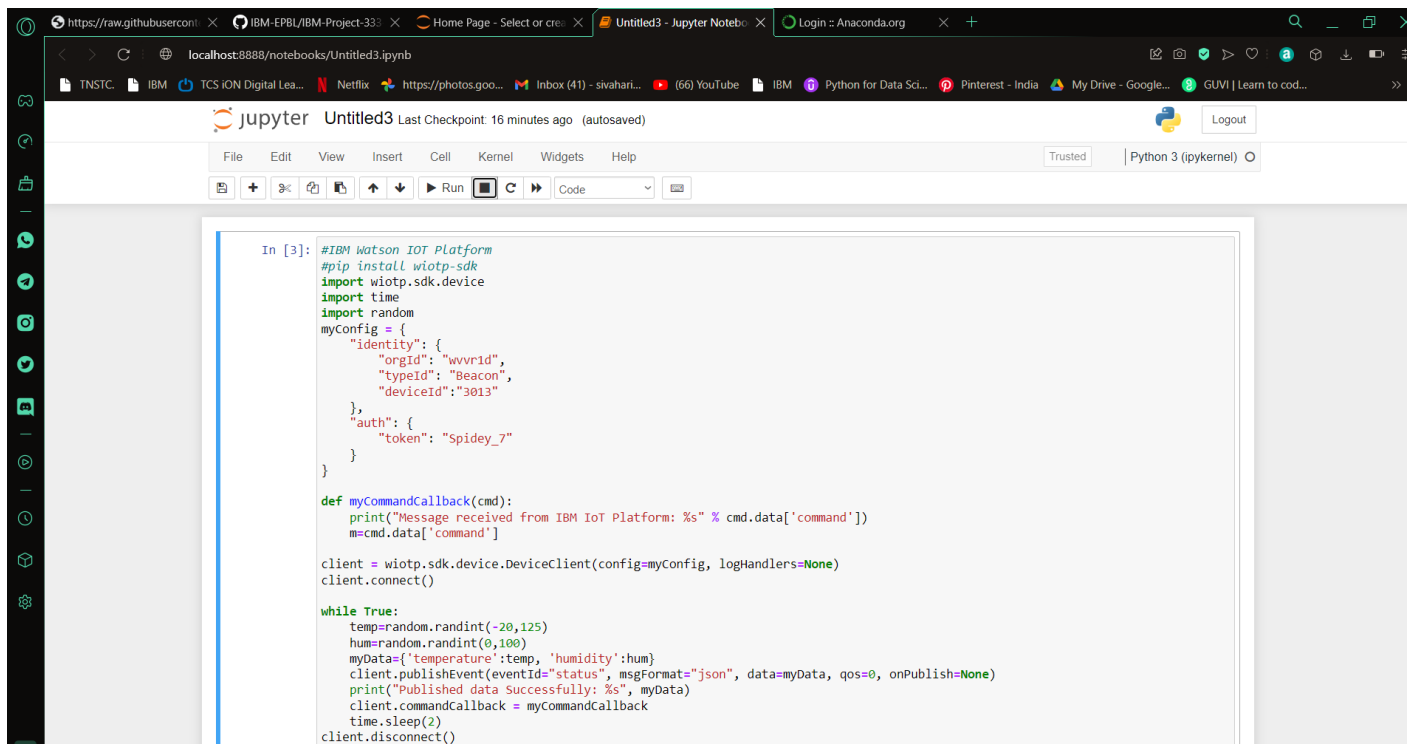


DEVELOP A PYTHON SCRIPT

Date	06 NOVEMBER 2022
Team ID	PNT2022TMID42278
Project Name	Hazardous Area Monitoring for Industrial Plant Powered by IOT

PYTHON CODE:



The screenshot shows a Jupyter Notebook interface with a browser window at the top. The notebook is titled 'Untitled3' and is running on a local host. The code is written in Python and is designed to interact with the IBM Watson IoT Platform. It includes imports for the IoT SDK, time, and random modules. A configuration dictionary 'myConfig' is defined with 'orgId', 'typeId', 'deviceId', and 'auth' fields. A callback function 'myCommandCallback' is defined to handle incoming commands. The main logic is enclosed in a 'while True' loop that generates random temperature and humidity data, publishes it to the IoT platform, and sleeps for 2 seconds before repeating the process.

