

Smart Farmer - IOT Enabled Smart Farming Application

FINAL CODE

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Final Python Code:-

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

#Provide your IBM Watson Device Credentials
organization = "blv8p3"
deviceType = "moistur_device"
deviceId = "moistur_today"
authMethod = "token"
authToken = "-b07a8H3qi2acCBZjP"
```

```
# Initialize GPIO
```

```
temp=random.randint(0,100)
```

```
pulse=random.randint(0,100)
```

```
oxygen= random.randint(0,100)
```

```
lat = 17
```

```
lon = 18
```

```
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:
```

```
    #Get Sensor Data from DHT11
```

```

    data = {"d":{ 'temp' : temp, 'pulse': pulse ,'oxygen':
oxygen,"lat":lat,"lon":lon} }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %% " %
pulse, "Moisture = %s C" % oxygen, "to IBM Watson")

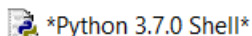
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
        time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

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

```

OUTPUT :



File Edit Shell Debug Options Window Help

[illegible]

