Developing the Python Script

Date:	15th November 2022
Team ID	PNT2022TMID27964
Project Name	Project – Smart Farmer- IoT basedSmartFarmingApplication

Python Code :

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

#Provide your IBM Watson Device Credentials
organization = "asgkbm"
deviceType = "smart_farming"
deviceId = "69696969"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
defmyCommandCallback(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()

# 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(90,110)
    Humid=random.randint(60,100)
```

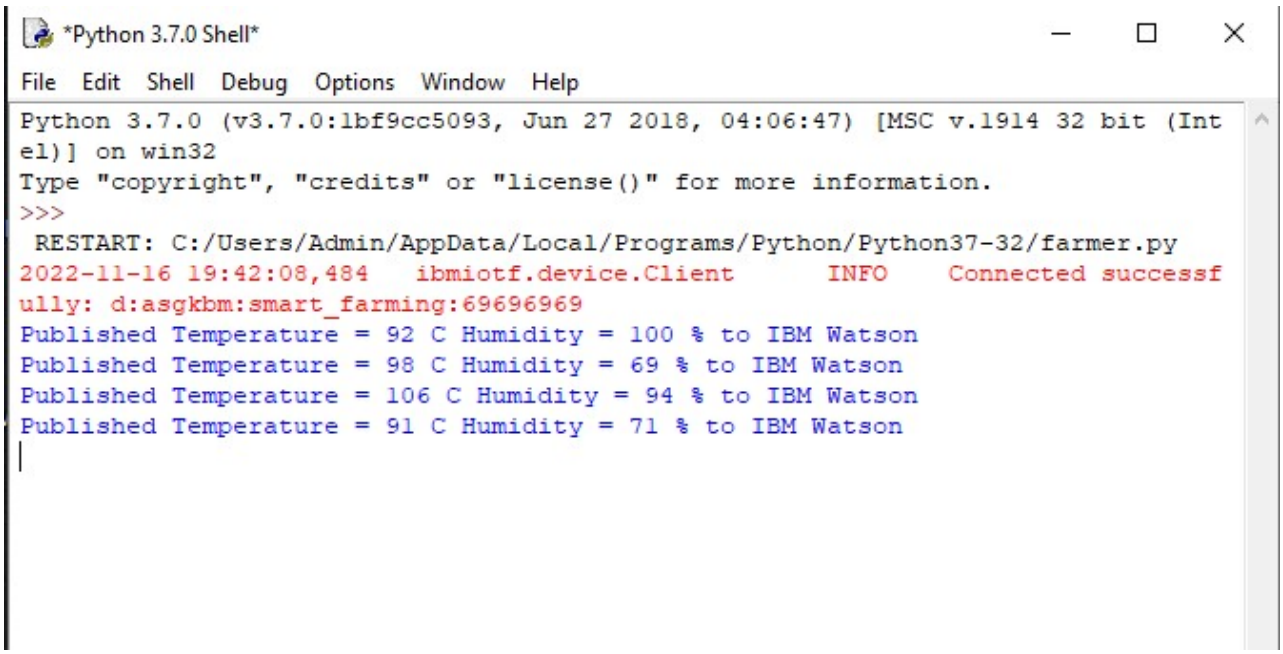
```
data = { 'temp' : temp, 'Humid': Humid }
      #print data
defmyOnPublishCallback():
print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid, "to IBM Watson")

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

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

Output :



This data will now be shared to the IBM Watson from where it will be linked to the web application using Node Red .