SMART FARMER – IOT ENABLED SMART FARMING APPLICATION

DEVELOP A PYTHON CODE

DATE	17 NOVEMBER 2022
TITLE	SMART FARMER – IOT ENABLED SMART FARMING APPLICATION
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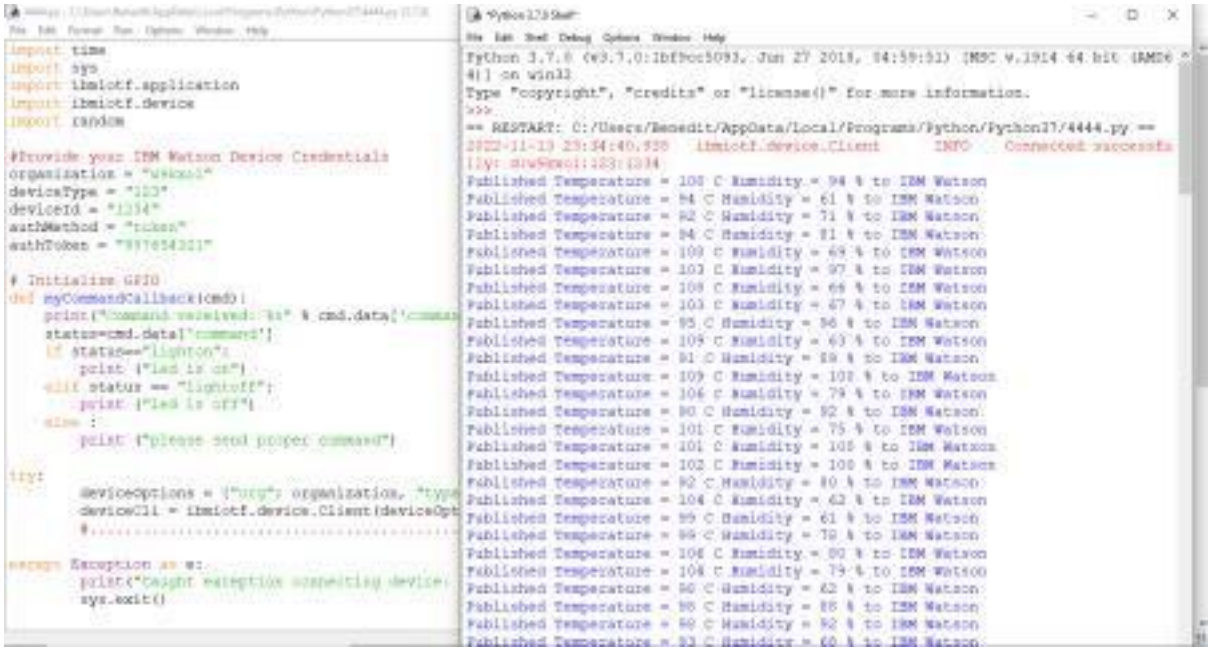
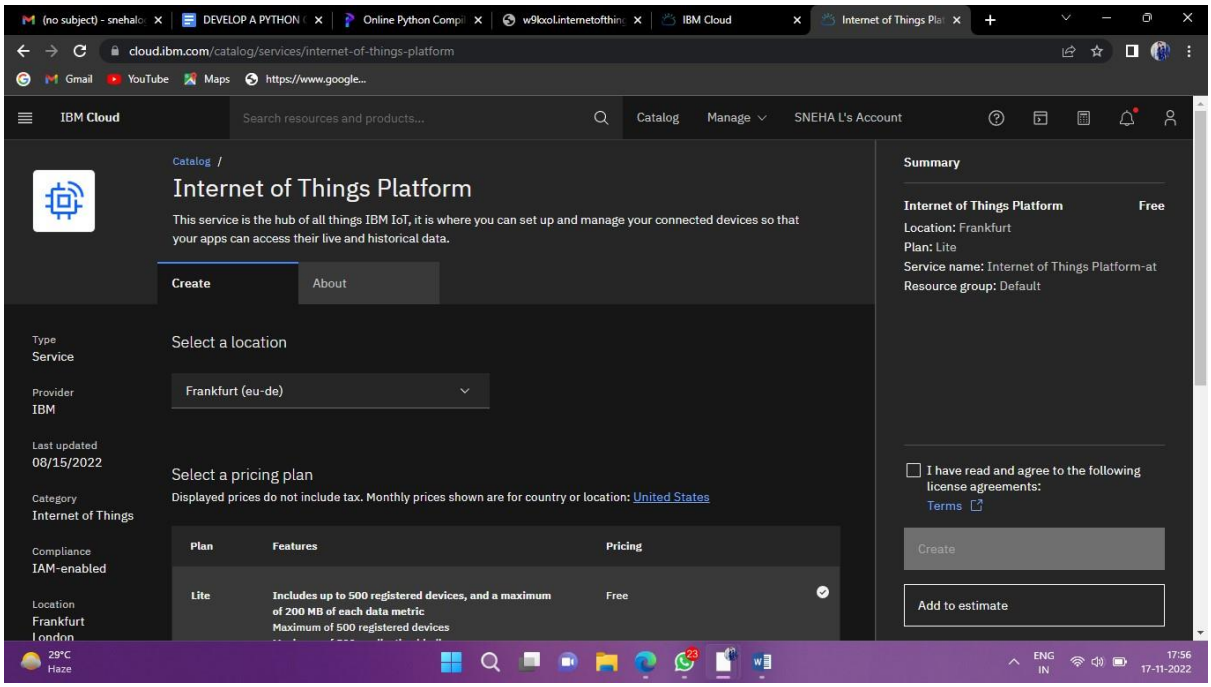
PYTHON CODE:

