SPRINT-2

Date	02.11.2022
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Project Name	Smart Farmer - IoT Enabled Smart Farming Application

Develop a Python Script:

- Develop the python script to publish the data and subscribe the data from the IBM Watson IoT Platform.
- Install the package wiot-sdk to make use of the watson iot platform functions in python script.
- Get the device credentials from the iot platform device.

Python Code:

#import packages

```
import wiotp.sdk.device
import time
import os
import datetime
import random
```

#CallBack function to receive the commands from cloud

```
def myCommandCallback(cmd):
    print ("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
    m = cmd.data['command']
    if(m=="motoron"):
        print("Motor is switched on")
```

```
    elif(m=="motoroff"):
        print("Motor is switched OFF")
    print(" ")

#Device credentials
myConfig = {
        "identity": {
            "orgId": "dzlyo8",
            "typeId": "device1",
            "deviceId": "1234"
        },
        "auth": {
            "token": "123456789"
        }
}

#Making Connection to cloud
client = wiotp.sdk.device.DeviceClient(config=myConfig,
logHandlers=None)
client.connect()

#Sending data for every 2 seconds to cloud
while True:
    soil=random.randint(0, 100)
    temp=random.randint(-20,125)
    hum=random.randint(0, 100)
    myData={'soil_moisture': soil, 'temperature': temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json",
data=myData, qos=0, onPublish = None)
```

```
    print("Published data Successfully: %s", myData)
    time.sleep(2)
    client.commandCallback = myCommandCallback
#Disconnected from cloud
client.disconnect()
```

Output: