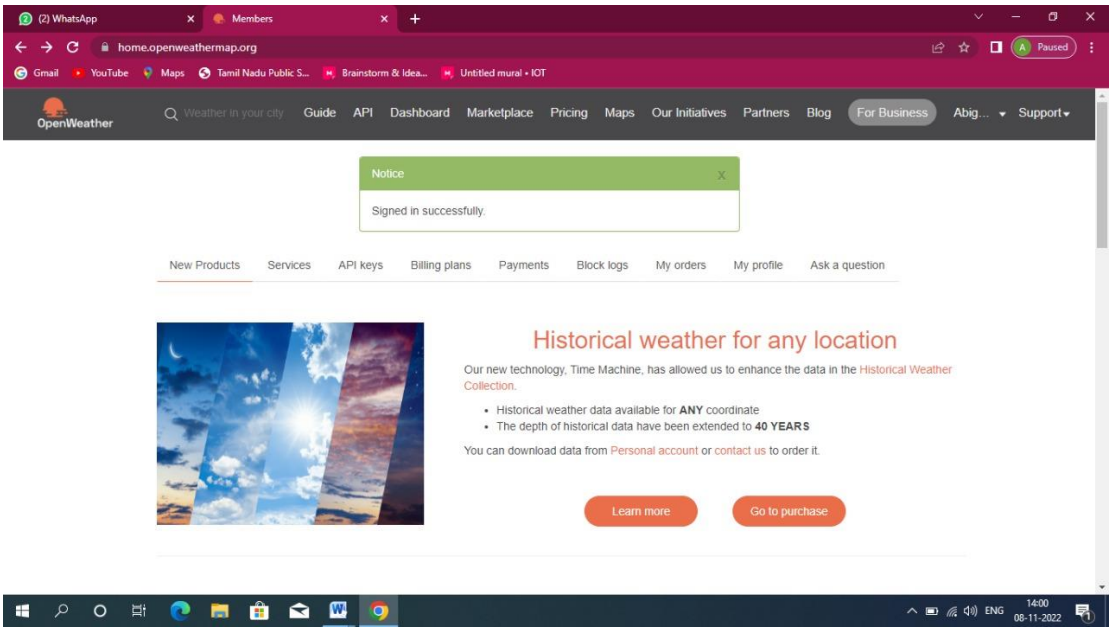


For Screen 5:





OPEN WEATHER:



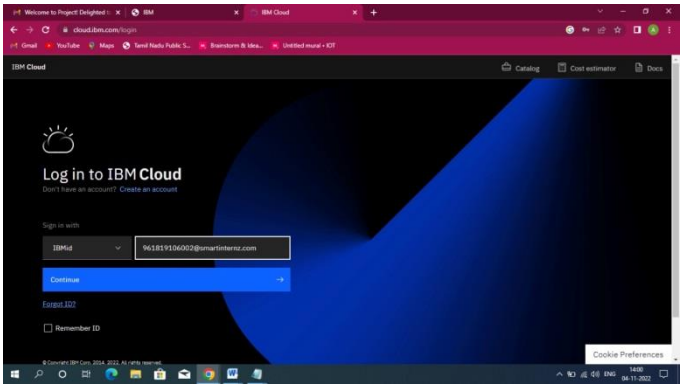
By using this website we can get the longitude and latitude values of the particular location.

RESOURCES PAGES

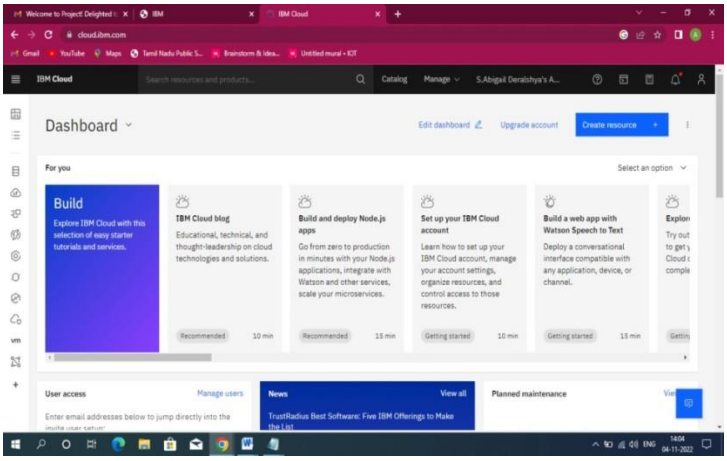
IBM CLOUD:

➢ LOGIN TO THE WEBSITE: IBM CLOUD LOGIN

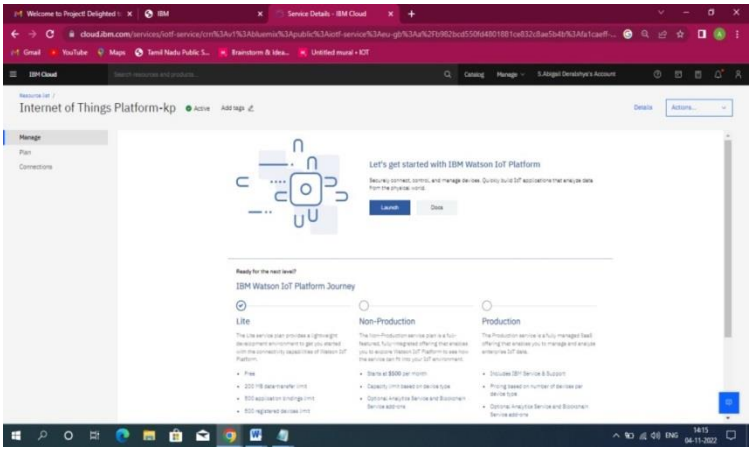
1. Enter The SI Mail Id And Create Your Password .



2. After Login Page Dashboard Will Be Displayed And Click The Catalog And Open Internet of Things:

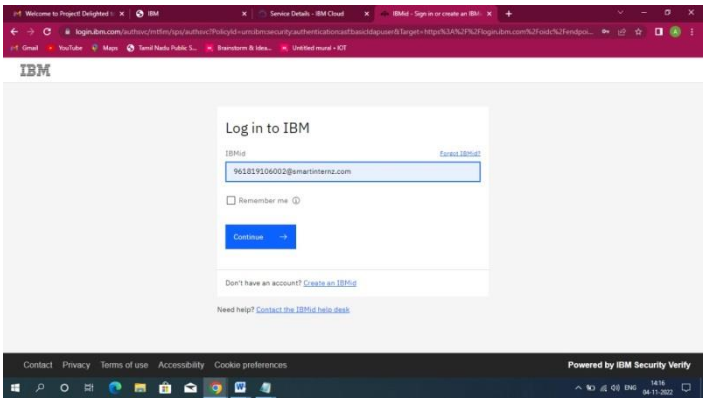


3. After That you will find this page and click the launch button:

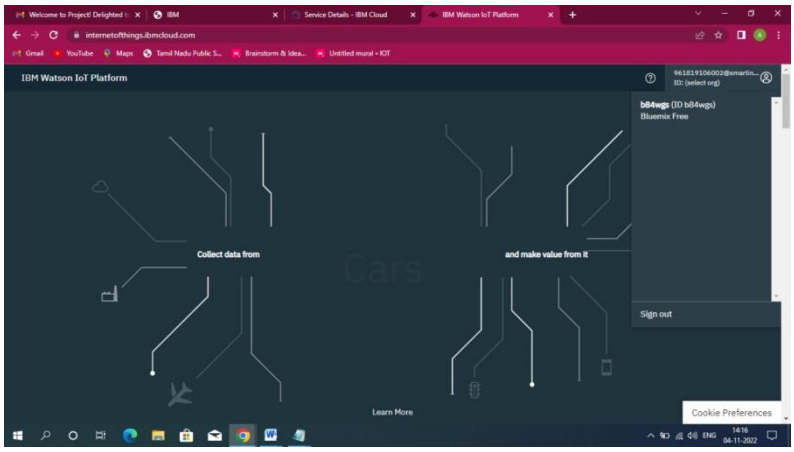


➢ ***TO LOGIN TO IBM WATSON***

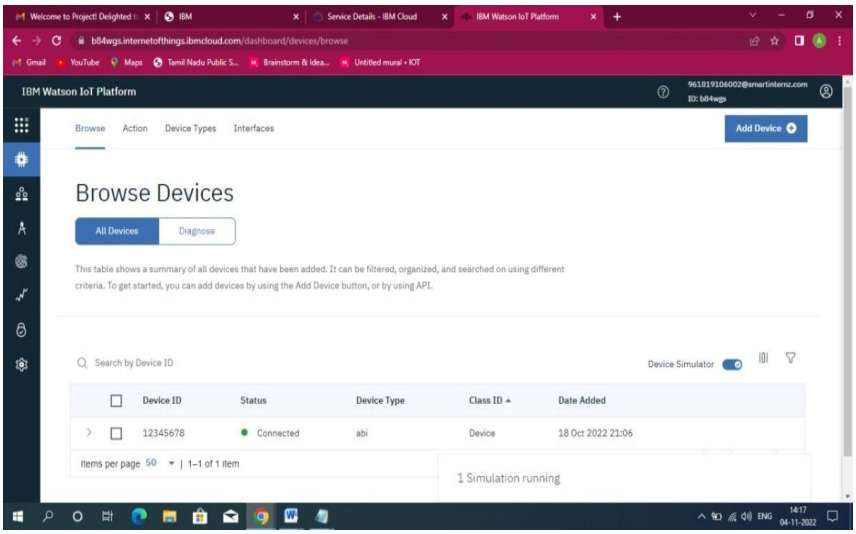
1 .After that login the Page and give your SI Mail id and password



2. Then sign in the right side corner id given in the Ibm Watson.



3. After that you will find the Browse Device Page:



4. <u>Create a Device by entering all the required details given below and click finish</u>:

Organization ID:

b84wgs

Device Type:

abi

Device ID:

12345678

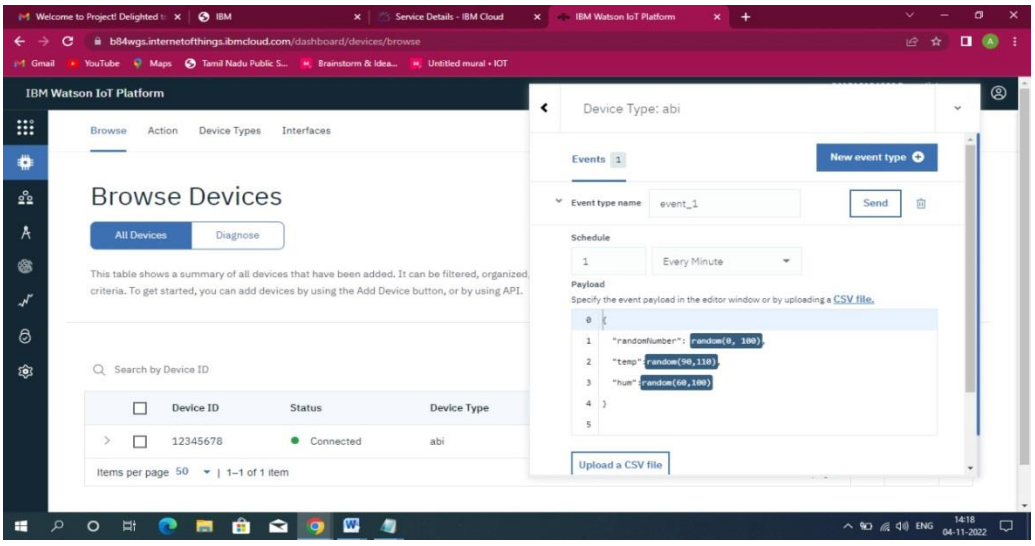
Authentication Method:

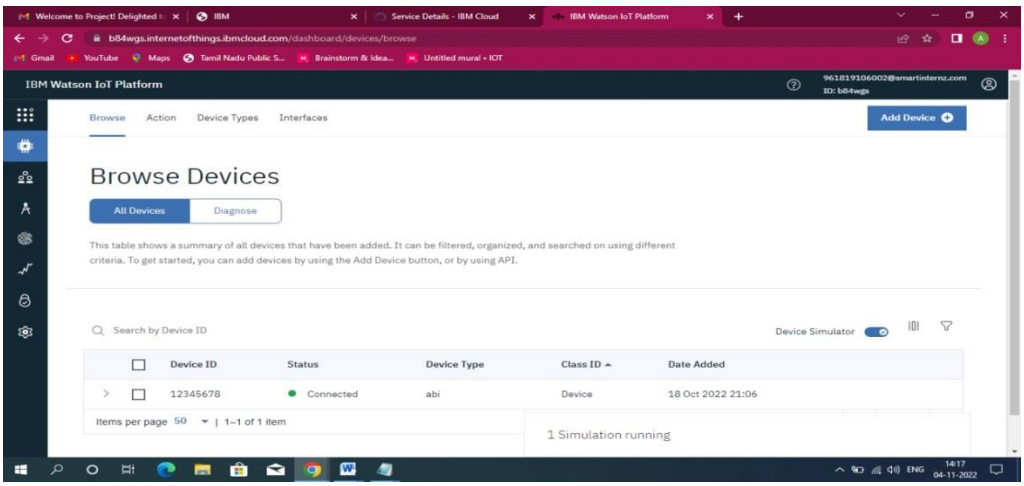
use-token-auth

Authentication Token:

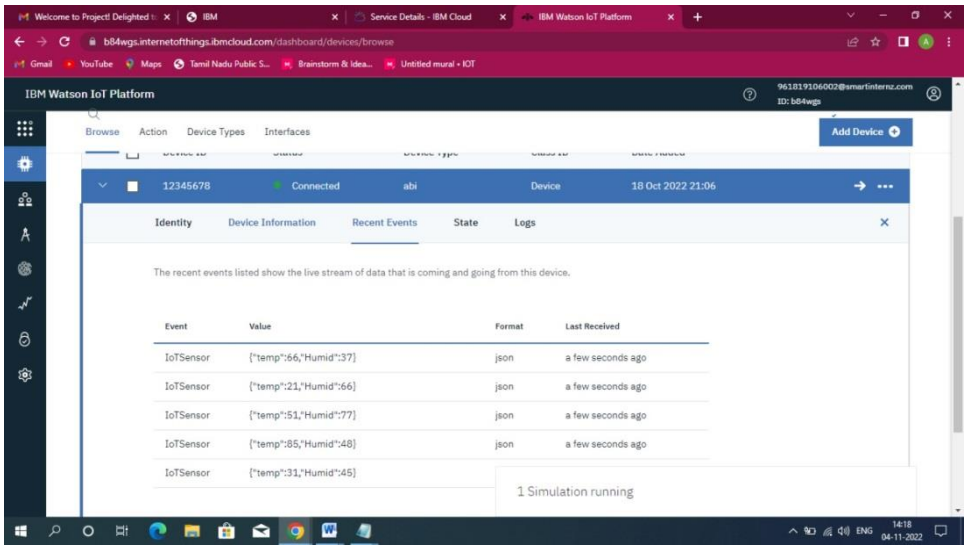
87654321

5. <u>And Then you will receive this page by stimulating the created device:</u>



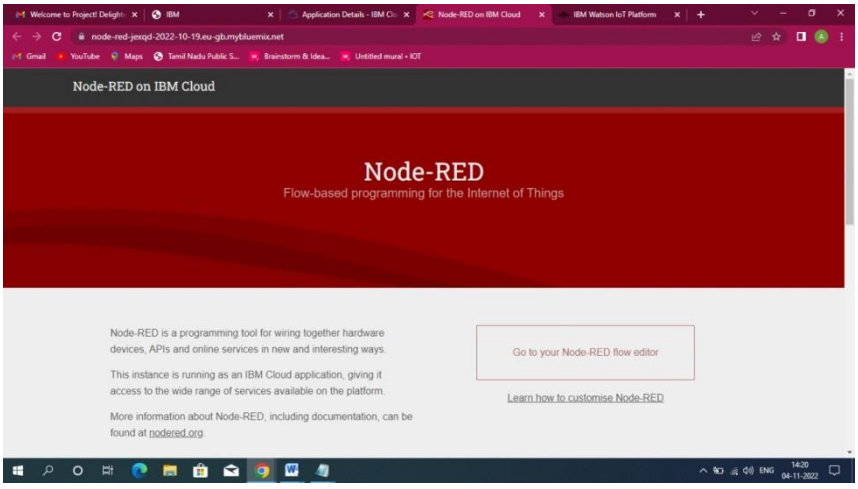


STATUS PAGE (RESULT):

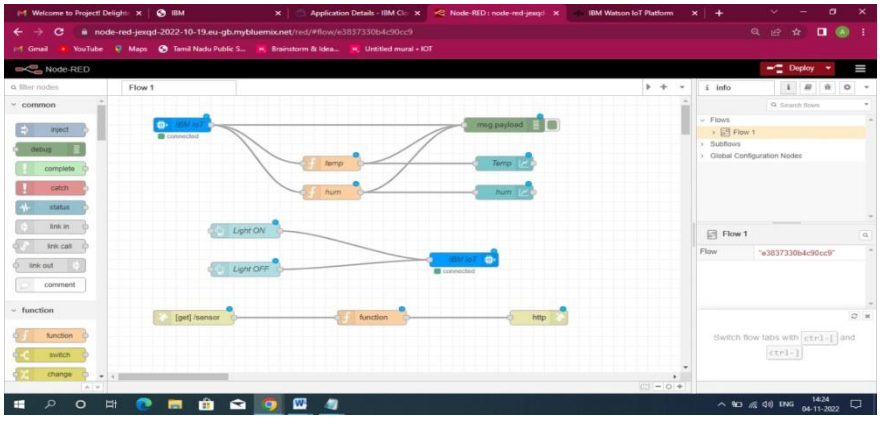


NODE RED:

➢ Login Page of the Node Red:



➢ Developing Route based on the program:



Output :

(The output will be displayed in graphical representation.)