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

#Provide your IBM Watson Device Credentials
organization = "w9kxol"  deviceType = "123"
deviceId = "1234"  authMethod = "token"
authToken = "8925435346"

# Initialize 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()
# 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   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(10)

 deviceCli.commandCallback = myCommandCallback

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

OUTPUT:


import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "w9kxol"
deviceType = "123"
deviceId = "1234"
authMethod = "token"
authToken = "9876543211"
# Initialize 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
deviceCli = ibmiotf.device.Client(deviceOpt
except Exception as e:
print("Caught exception connecting device:
sys.exit()
Python 3.7.0 Shell
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/Benedit/AppData/Local/Programs/Python/Python37/4444.py ==
2022-11-19 23:34:40,535 ibmiotf.device.Client INFO Connected successfu
lly: d:w9kxol:123:1234
Published Temperature = 108 C Humidity = 94 % to IBM Watson
Published Temperature = 84 C Humidity = 61 % to IBM Watson
Published Temperature = 82 C Humidity = 71 % to IBM Watson
Published Temperature = 84 C Humidity = 81 % to IBM Watson
Published Temperature = 109 C Humidity = 69 % to IBM Watson
Published Temperature = 103 C Humidity = 97 % to IBM Watson
Published Temperature = 109 C Humidity = 66 % to IBM Watson
Published Temperature = 103 C Humidity = 67 % to IBM Watson
Published Temperature = 95 C Humidity = 86 % to IBM Watson
Published Temperature = 109 C Humidity = 63 % to IBM Watson
Published Temperature = 81 C Humidity = 89 % to IBM Watson
Published Temperature = 109 C Humidity = 108 % to IBM Watson
Published Temperature = 106 C Humidity = 79 % to IBM Watson
Published Temperature = 80 C Humidity = 92 % to IBM Watson
Published Temperature = 101 C Humidity = 75 % to IBM Watson
Published Temperature = 101 C Humidity = 105 % to IBM Watson
Published Temperature = 102 C Humidity = 100 % to IBM Watson
Published Temperature = 82 C Humidity = 80 % to IBM Watson
Published Temperature = 104 C Humidity = 62 % to IBM Watson
Published Temperature = 99 C Humidity = 61 % to IBM Watson
Published Temperature = 86 C Humidity = 78 % to IBM Watson
Published Temperature = 104 C Humidity = 90 % to IBM Watson
Published Temperature = 104 C Humidity = 79 % to IBM Watson
Published Temperature = 80 C Humidity = 62 % to IBM Watson
Published Temperature = 86 C Humidity = 86 % to IBM Watson
Published Temperature = 80 C Humidity = 92 % to IBM Watson
Published Temperature = 93 C Humidity = 60 % to IBM Watson


(no subject) - snehalc
DEVELOP A PYTHON
Online Python Compil
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Internet of Things Pla
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This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.
Create
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Category
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IAM-enabled
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Select a location
Frankfurt (eu-de)
Select a pricing plan
Displayed prices do not include tax. Monthly prices shown are for country or location: United States
Plan
Features
Pricing
Lite
Includes up to 500 registered devices, and a maximum of 200 MB of each data metric
Maximum of 500 registered devices
Free
Summary
Internet of Things Platform
Free
Location: Frankfurt
Plan: Lite
Service name: Internet of Things Platform-at
Resource group: Default
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17-11-2022