

SPRINT 1

Sensors and Wi-Fi module with python code

Date	01 November 2022
Team ID	PNT2022TMID43020
Project Name	Smart Farmer IoT enabled smart farming

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

```
import wiotp.sdk.device
```

```
import time import
```

```
random myConfig = {
```

```
    "identity": {
```

```
        "orgId": "0lz4tn",
```

```
        "typeId": "NodeMCU",
```

```
        "deviceId": "24680"
```

```
    },
```

```
    "auth": {
```

```
        "token": "1133557799"
```

```
    }
```

```
}
```

```
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(" ")

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    temp=random.randint(0,100)
    hum=random.randint(0,100)
    soil=random.randint(0,100)
    myData={'Temperature':temp,
            'Humidity':hum,
            'SoilMoisture':soil}

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

    print("Published data Successfully: %s", myData)
if(soil<20):
    print("Less moisture is detected")
else:
    print("Moisture is sufficient")
time.sleep(2)

client.commandCallback = myCommandCallback client.disconnect()
```

ibm-mit.py - C:\Users\Admin\Desktop\lakshya\ibm-mit.py (3.7.0)

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```
#IBM Watson IoT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "01z4tn",
        "typeId": "NodeMCU",
        "deviceId": "24680"
    },
    "auth": {
        "token": "1133557799"
    }
}

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(" ")

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    temp=random.randint(0,100)
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    soil=random.randint(0,100)
    myData={'Temperature':temp,
            'Humidity':hum,
            'SoilMoisture':soil}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    if(soil<20):
        print("Less moisture is detected")
    else:
        print("Moisture is sufficient")
    time.sleep(2)
```

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Python 3.7.0 Shell

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Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:\Users\Admin\Desktop\lakshya\ibm-mit.py =====

2022-11-13 09:49:20,671 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:01z4tn:NodeMCU:24680

Published data Successfully: %s {'Temperature': 8, 'Humidity': 75, 'SoilMoisture': 56}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 13, 'Humidity': 69, 'SoilMoisture': 27}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 95, 'Humidity': 77, 'SoilMoisture': 28}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 6, 'Humidity': 60, 'SoilMoisture': 55}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 19, 'Humidity': 28, 'SoilMoisture': 73}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 95, 'Humidity': 40, 'SoilMoisture': 51}

Moisture is sufficient

Published data Successfully: %s {'Temperature': 96, 'Humidity': 45, 'SoilMoisture': 11}

Less moisture is detected

Published data Successfully: %s {'Temperature': 42, 'Humidity': 36, 'SoilMoisture': 6}

Less moisture is detected

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