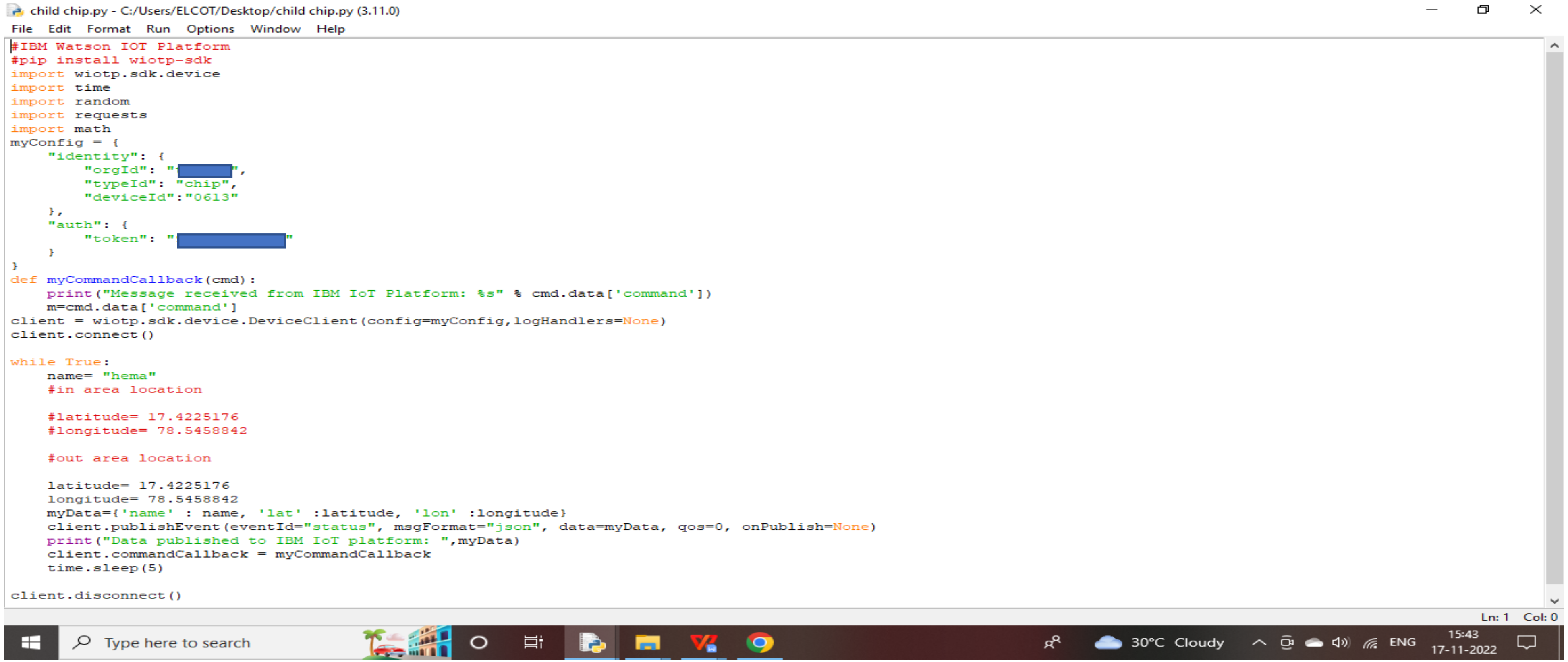
Develop A Python Script

Date	17 November 2022
Team ID	PNT2022TMID48061
Project Name	Project -IoT Based Safety Gadget for Child Safety Monitoring and Notification

Develop a python code for publishing the location (latitude and longitude) data to the IBM IoT Platform.

