

Smart Farmer - IOT Enabled Smart Farming Application

SPRINT -1

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Python Code:-

```
import time

import sys

import ibmiotf.application # to install pip install ibmiotf
import ibmiotf.device

#Provide your IBM Watson Device Credentials

organization = "1jk4ps"

deviceType = "NODEMCU1"

deviceId = "12345"

authMethod = "token"
```

```
authToken = "*ev9TDcZDdKDBUA81@"
```

```
def myCommandCallback(cmd): # function for Callback
```

```
    print("Command received: %s" % cmd.data)
```

```
    if cmd.data['command']=='motoron':
```

```
        print("Motor On IS RECEIVED")
```

```
    elif cmd.data['command']=='motoroff':
```

```
        print("Motor Off IS RECEIVED")
```

```
    if cmd.command == "setInterval":
```

```
        if 'interval' not in cmd.data:
```

```
            print("Error - command is missing required information: 'interval'") else:
```

```
                interval = cmd.data['interval']
```

```
    elif cmd.command == "print":
```

```
        if 'message' not in cmd.data:
```

```
            print("Error - command is missing required information: 'message'")
```

```
        else:
```

```
            output=cmd.data['message']
```

```
            print(output)
```

```
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()
```

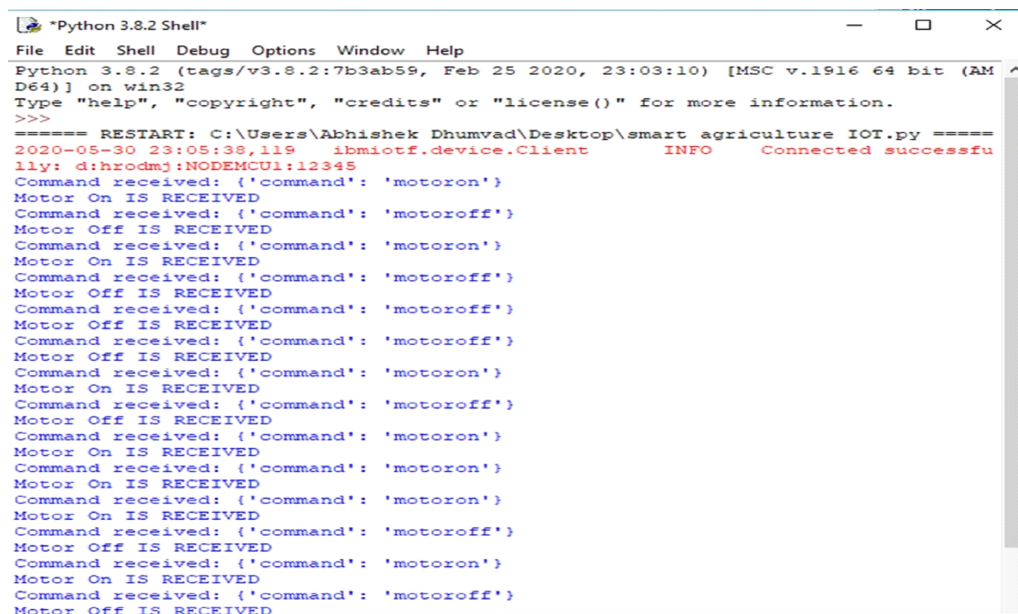
```
while True:
```

```
    deviceCli.commandCallback = myCommandCallback
```

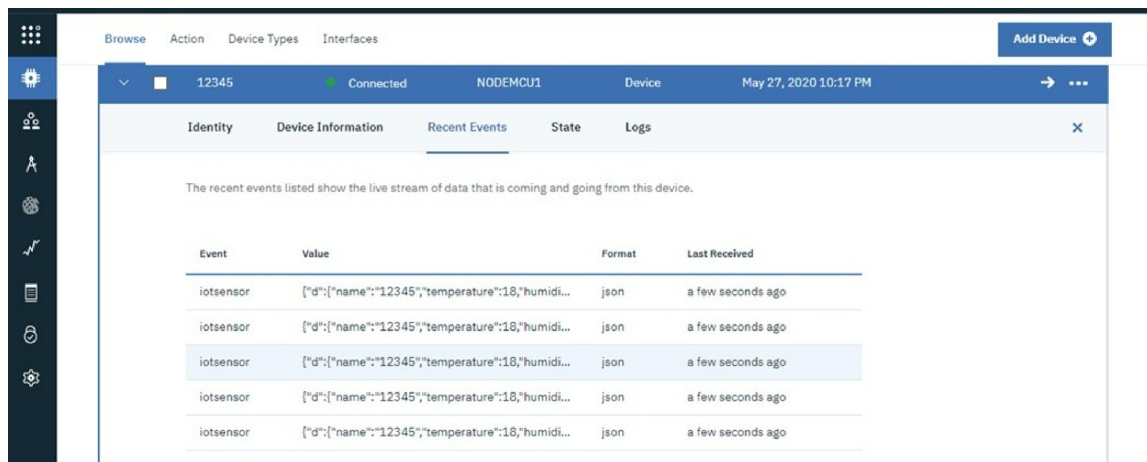
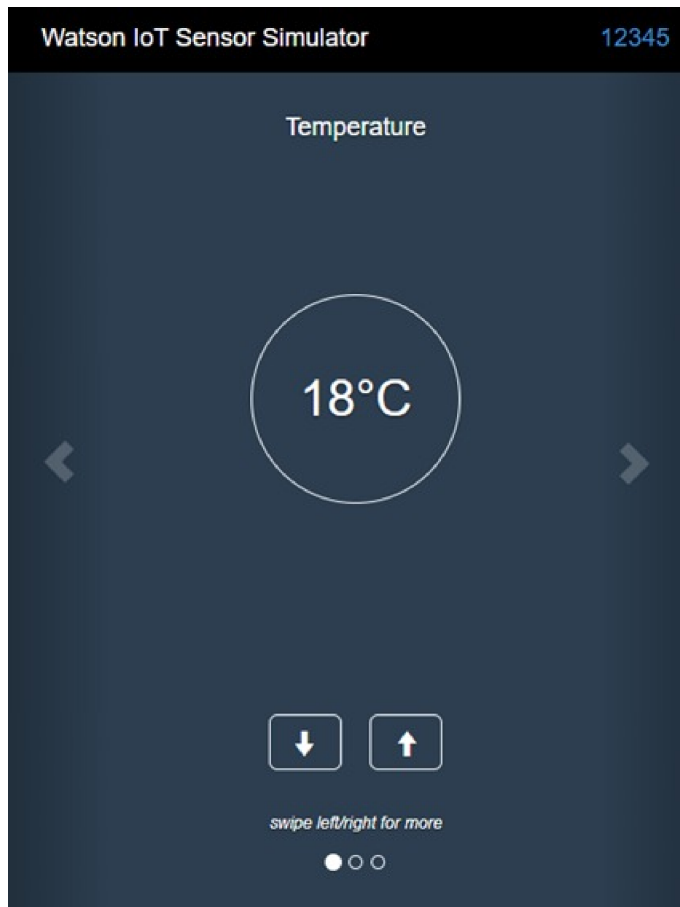
```
# Disconnect the device and application from the cloud
```

```
deviceCli.disconnect()
```

Output:-



```
Python 3.8.2 Shell
File Edit Shell Debug Options Window Help
Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\Abhishek Dhumvad\Desktop\smart agriculture IOT.py =====
2020-05-30 23:05:38,119 ibmiotf.device.Client INFO Connected successfully
lly: d:hrodmj:NODEMCU1:12345
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
Command received: {'command': 'motoron'}
Motor On IS RECEIVED
Command received: {'command': 'motoroff'}
Motor Off IS RECEIVED
```



nces