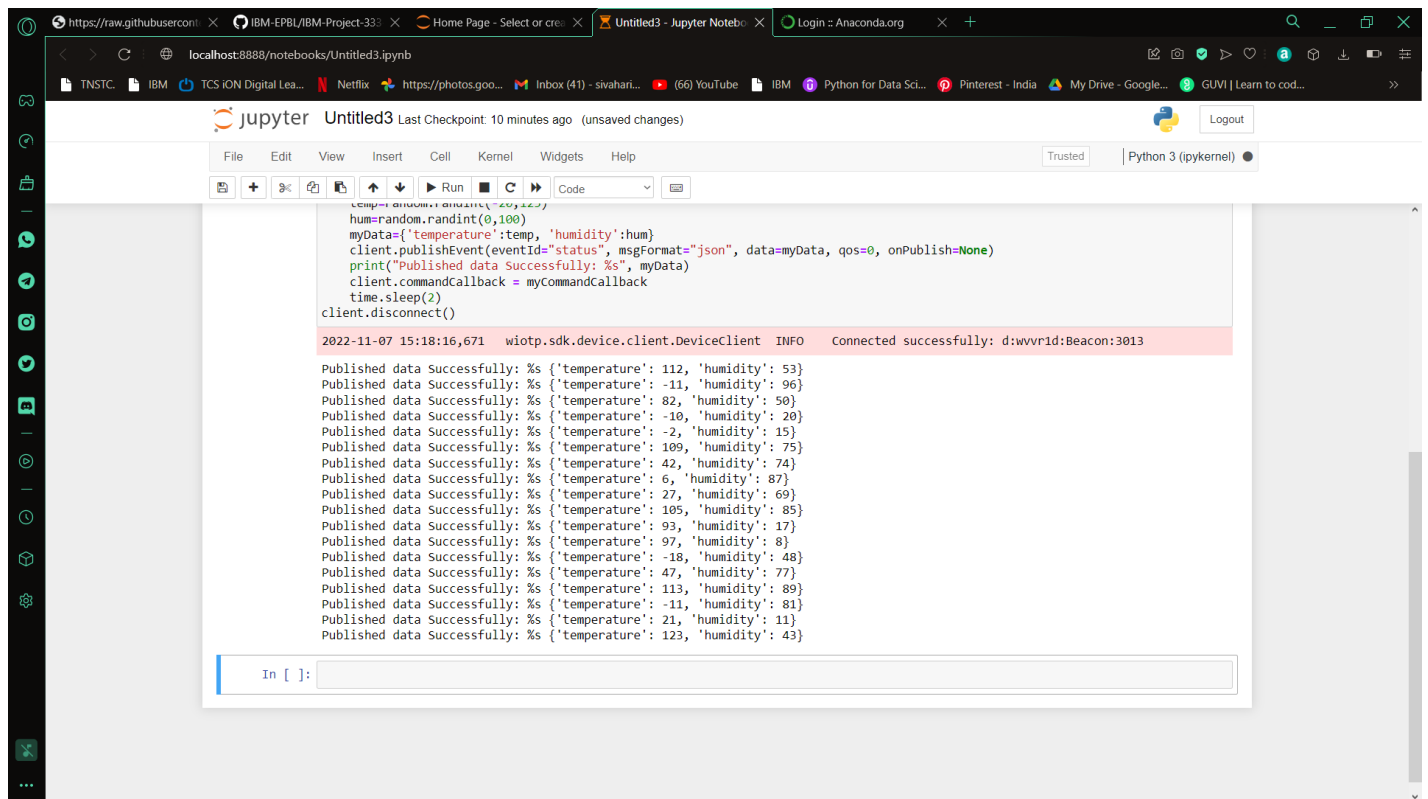
```
In [3]: #IBM Watson IoT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "wvvr1d",
        "typeId": "Beacon",
        "deviceId": "3013"
    },
    "auth": {
        "token": "Spidey_7"
    }
}

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:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

OUTPUT:



The screenshot shows a Jupyter Notebook titled 'Untitled3' running on a local host. The code in the cell generates random temperature and humidity data and publishes it as JSON events. The output shows a successful connection to a device client and a series of published data points.

```
temp=random.randint(-20,20)
hum=random.randint(0,100)
myData={'temperature':temp, 'humidity':hum}
client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
print("Published data Successfully: %s", myData)
client.commandCallback = myCommandCallback
time.sleep(2)
client.disconnect()
```

2022-11-07 15:18:16,671 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:wwvr1d:Beacon:3013

Published data Successfully: %s {'temperature': 112, 'humidity': 53}
Published data Successfully: %s {'temperature': -11, 'humidity': 96}
Published data Successfully: %s {'temperature': 82, 'humidity': 50}
Published data Successfully: %s {'temperature': -10, 'humidity': 20}
Published data Successfully: %s {'temperature': -2, 'humidity': 15}
Published data Successfully: %s {'temperature': 109, 'humidity': 75}
Published data Successfully: %s {'temperature': 42, 'humidity': 74}
Published data Successfully: %s {'temperature': 6, 'humidity': 87}
Published data Successfully: %s {'temperature': 27, 'humidity': 69}
Published data Successfully: %s {'temperature': 105, 'humidity': 85}
Published data Successfully: %s {'temperature': 93, 'humidity': 17}
Published data Successfully: %s {'temperature': 97, 'humidity': 8}
Published data Successfully: %s {'temperature': -18, 'humidity': 48}
Published data Successfully: %s {'temperature': 47, 'humidity': 77}
Published data Successfully: %s {'temperature': 113, 'humidity': 89}
Published data Successfully: %s {'temperature': -11, 'humidity': 81}
Published data Successfully: %s {'temperature': 21, 'humidity': 11}
Published data Successfully: %s {'temperature': 123, 'humidity': 43}

In []: