**Sprint 1 Python Code**

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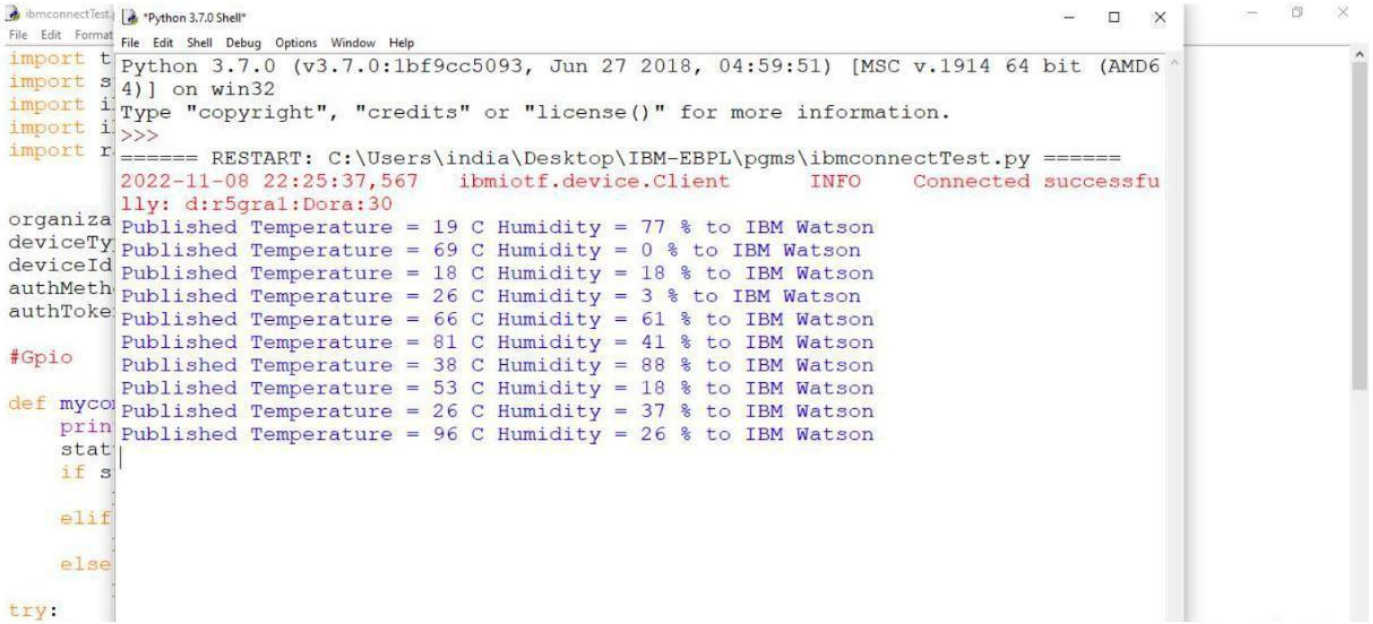
| **TEAM ID** | PNT2022TMID12914 |
| **PROJECT NAME** | Smart Farmer - IoT enabled Smart Farming Application |

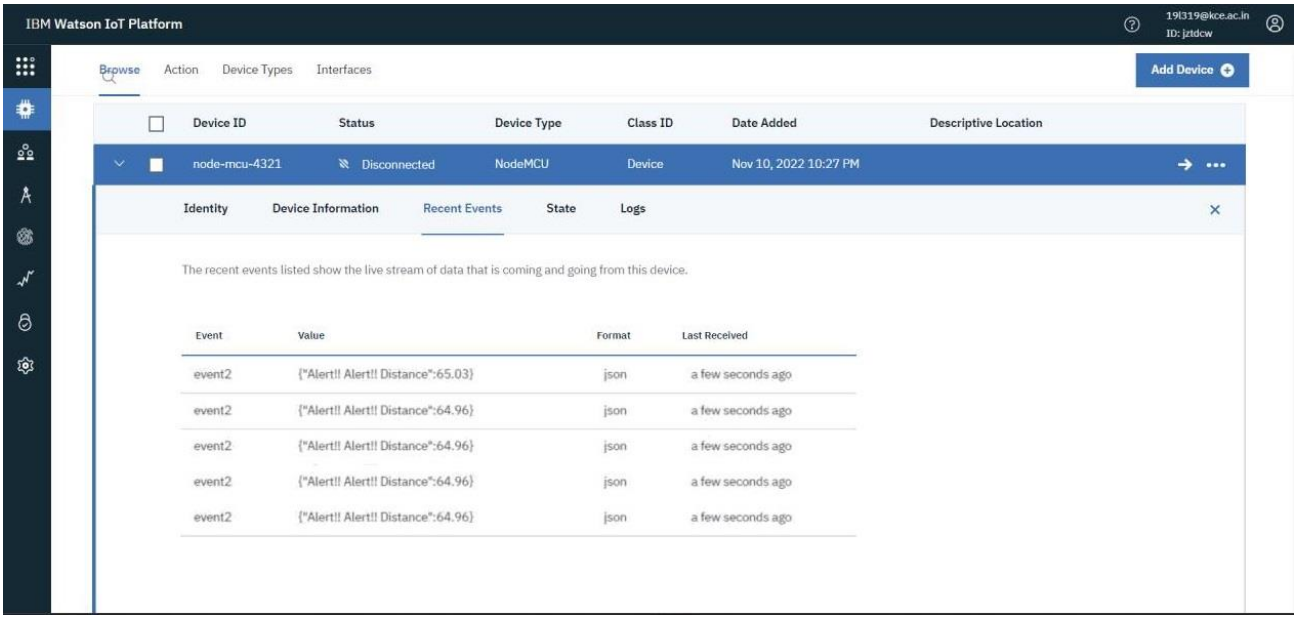
**Program Coding:**

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#IBM
organization = “jztdcw”
deviceType = "NodeMCU"
deviceId = " node-mcu-4321 "
authMethod = "use-token-auth"
authToken = "987654321"

#Gpio

def mycommandCallback(cmd):
        print("Command Received: %s" %cmd.data['command'])
        status = cmd.data['command']
        if status=="lighton":
                print("LED is ON")
        elif status=="lightoff":
                print("LED 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()

#CONNECCT
deviceCli.connect()

while True:
        temp=random.randint(0,100)
        hum=random.randint(0,100)
```

```
        data={'temp':temp,'hum':hum}

        def myOnPublishCallback():
            print("Published Temperature = %s C"%temp,"Humidity = %s %%" %hum, "to IBM
            Watson")

        success = deviceCli.publishEvent("IoTSensor","json",data,qos=0,
        on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(10)

        deviceCli.commandCallback = mycommandCallback

#Disconnect

deviceCli.disconnect()
```

**Screenshots:**




IBM Watson IoT Platform
19l319@kce.ac.in
ID: jztdcw
Browse
Action
Device Types
Interfaces
Add Device
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
node-mcu-4321
Disconnected
NodeMCU
Device
Nov 10, 2022 10:27 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
event2
{"Alert!! Alert!! Distance":65.03}
json
a few seconds ago
event2
{"Alert!! Alert!! Distance":64.96}
json
a few seconds ago
event2
{"Alert!! Alert!! Distance":64.96}
json
a few seconds ago
event2
{"Alert!! Alert!! Distance":64.96}
json
a few seconds ago
event2
{"Alert!! Alert!! Distance":64.96}
json
a few seconds ago