

SPRINT 2

Date	5 November 2022
Team ID	PNT2022TMID44065
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

TEAM MEMBERS:-

DEENADHAYALAN K	723719106004
KESAVARAJ D	723719106011
SUGENDRAN A	723719106030
MOHAMMAD HARIS C M	723719106020

PYTHON SCRIPT :-

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

organization = "zxnybt"
deviceType = "dominators"
deviceId = "12345"
authMethod = "token"
authToken = "123456789"

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data)
    for key in cmd.data.keys():
        if key == 'motor':
            if cmd.data['motor'] == 'ON':
                print("MOTOR is turned ON")

            elif cmd.data['motor'] == 'OFF':
                print("MOTOR is turned OFF")
    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()
```

```
deviceCli.connect()
```

```
while True:
```

```
    temp=random.randint(0,40)  
    Humid=random.randint(0,100)  
    moist=random.randint(0,40)  
    data = { 'temperature' : temp, 'humidity': Humid, 'soil_moisture':moist  
}
```

```
    def myOnPublishCallback():  
        print ("Published Temperature = %s C" % temp, "Humidity = %s  
%%%" % Humid, "soil moisture =%s" % moist,"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
```

```
deviceCli.disconnect()
```

PYTHON SCRIPT CONFIGURED TO IBM WATSON IoT PLATFORM :-

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Add Device

Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Connected	dominators	Device	Nov 3, 2022 3:08 PM	

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0 Simulations running

THE SENSOR DATAS IN THE PYTHON SCRIPT WILL BE RECEIVED BY IBM WATSON IOT PLATFORM:-

Python 3.9.8 (tags/v3.9.8:bb3fddc, Nov 5 2021, 20:48:33) [MSC v.1929 64 bit (AMD64)] on win32

```
>>>
===== RESTART: C:\Users\sugen\OneDrive\Desktop\try1.py =====
2022-11-17 19:33:43,811 ibmiotf.device.Client INFO connected successfully: d:zxnybt:dominators:12345
Published Temperature = 22 C Humidity = 0 % to IBM Watson
Published Temperature = 25 C Humidity = 77 % to IBM Watson
Published Temperature = 13 C Humidity = 10 % to IBM Watson
Published Temperature = 39 C Humidity = 34 % to IBM Watson
Published Temperature = 22 C Humidity = 43 % to IBM Watson
Published Temperature = 1 C Humidity = 63 % to IBM Watson
```

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Add Device

12345 Connected dominators Device Nov 3, 2022 3:08 PM

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensor	{"temperature":1,"humidity":63,"soil_moisture":...	json	a few seconds ago
IoTSensor	{"temperature":22,"humidity":43,"soil_moisture":...	json	a few seconds ago
IoTSensor	{"temperature":39,"humidity":34,"soil_moisture":...	json	a few seconds ago

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