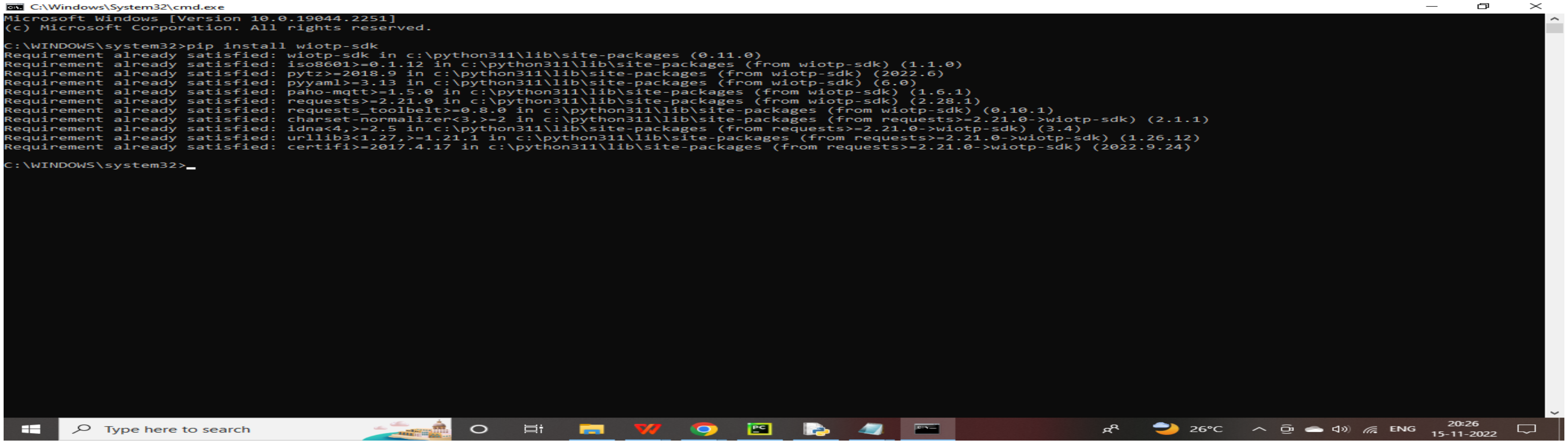
PYTHON SCRIPT:



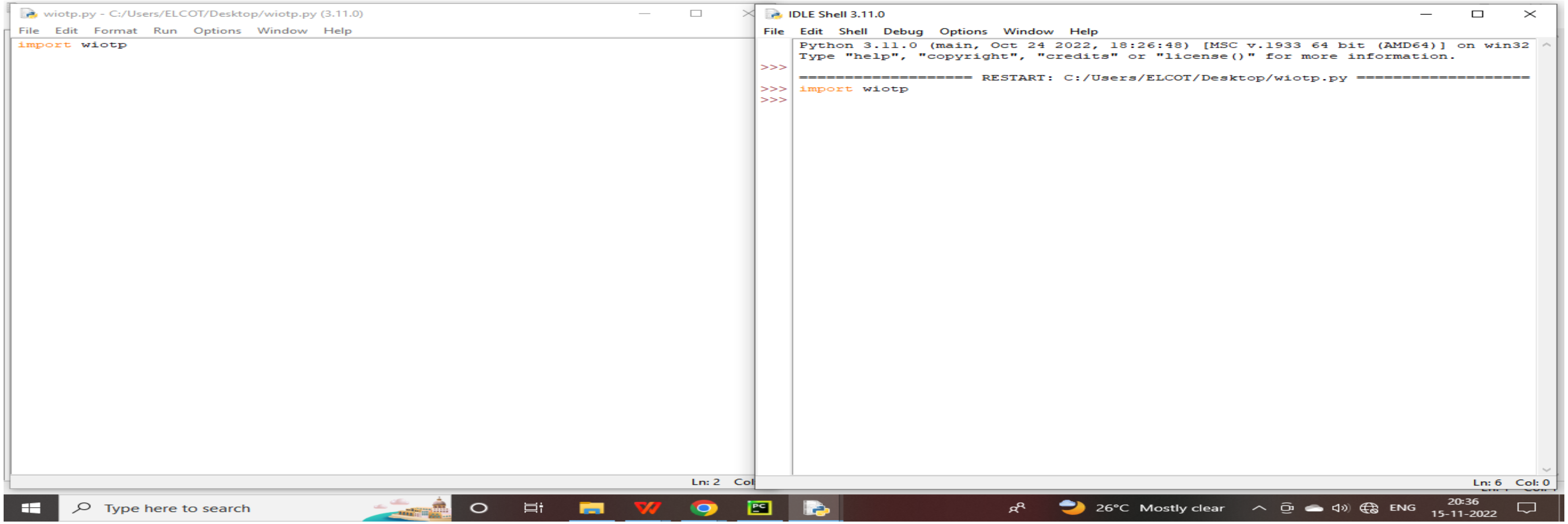
child chip.py - C:/Users/ELCOT/Desktop/child chip.py (3.11.0)
File Edit Format Run Options Window Help

```python
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
import requests
import math
myConfig = {
    "identity": {
        "orgId": "[redacted]",
        "typeId": "chip",
        "deviceId":"0613"
    },
    "auth": {
        "token": "[redacted]"
    }
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
client = wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
client.connect()

while True:
    name= "hema"
    #in area location

    #latitude= 17.4225176
    #longitude= 78.5458842

    #out area location

    latitude= 17.4225176
    longitude= 78.5458842
    myData={'name' : name, 'lat' :latitude, 'lon' :longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Data published to IBM IoT platform: ",myData)
    client.commandCallback = myCommandCallback
    time.sleep(5)

client.disconnect()
```

INSTALL WIOTP PACKAGE:



```
Microsoft Windows [Version 10.0.19044.2251]
(c) Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>pip install wiotp-sdk
Requirement already satisfied: wiotp-sdk in c:\python311\lib\site-packages (0.11.0)
Requirement already satisfied: iso8601>=0.1.12 in c:\python311\lib\site-packages (from wiotp-sdk) (1.1.0)
Requirement already satisfied: pytz>=2018.9 in c:\python311\lib\site-packages (from wiotp-sdk) (2022.6)
Requirement already satisfied: pyyaml>=3.13 in c:\python311\lib\site-packages (from wiotp-sdk) (6.0)
Requirement already satisfied: paho-mqtt>=1.5.0 in c:\python311\lib\site-packages (from wiotp-sdk) (1.6.1)
Requirement already satisfied: requests>=2.21.0 in c:\python311\lib\site-packages (from wiotp-sdk) (2.28.1)
Requirement already satisfied: requests_toolbelt>=0.8.0 in c:\python311\lib\site-packages (from wiotp-sdk) (0.10.1)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\python311\lib\site-packages (from requests>=2.21.0->wiotp-sdk) (2.1.1)
Requirement already satisfied: idna<4,>=2.5 in c:\python311\lib\site-packages (from requests>=2.21.0->wiotp-sdk) (3.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\python311\lib\site-packages (from requests>=2.21.0->wiotp-sdk) (1.26.12)
Requirement already satisfied: certifi>=2017.4.17 in c:\python311\lib\site-packages (from requests>=2.21.0->wiotp-sdk) (2022.9.24)

C:\WINDOWS\system32>
```

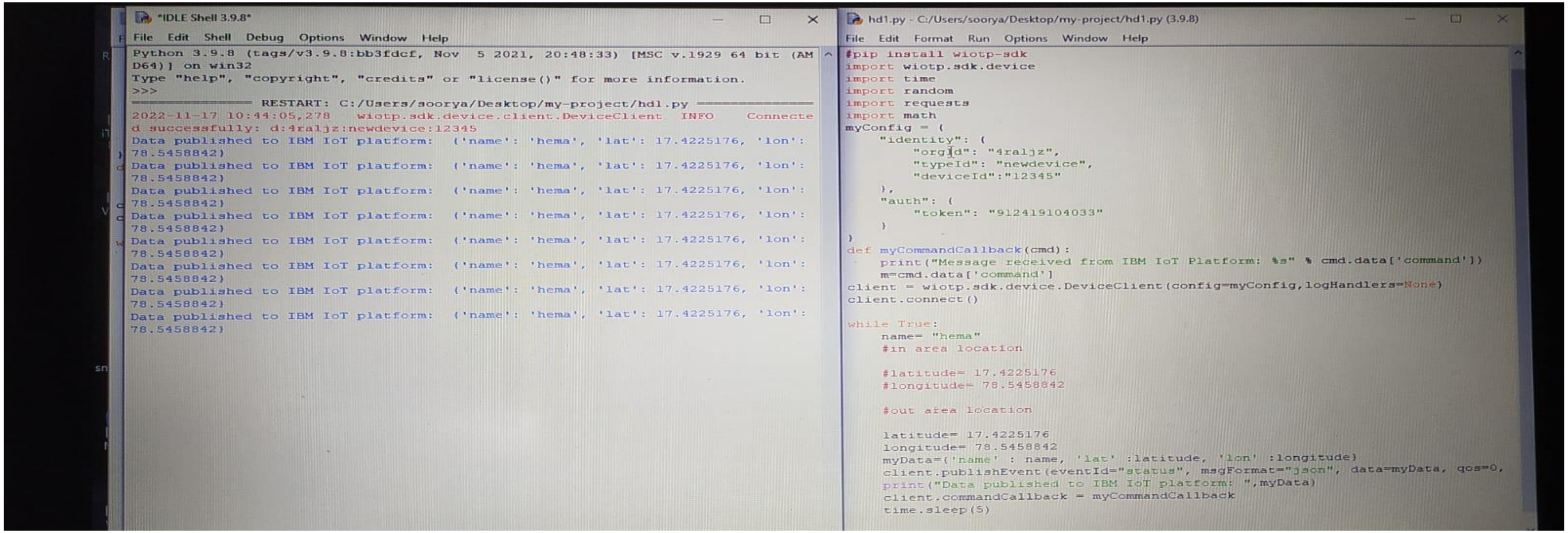


wiotp.py - C:/Users/ELCOT/Desktop/wiotp.py (3.11.0)
File Edit Format Run Options Window Help

```python
import wiotp
```

```
Python 3.11.0 (main, Oct 24 2022, 18:26:48) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==================== RESTART: C:/Users/ELCOT/Desktop/wiotp.py ====================
>>> import wiotp
>>>
```

