DEVELOP THE PYTHON CODE

Date	11th November 2022
Team ID	PNT2022TMID12810
Project Name	SmartFarmer – IoT Enabled Farming Application
Submitted by	Tharun G (718019L144)

PYTHON CODE:

```
import wiotp.sdk.device as wsd
import time
import os
import datetime
import random
ourConfig = {
  "identity": {
    "orgId": "b6kdov",
    "typeId": "ESP32",
    "deviceId": "24_0A_C4_00_01_10"
  },
  "auth":{
    "token": "G8F*JZcTgYJl6h!17W"
  }
}
client = wsd.DeviceClient(config = ourConfig, logHandlers = None)
client.connect()
def myCmdCallback(cmd):
  reCmd = cmd.data['command']
  if reCmd == "motoron":
    print("Motor is switched on!")
  elif reCmd == "motoroff":
    print("Motor is switched off!")
while True:
```

```
    mois = random.randint(0,100)
    temp = random.randint(-20,125)
    humi = random.randint(0,100)
    myData =
dict([['soil_moisture_content',mois),('temperature',temp),('humidity',humi)]])
    client.publishEvent(eventId = "update", msgFormat = "json", data = myData, qos = 0,
onPublish = None)
    print("Data is published through MQTT successfully!")
    time.sleep(2)
    client.commandCallback = myCmdCallback
client.disconnect()
```

OUTPUT (COMMAND PROMPT):

```
D:\Desktop\Final code - AIDRS\AIDRS>python -u "d:\Desktop\Final code - AIDRS\AIDRS\python_code.py"
2022-11-11 15:38:08,266   wiotp.sdk.device.client.DeviceClient  INFO    Connected successfully: d:b6kdov:ESP32:24_0A_C4_00_01_10
Data is published through MQTT successfully!
Traceback (most recent call last):
  File "d:\Desktop\Final code - AIDRS\AIDRS\python_code.py", line 35, in <module>
    time.sleep(10)
- AIDRS\AIDRS\python_code.py"
2022-11-11 15:38:54,829   wiotp.sdk.device.client.DeviceClient  INFO    Connected successfully: d:b6kdov:ESP32:24_0A_C4_00_01_10
Data is published through MQTT successfully!
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```
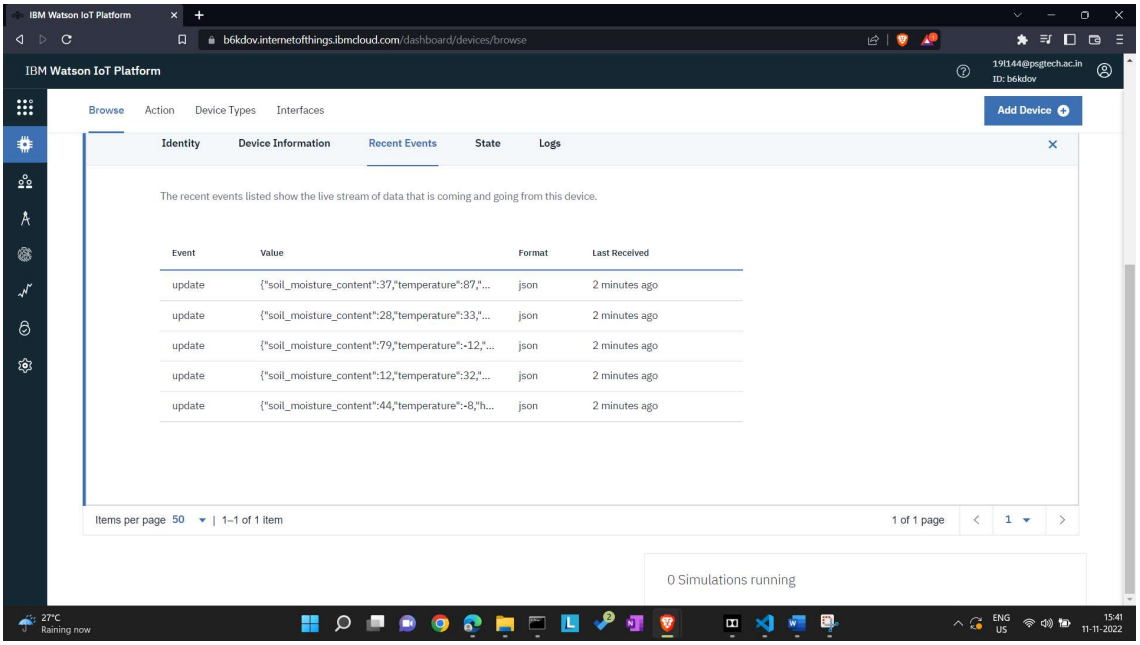
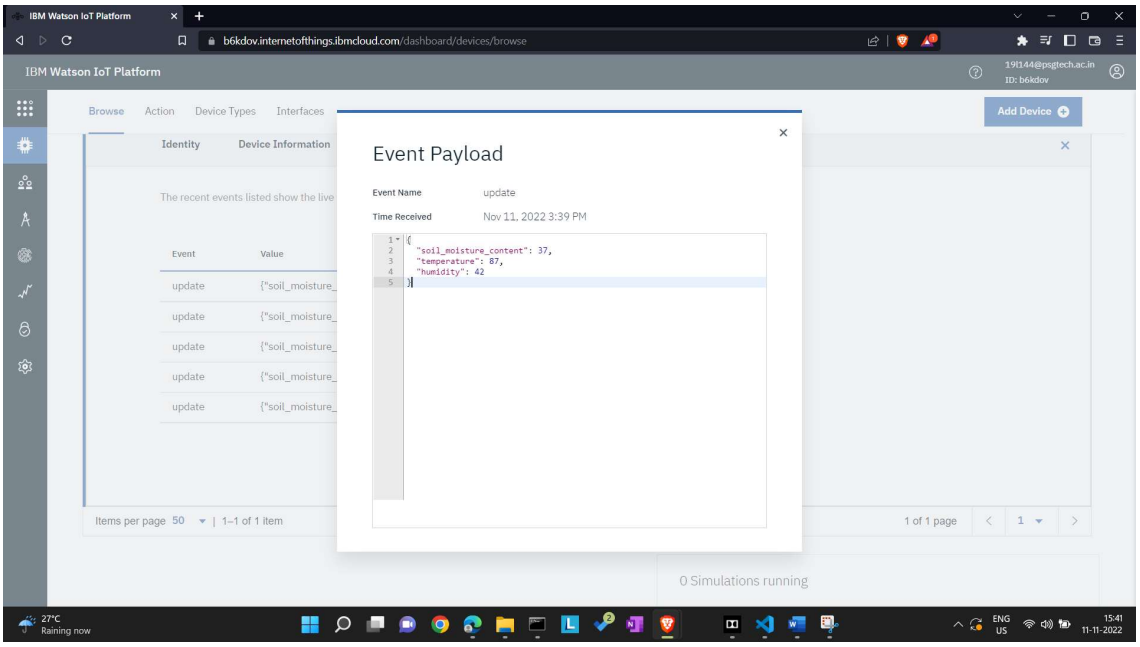

OUTPUT (IBM WATSON IOT PLATFORM):

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Browse
Action
Device Types
Interfaces
Add Device
Identity
Device Information
The recent events listed show the live
Event
Value
update
{"soil_moisture_
Items per page 50
1–1 of 1 item
1 of 1 page
0 Simulations running
Event Payload
Event Name
update
Time Received
Nov 11, 2022 3:39 PM
{
"soil_moisture_content": 37,
"temperature": 87,
"humidity": 42
}
27°C
Raining now
ENG
US
15:41
11-11-2022