

VIT SMART BRIDGE IOT EXTERNSHIP PROGRAM

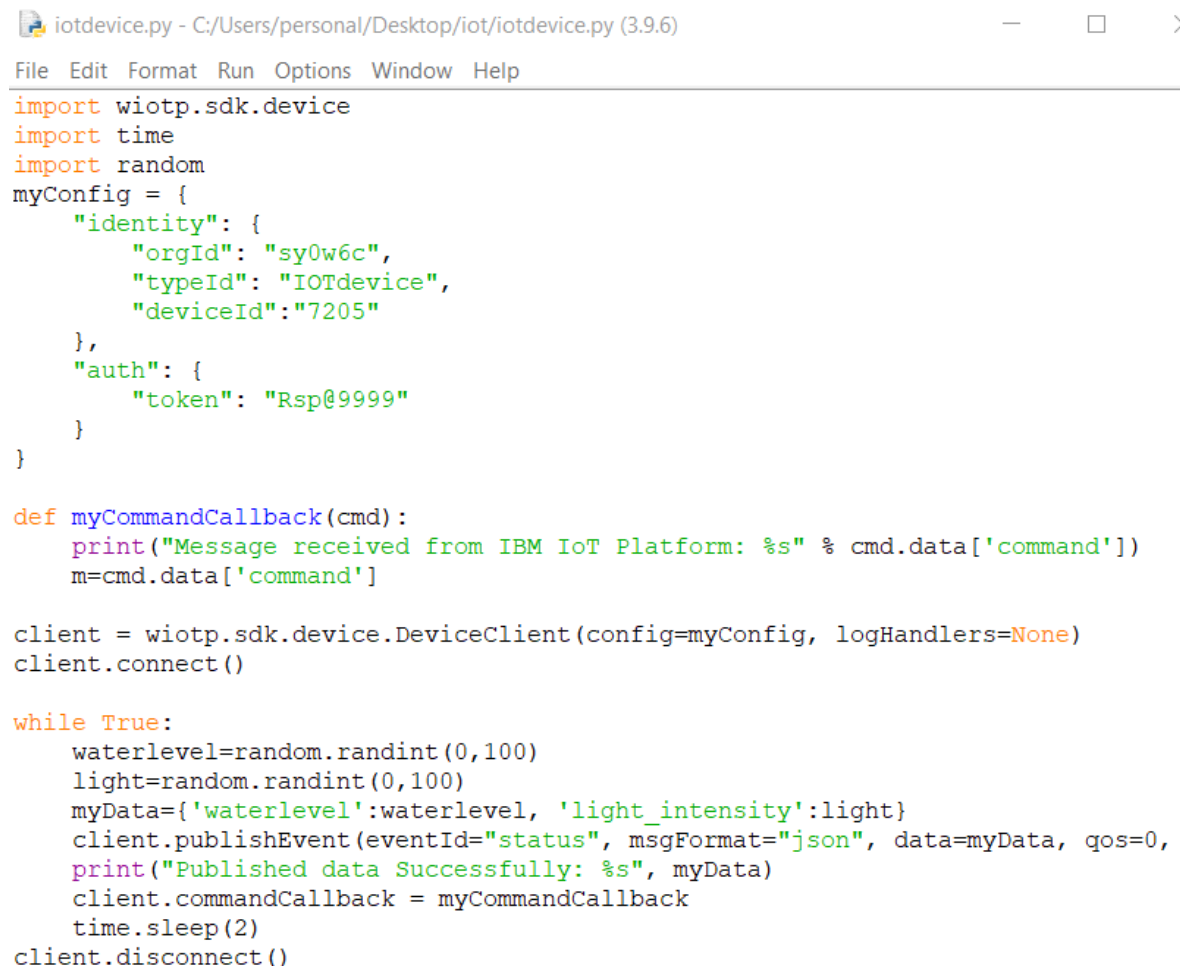
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Assignment-3:

Develop a code to upload the water tank level and light intensity values to the IBM IoT platform and visualize them in the web application.

Python code:



```
iotdevice.py - C:/Users/personal/Desktop/iot/iotdevice.py (3.9.6)
File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "sy0w6c",
        "typeId": "IOTdevice",
        "deviceId": "7205"
    },
    "auth": {
        "token": "Rsp@9999"
    }
}

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

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

while True:
    waterlevel=random.randint(0,100)
    light=random.randint(0,100)
    myData={'waterlevel':waterlevel, 'light_intensity':light}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

Code:

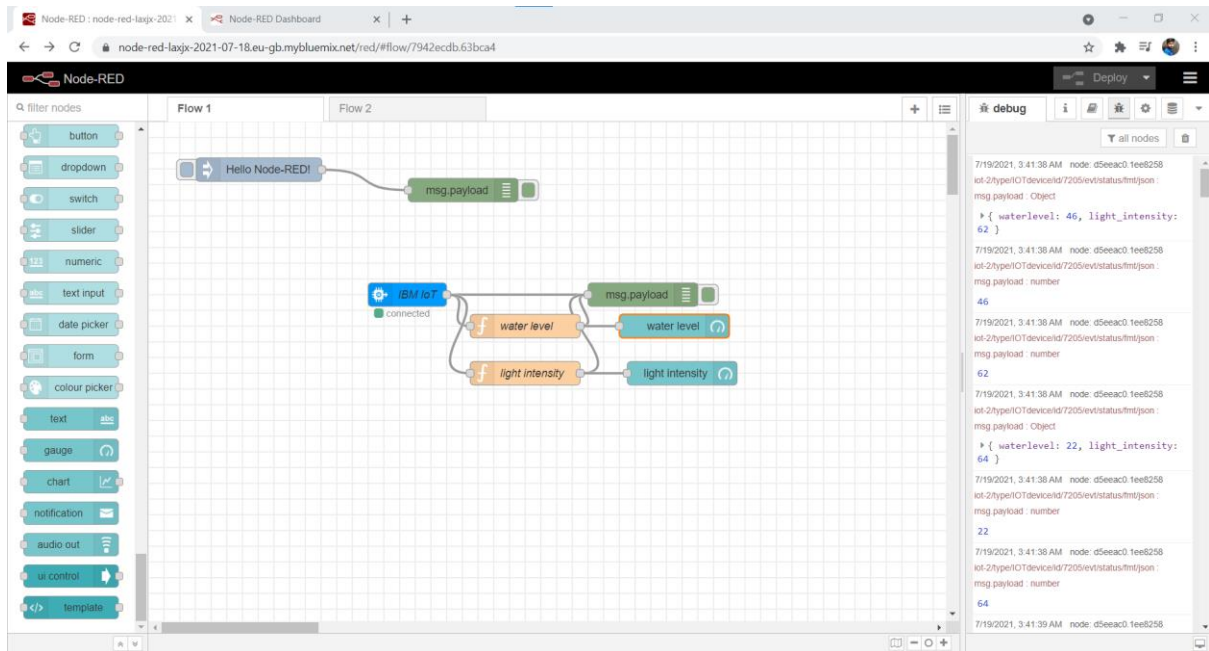
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client.connect()

while True:
    waterlevel=random.randint(0,100)
    light=random.randint(0,100)
    myData={'waterlevel':waterlevel, 'light_intensity':light}
    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()
```

NODE-RED LAYOUT:



OUTPUT:

```
Published data Successfully: { "waterlevel": 72, "light_intensity": 57 }
Published data Successfully: { "waterlevel": 84, "light_intensity": 91 }
Published data Successfully: { "waterlevel": 49, "light_intensity": 66 }
Published data Successfully: { "waterlevel": 95, "light_intensity": 13 }
Published data Successfully: { "waterlevel": 24, "light_intensity": 75 }
Published data Successfully: { "waterlevel": 68, "light_intensity": 69 }
Published data Successfully: { "waterlevel": 60, "light_intensity": 19 }
Published data Successfully: { "waterlevel": 41, "light_intensity": 29 }
Published data Successfully: { "waterlevel": 71, "light_intensity": 95 }
Published data Successfully: { "waterlevel": 34, "light_intensity": 68 }
Published data Successfully: { "waterlevel": 100, "light_intensity": 97 }
Published data Successfully: { "waterlevel": 60, "light_intensity": 57 }
Published data Successfully: { "waterlevel": 57, "light_intensity": 72 }
Published data Successfully: { "waterlevel": 100, "light_intensity": 55 }
Published data Successfully: { "waterlevel": 17, "light_intensity": 70 }
Published data Successfully: { "waterlevel": 71, "light_intensity": 13 }
Published data Successfully: { "waterlevel": 64, "light_intensity": 33 }
Published data Successfully: { "waterlevel": 11, "light_intensity": 19 }
Published data Successfully: { "waterlevel": 91, "light_intensity": 96 }
Published data Successfully: { "waterlevel": 12, "light_intensity": 21 }
Published data Successfully: { "waterlevel": 51, "light_intensity": 84 }
Published data Successfully: { "waterlevel": 42, "light_intensity": 62 }
Published data Successfully: { "waterlevel": 24, "light_intensity": 32 }
Published data Successfully: { "waterlevel": 23, "light_intensity": 28 }
Published data Successfully: { "waterlevel": 30, "light_intensity": 15 }
Published data Successfully: { "waterlevel": 77, "light_intensity": 10 }
Published data Successfully: { "waterlevel": 41, "light_intensity": 44 }
Published data Successfully: { "waterlevel": 42, "light_intensity": 22 }
Published data Successfully: { "waterlevel": 69, "light_intensity": 43 }
Published data Successfully: { "waterlevel": 36, "light_intensity": 81 }
Published data Successfully: { "waterlevel": 90, "light_intensity": 90 }
Published data Successfully: { "waterlevel": 30, "light_intensity": 37 }
Published data Successfully: { "waterlevel": 18, "light_intensity": 76 }
Published data Successfully: { "waterlevel": 76, "light_intensity": 85 }
Published data Successfully: { "waterlevel": 81, "light_intensity": 81 }
Published data Successfully: { "waterlevel": 47, "light_intensity": 61 }
Published data Successfully: { "waterlevel": 60, "light_intensity": 47 }
Published data Successfully: { "waterlevel": 82, "light_intensity": 15 }
Published data Successfully: { "waterlevel": 28, "light_intensity": 71 }
Published data Successfully: { "waterlevel": 46, "light_intensity": 84 }
Published data Successfully: { "waterlevel": 53, "light_intensity": 99 }
Published data Successfully: { "waterlevel": 11, "light_intensity": 53 }
Published data Successfully: { "waterlevel": 96, "light_intensity": 92 }
Published data Successfully: { "waterlevel": 3, "light_intensity": 17 }
Published data Successfully: { "waterlevel": 97, "light_intensity": 51 }
Published data Successfully: { "waterlevel": 2, "light_intensity": 12 }
```