OUTPUT :



IDLE Shell 3.9.8

```
Python 3.9.8 (tags/v3.9.8:bb3fdcf, Nov  5 2021, 20:48:33) [MSC v.1929 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: C:/Users/soorya/Desktop/my-project/hdl.py ================
2022-11-17 10:44:05,278   wiotp.sdk.device.client.DeviceClient  INFO    Connecte
d successfully: d:4raljz:newdevice:12345
Data published to IBM IoT platform:  {'name': 'hema', 'lat': 17.4225176, 'lon':
78.5458842}
Data published to IBM IoT platform:  {'name': 'hema', 'lat': 17.4225176, 'lon':
78.5458842}
Data published to IBM IoT platform:  {'name': 'hema', 'lat': 17.4225176, 'lon':
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78.5458842}
Data published to IBM IoT platform:  {'name': 'hema', 'lat': 17.4225176, 'lon':
78.5458842}
```

hd1.py - C:/Users/soorya/Desktop/my-project/hd1.py (3.9.8)

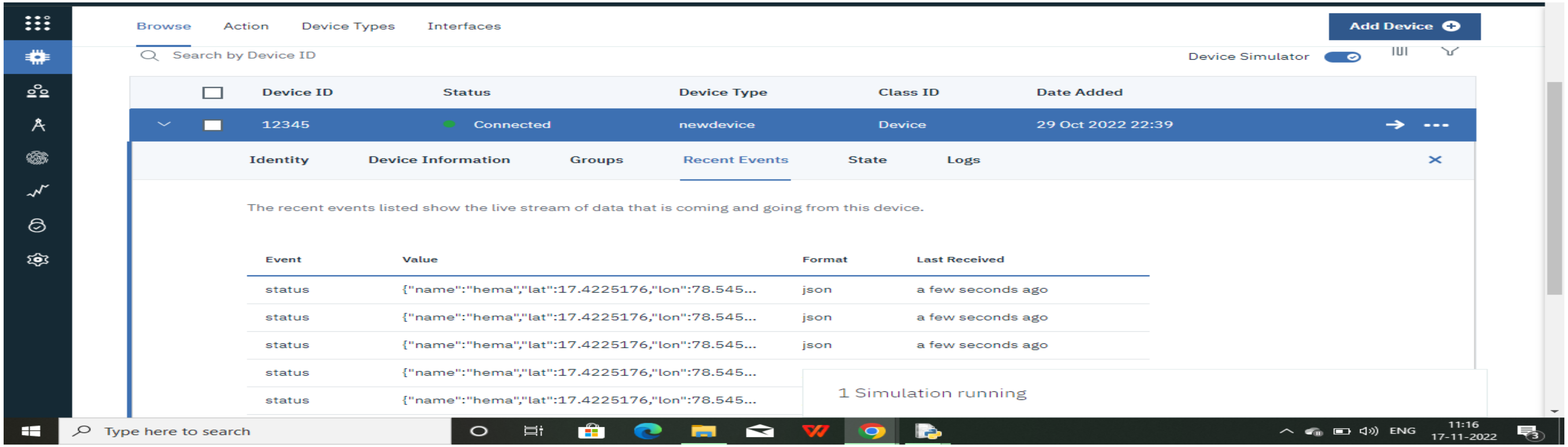
```python
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
import requests
import math
myConfig = {
    "identity": {
        "orgId": "4raljz",
        "typeId": "newdevice",
        "deviceId":"12345"
    },
    "auth": {
        "token": "912419104033"
    }
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
client = wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
client.connect()

while True:
    name= "hema"
    #in area location

    #latitude= 17.4225176
    #longitude= 78.5458842

    #out area location

    latitude= 17.4225176
    longitude= 78.5458842
    myData={'name' : name, 'lat' :latitude, 'lon' :longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
    print("Data published to IBM IoT platform: ",myData)
    client.commandCallback = myCommandCallback
    time.sleep(5)
```



	Device ID	Status	Device Type	Class ID	Date Added
□	12345	● Connected	newdevice	Device	29 Oct 2022 22:39

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	{"name":"hema","lat":17.4225176,"lon":78.545...	json	a few seconds ago
status	{"name":"hema","lat":17.4225176,"lon":78.545...	json	a few seconds ago
status	{"name":"hema","lat":17.4225176,"lon":78.545...	json	a few seconds ago
status	{"name":"hema","lat":17.4225176,"lon":78.545...		
status	{"name":"hema","lat":17.4225176,"lon":78.545...		

1 Simulation running