

SPRINT – 3

Date	14 November 2022
Team ID	PNT2022TMID02308
Project Name	Smart farmer- IOT enabled smart farming application

PYTHON CODE

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

#IBM Watson Device Credentials
organization = "re4wy2" #replace with org ID
deviceType = "abcd"
deviceId = "12"
authMethod = "token"
authToken = "12345678"

#Receives Command fro Node-RED
def myCommandCallback(cmd): #gets data from ibm cloud to python
    print("Command receive: %s" % cmd.data['command'])
    status=cmd.dataa['command']
    if status=="motoron":
        print("motor is on")
    elif status=="motoroff":
        print ("motor is off")
    else :
        print("please send proper command")
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
deviceCli.connect()

```

```

while True:

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    #Get sensor data from DHT11

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    temp=random.randint(0,100)

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    humidity=random.randint(0,100)

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    randomNumber=random.randint(0,100)

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    data = {'temp':temp, 'humidity':humidity, 'randomNumber':randomNumber}

```

```

    #print data

```

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    def myOnPublishCallback():

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        print("Published Temperature = %s" % temp, "Humidity = %s" % humidity,
"soilmoisture = %s" % randomNumber, "to IBM Watson")

```

```

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish =
myOnPublishCallback())

```

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        if not success:

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```

            print("NOT CONNECTED TO IoTF")

```

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            time.sleep(5)

```

```

            deviceCli.commandCallback = myCommandCallback

```

```

#disconnect the device and application from the cloud

```

```

deviceCli.disconnect()

```