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DEVLOP A PYTHON SCRIPT

To deployment of IOT platform is also initiated by the python interpreter the IOT platform to connect with devices. Few packages need to be installed to work in python interpreter to traverse between simulator and NODE-RED many other services

PYTHON CODE FOR NODE-RED AND SIMULATOR

The below python code communicates between Node-Red Services, Simulator.

CODE:

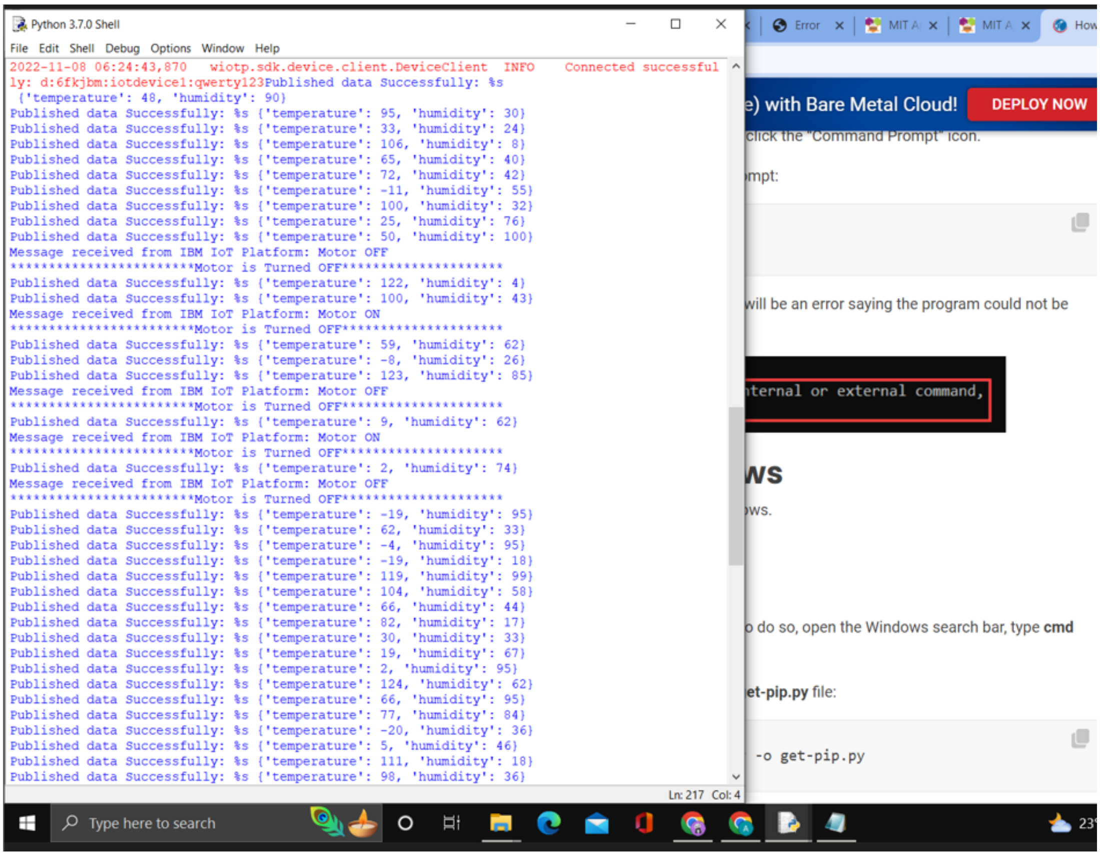
```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "6fkjbm",
        "typeId": "iotdevice1",
        "deviceId":"qwerty123"
    },
    "auth": {
        "token": "johnyjohnyyespapa"
    }
}

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 Turned ON*********************")
    else:
        print("************************Motor is Turned OFF*********************")
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

IBM TEXT TO SPEECH

```
from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
authenticator = IAMAuthenticator('M_u6yEvEGJylj_ysbL_pG0ZOKuRCQW1LgXUtv_IcBPCR')
text_to_speech = TextToSpeechV1(
    authenticator=authenticator
)
text_to_speech.set_service_url('https://api.au-syd.text-to-speech.watson.cloud.ibm.com/instances/23724eb6-a096-4a3a-b914-da0e442c1c5f')
with open('hello_world.wav', 'wb') as audio_file:
    audio_file.write(
        text_to_speech.synthesize(
            'Alert',
            voice='en-US_AllisonV3Voice',
            accept='audio/wav'
        ).get_result().content)
```

OUTPUT:


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Ln: 217 Col: 4
Type here to search
Error
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How
e) with Bare Metal Cloud!
DEPLOY NOW
click the "Command Prompt" icon.
mpt:
will be an error saying the program could not be
nternal or external command,
ws
ws.
o do so, open the Windows search bar, type cmd
et-pip.py file:
-o get-pip.py

```
2022-11-08 06:24:43,870   wiotp.sdk.device.client.DeviceClient  INFO    Connected successful
ly: d:6fkjbm:iotdevice1:qwerty123Published data Successfully: %s
 {'temperature': 48, 'humidity': 90}
Published data Successfully: %s {'temperature': 95, 'humidity': 30}
Published data Successfully: %s {'temperature': 33, 'humidity': 24}
Published data Successfully: %s {'temperature': 106, 'humidity': 8}
Published data Successfully: %s {'temperature': 65, 'humidity': 40}
Published data Successfully: %s {'temperature': 72, 'humidity': 42}
Published data Successfully: %s {'temperature': -11, 'humidity': 55}
Published data Successfully: %s {'temperature': 100, 'humidity': 32}
Published data Successfully: %s {'temperature': 25, 'humidity': 76}
Published data Successfully: %s {'temperature': 50, 'humidity': 100}
Message received from IBM IoT Platform: Motor OFF
***********************Motor is Turned OFF********************
Published data Successfully: %s {'temperature': 122, 'humidity': 4}
Published data Successfully: %s {'temperature': 100, 'humidity': 43}
Message received from IBM IoT Platform: Motor ON
***********************Motor is Turned OFF********************
Published data Successfully: %s {'temperature': 59, 'humidity': 62}
Published data Successfully: %s {'temperature': -8, 'humidity': 26}
Published data Successfully: %s {'temperature': 123, 'humidity': 85}
Message received from IBM IoT Platform: Motor OFF
***********************Motor is Turned OFF********************
Published data Successfully: %s {'temperature': 9, 'humidity': 62}
Message received from IBM IoT Platform: Motor ON
***********************Motor is Turned OFF********************
Published data Successfully: %s {'temperature': 2, 'humidity': 74}
Message received from IBM IoT Platform: Motor OFF
***********************Motor is Turned OFF********************
Published data Successfully: %s {'temperature': -19, 'humidity': 95}
Published data Successfully: %s {'temperature': 62, 'humidity': 33}
Published data Successfully: %s {'temperature': -4, 'humidity': 95}
Published data Successfully: %s {'temperature': -19, 'humidity': 18}
Published data Successfully: %s {'temperature': 119, 'humidity': 99}
Published data Successfully: %s {'temperature': 104, 'humidity': 58}
Published data Successfully: %s {'temperature': 66, 'humidity': 44}
Published data Successfully: %s {'temperature': 82, 'humidity': 17}
Published data Successfully: %s {'temperature': 30, 'humidity': 33}
Published data Successfully: %s {'temperature': 19, 'humidity': 67}
Published data Successfully: %s {'temperature': 2, 'humidity': 95}
Published data Successfully: %s {'temperature': 124, 'humidity': 62}
Published data Successfully: %s {'temperature': 66, 'humidity': 95}
Published data Successfully: %s {'temperature': 77, 'humidity': 84}
Published data Successfully: %s {'temperature': -20, 'humidity': 36}
Published data Successfully: %s {'temperature': 5, 'humidity': 46}
Published data Successfully: %s {'temperature': 111, 'humidity': 18}
Published data Successfully: %s {'temperature': 98, 'humidity': 36}
```