SPRINT 2

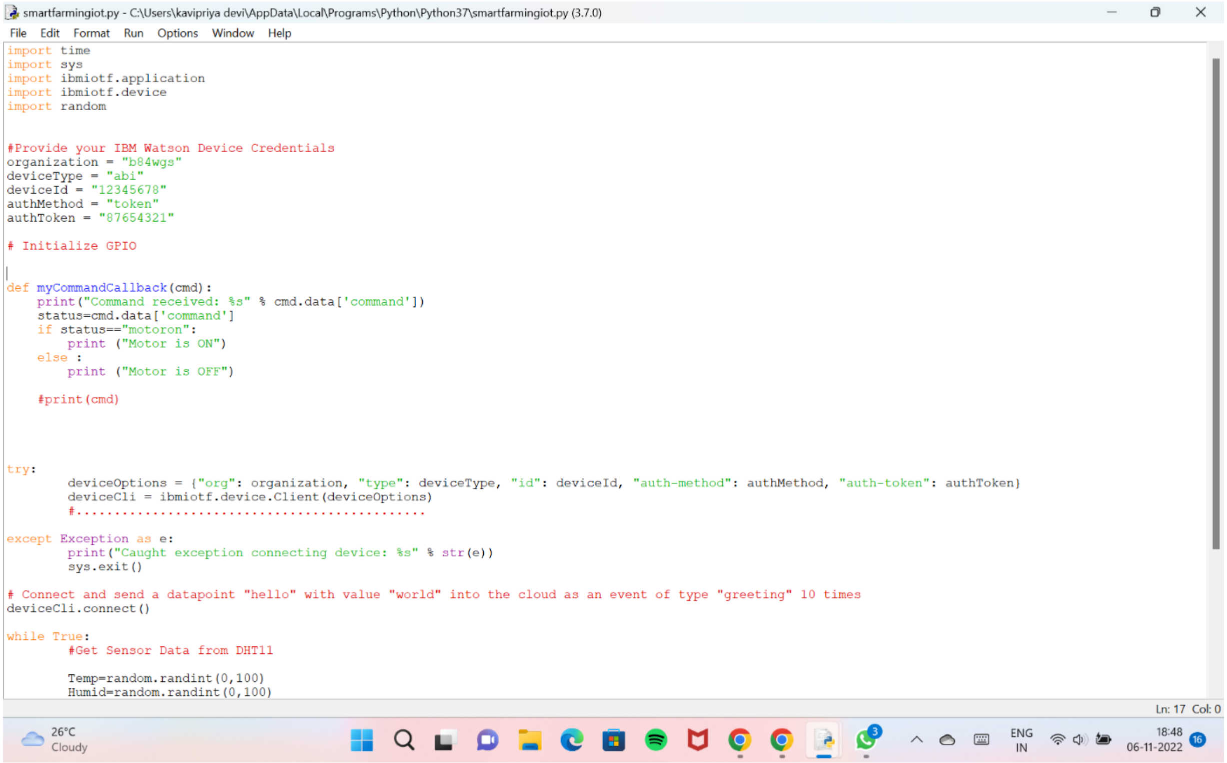
TEAM ID	PNT2022TMID34551
PROJECT NAME	Smart Farmer-IoT Enabled Smart Farming Application

Python Code:

```
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)


       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
```

Python in IDLE:


smartfarmingiot.py - C:\Users\kavipriya devi\AppData\Local\Programs\Python\Python37\smartfarmingiot.py (3.7.0)
File Edit Format Run Options Window Help
Ln: 17 Col: 0
26°C
Cloudy
ENG
IN
18:48
06-11-2022

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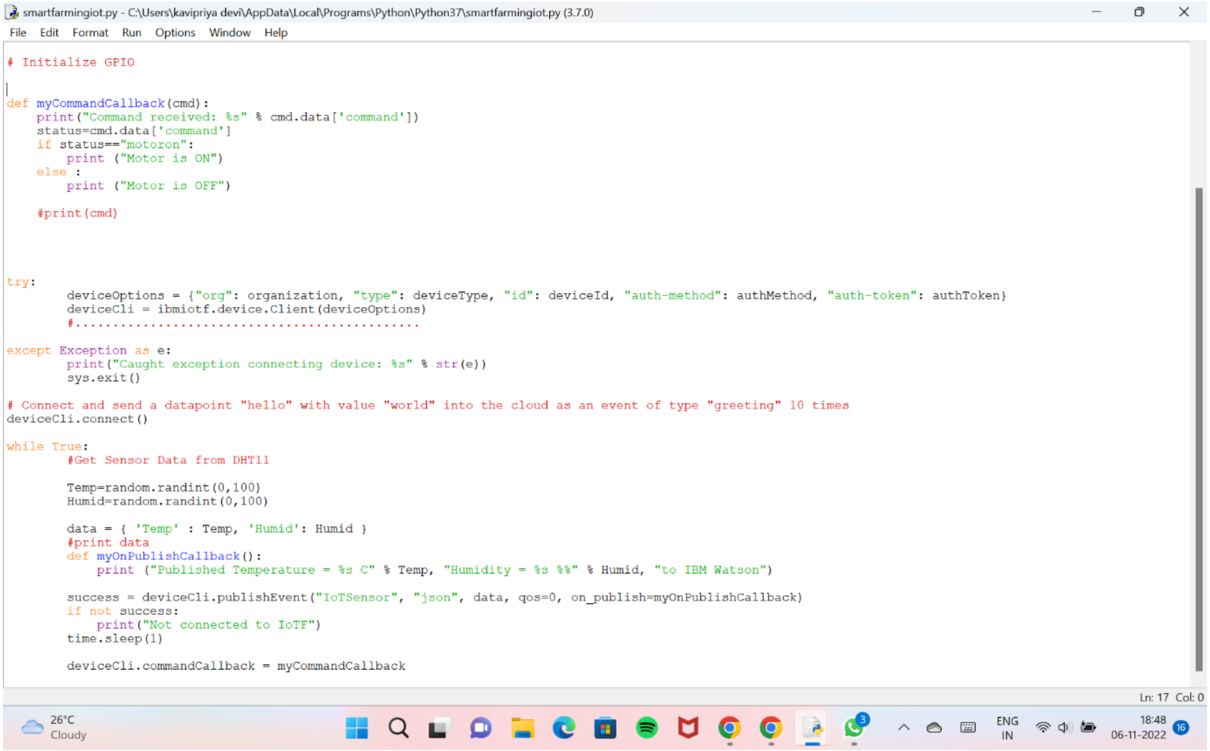
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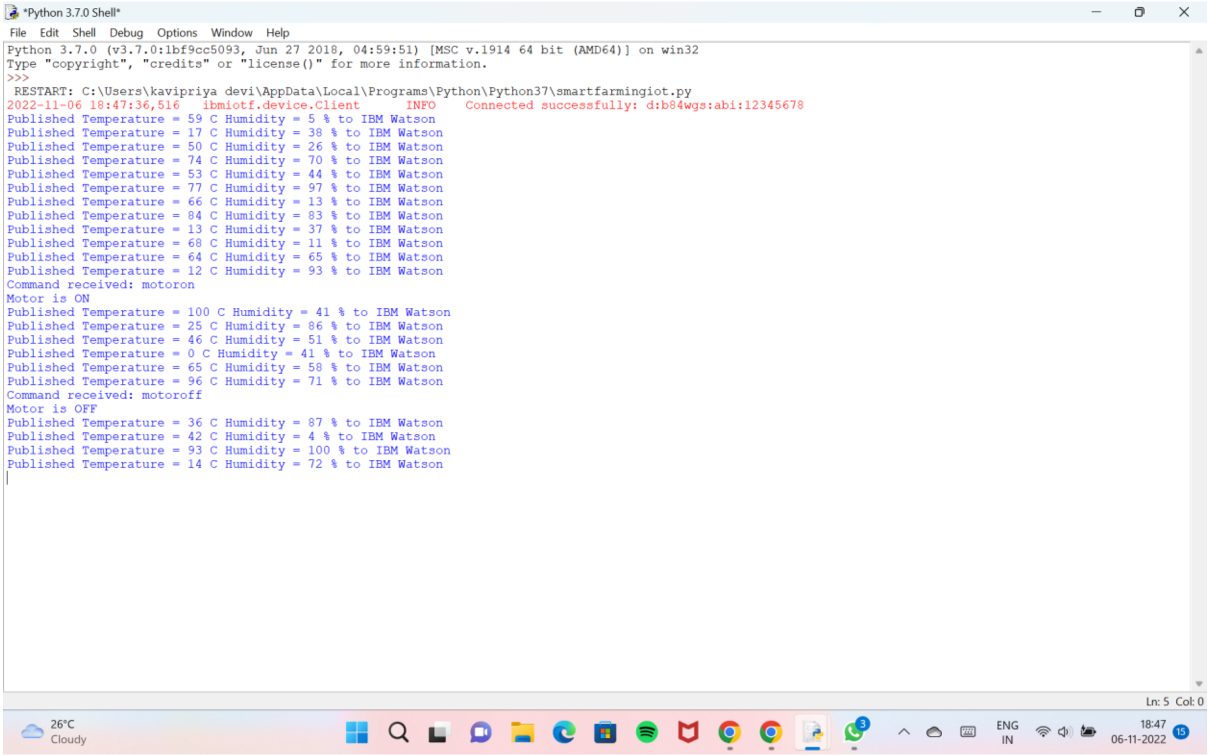
OUTPUT:



```
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
```