Project Development -Delivery of Sprint-1

Date	29 Oct 2022
Team ID	PNT2022TMID26547
Project Name	Project -Smart farmer-IOT enabled smart Farming Application

```python
#IBM Watson IOT Platform

#pip install wiotp-sdk

import wiotp.sdk.device

import time

import random


ms=0

status='light off'

myConfig = {

    "identity": {

        "orgId": "17lsro",

        "typeId": "MyDeviceType",

        "deviceId":"12345"

    },

    "auth": {

        "token": "GkatKdiUS?UVHKvnAD"

    }

}


def myCommandCallback(cmd):

    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])

    m=cmd.data['command']

    if(m=="MOTOR ON"):

        print("MOTOR  IS ON")

        status='motor on'

        myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage,'status':status}
```

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        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
        print("Published data Successfully: %s", myData)


        time.sleep(2)


    elif(m=="MOTOR OFF"):
        print("MOTOR IS OFF")
        status='motor off'
        myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage,'status':status}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
        print("Published data Successfully: %s", myData)


        time.sleep(2)



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

while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    soilmoisture=random.randint(0,1023)#analog sensor
    sm_percentage=(soilmoisture/1023)*100
    sm_percentage=int(sm_percentage)
    myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
    time.sleep(2)
client.disconnect()
```

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```python
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

ms=0
status='light off'
myConfig = {
    "identity": {
        "orgId": "17lsro",
        "typeId": "MyDeviceType",
        "deviceId":"12345"
    },
    "auth": {
        "token": "GkatKdiUS?UVHKvnAD"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
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    if(m=="MOTOR ON"):
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        myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage,'status':status}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
        print("Published data Successfully: %s", myData)

        time.sleep(2)

    elif(m=="MOTOR OFF"):
        print("MOTOR IS OFF")
        status='motor off'
        myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage,'status':status}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
        print("Published data Successfully: %s", myData)

        time.sleep(2)


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
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while True:
    temp=random.randint(-20,125)
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    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)

time.sleep(2)
client.disconnect()
```

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```
Published data Successfully: %s {'temperature': 75, 'humidity': 53, 'soilmoisture': 93}
Published data Successfully: %s {'temperature': 67, 'humidity': 9, 'soilmoisture': 79}
Published data Successfully: %s {'temperature': -11, 'humidity': 64, 'soilmoisture': 19}
Published data Successfully: %s {'temperature': 65, 'humidity': 98, 'soilmoisture': 73}
Published data Successfully: %s {'temperature': 74, 'humidity': 21, 'soilmoisture': 62}
Published data Successfully: %s {'temperature': -2, 'humidity': 5, 'soilmoisture': 13}
Published data Successfully: %s {'temperature': 104, 'humidity': 84, 'soilmoisture': 28}
Published data Successfully: %s {'temperature': 92, 'humidity': 17, 'soilmoisture': 82}
Published data Successfully: %s {'temperature': 0, 'humidity': 9, 'soilmoisture': 39}
Published data Successfully: %s {'temperature': -3, 'humidity': 9, 'soilmoisture': 53}
Published data Successfully: %s {'temperature': 57, 'humidity': 61, 'soilmoisture': 90}
Published data Successfully: %s {'temperature': 36, 'humidity': 86, 'soilmoisture': 17}
Published data Successfully: %s {'temperature': 99, 'humidity': 67, 'soilmoisture': 69}
Published data Successfully: %s {'temperature': 53, 'humidity': 35, 'soilmoisture': 31}
Published data Successfully: %s {'temperature': 5, 'humidity': 77, 'soilmoisture': 84}
Published data Successfully: %s {'temperature': 5, 'humidity': 1, 'soilmoisture': 40}
Published data Successfully: %s {'temperature': 118, 'humidity': 64, 'soilmoisture': 58}
Published data Successfully: %s {'temperature': -8, 'humidity': 50, 'soilmoisture': 31}
Published data Successfully: %s {'temperature': 19, 'humidity': 81, 'soilmoisture': 15}
Published data Successfully: %s {'temperature': 117, 'humidity': 93, 'soilmoisture': 94}
Published data Successfully: %s {'temperature': 39, 'humidity': 81, 'soilmoisture': 68}
Published data Successfully: %s {'temperature': 11, 'humidity': 25, 'soilmoisture': 14}
Published data Successfully: %s {'temperature': 48, 'humidity': 59, 'soilmoisture': 8}
Published data Successfully: %s {'temperature': 25, 'humidity': 40, 'soilmoisture': 87}
Published data Successfully: %s {'temperature': 87, 'humidity': 50, 'soilmoisture': 77}
Published data Successfully: %s {'temperature': -12, 'humidity': 75, 'soilmoisture': 14}
Published data Successfully: %s {'temperature': 57, 'humidity': 95, 'soilmoisture': 36}
Published data Successfully: %s {'temperature': 105, 'humidity': 22, 'soilmoisture': 96}
Published data Successfully: %s {'temperature': 51, 'humidity': 79, 'soilmoisture': 51}
Published data Successfully: %s {'temperature': 6, 'humidity': 11, 'soilmoisture': 64}
Published data Successfully: %s {'temperature': 101, 'humidity': 6, 'soilmoisture': 81}
Published data Successfully: %s {'temperature': 33, 'humidity': 99, 'soilmoisture': 48}
Published data Successfully: %s {'temperature': 73, 'humidity': 67, 'soilmoisture': 16}
Published data Successfully: %s {'temperature': 120, 'humidity': 5, 'soilmoisture': 99}
Published data Successfully: %s {'temperature': 68, 'humidity': 12, 'soilmoisture': 25}
Published data Successfully: %s {'temperature': 26, 'humidity': 96, 'soilmoisture': 94}
Published data Successfully: %s {'temperature': 55, 'humidity': 54, 'soilmoisture': 46}
Published data Successfully: %s {'temperature': -20, 'humidity': 12, 'soilmoisture': 39}
Published data Successfully: %s {'temperature': 103, 'humidity': 50, 'soilmoisture': 72}
Published data Successfully: %s {'temperature': -16, 'humidity': 67, 'soilmoisture': 14}
```

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