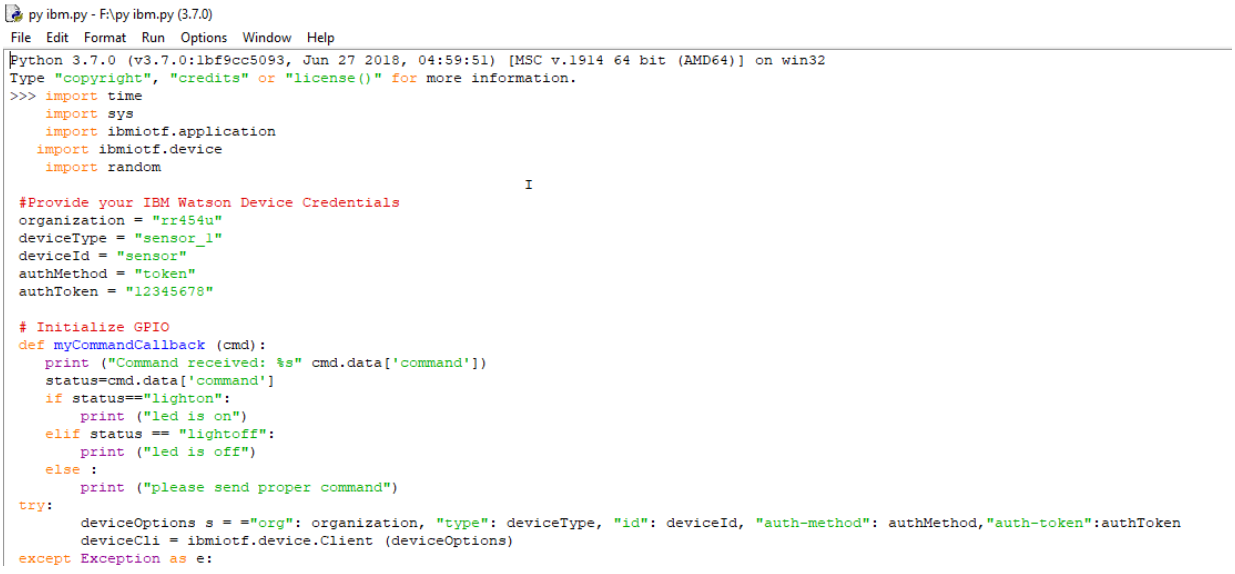
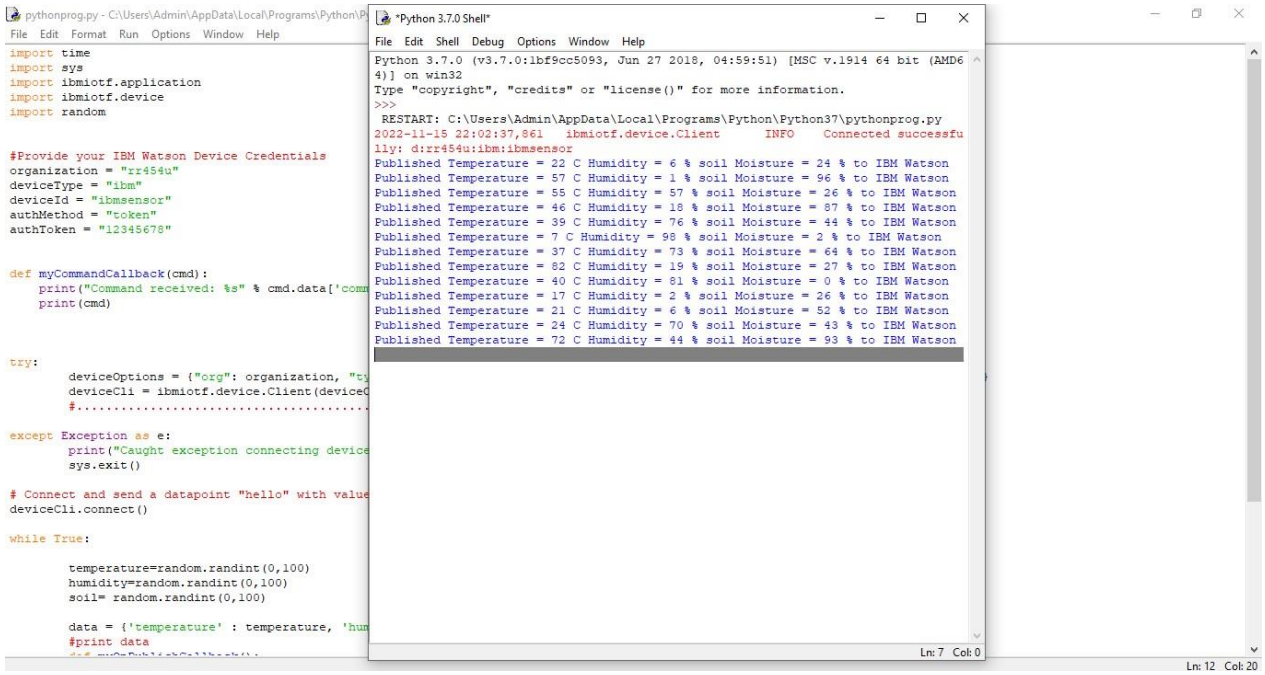
IOT ENABLED SMART FARMING APPLICATION

PYTHON CODE

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


#Provide your IBM Watson Device Credentials
organization = "TU45K3"
deviceType = "sensor-1"
deviceId = "sensor1"
authMethod = "use-auth-
token"
authToken = "123456789"


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    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:

        temperature=random.randint(0,100)
        humidity=random.randint(0,100)
        soil= random.randint(0,100)

        data = {'temperature' : temperature, 'Humidity': humidity
,'moisture':soil}
        #print data
```

```
        def myOnPublishCallback():
            print ("Published Temperature = %s C" % temperature, "Humidity =
%s %%" % humidity, "soil Moisture = %s %%"% soil,"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

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




pythonprog.py - C:\Users\Admin\AppData\Local\Programs\Python\P
File Edit Format Run Options Window Help
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "rr454u"
deviceType = "ibm"
deviceId = "ibmsensor"
authMethod = "token"
authToken = "12345678"
def myCommandCallback(cmd):
print("Command received: %s" % cmd.data['comm
print(cmd)
try:
deviceOptions = {"org": organization, "ty
deviceCli = ibmiotf.device.Client(deviceC
except Exception as e:
print("Caught exception connecting device
sys.exit()
# Connect and send a datapoint "hello" with value
deviceCli.connect()
while True:
temperature=random.randint(0,100)
humidity=random.randint(0,100)
soil= random.randint(0,100)
data = {'temperature' : temperature, 'hum
#print data
Ln: 12 Col: 20
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD6
4)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Admin\AppData\Local\Programs\Python\Python37\pythonprog.py
2022-11-15 22:02:37,861 ibmiotf.device.Client INFO Connected successfu
lly: d:rr454u:ibm:ibmsensor
Published Temperature = 22 C Humidity = 6 % soil Moisture = 24 % to IBM Watson
Published Temperature = 57 C Humidity = 1 % soil Moisture = 96 % to IBM Watson
Published Temperature = 55 C Humidity = 57 % soil Moisture = 26 % to IBM Watson
Published Temperature = 46 C Humidity = 18 % soil Moisture = 87 % to IBM Watson
Published Temperature = 39 C Humidity = 76 % soil Moisture = 44 % to IBM Watson
Published Temperature = 7 C Humidity = 98 % soil Moisture = 2 % to IBM Watson
Published Temperature = 37 C Humidity = 73 % soil Moisture = 64 % to IBM Watson
Published Temperature = 82 C Humidity = 19 % soil Moisture = 27 % to IBM Watson
Published Temperature = 40 C Humidity = 81 % soil Moisture = 0 % to IBM Watson
Published Temperature = 17 C Humidity = 2 % soil Moisture = 26 % to IBM Watson
Published Temperature = 21 C Humidity = 6 % soil Moisture = 52 % to IBM Watson
Published Temperature = 24 C Humidity = 70 % soil Moisture = 43 % to IBM Watson
Published Temperature = 72 C Humidity = 44 % soil Moisture = 93 % to IBM Watson
Ln: 7 Col: 0