

ASSIGNMENT 3

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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.

CODE: import

wiotp.sdk.device import

time import random

myConfig = {

 "identity": {

 "orgId": "g3kuc1",

 "typeId": "vitap",

 "deviceId": "7011"

 },

 "auth": {

 "token": "vitap123"

 }

}

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:

```
wl=random.randint(0,100)
li=random.randint(0,300)

myData={'waterlevel':wl, 'lightintensity':li}

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()
```

OUTPUT:

The Node-RED interface shows a flow named 'Flow 3'. It starts with an 'IBM IoT' node (blue) which is connected to a 'msg.payload' node (green). The 'IBM IoT' node is also connected to two function nodes: 'waterlevel' (orange) and 'lightintensity' (orange). These function nodes are connected to 'waterlevel' (blue) and 'lightintensity' (blue) nodes respectively. The 'waterlevel' and 'lightintensity' nodes are connected to the 'msg.payload' node. The 'msg.payload' node is connected to a 'debug' node (green). The 'debug' node is connected to the 'debug' console on the right.

```
graph LR
    IoT[IBM IoT] --> waterlevel_f[waterlevel]
    IoT --> lightintensity_f[lightintensity]
    IoT --> payload[msg.payload]
    waterlevel_f --> waterlevel_n[waterlevel]
    lightintensity_f --> lightintensity_n[lightintensity]
    waterlevel_n --> payload
    lightintensity_n --> payload
    payload --> debug[debug]
```

Python 3.8.8 (tags/v3.8.8:024d805, Feb 19 2021, 13:18:16) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\CH.John Abhishek\Desktop\iot-externship\ibmiot.py =====
2021-07-18 14:19:27,502 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:g3kuc1:vitap:7011
Published data Successfully: %s {'waterlevel': 82, 'lightintensity': 1}
Published data Successfully: %s {'waterlevel': 60, 'lightintensity': 1}
Published data Successfully: %s {'waterlevel': 99, 'lightintensity': 218}
Published data Successfully: %s {'waterlevel': 11, 'lightintensity': 137}
Published data Successfully: %s {'waterlevel': 69, 'lightintensity': 17}
Published data Successfully: %s {'waterlevel': 61, 'lightintensity': 225}
Published data Successfully: %s {'waterlevel': 14, 'lightintensity': 19}
Published data Successfully: %s {'waterlevel': 11, 'lightintensity': 24}
Published data Successfully: %s {'waterlevel': 12, 'lightintensity': 282}
Published data Successfully: %s {'waterlevel': 68, 'lightintensity': 78}
Published data Successfully: %s {'waterlevel': 97, 'lightintensity': 153}
Published data Successfully: %s {'waterlevel': 32, 'lightintensity': 299}
Published data Successfully: %s {'waterlevel': 18, 'lightintensity': 204}
Published data Successfully: %s {'waterlevel': 94, 'lightintensity': 53}
Published data Successfully: %s {'waterlevel': 87, 'lightintensity': 15}
Published data Successfully: %s {'waterlevel': 47, 'lightintensity': 224}
Published data Successfully: %s {'waterlevel': 6, 'lightintensity': 57}
Published data Successfully: %s {'waterlevel': 27, 'lightintensity': 273}
Published data Successfully: %s {'waterlevel': 7, 'lightintensity': 155}
Published data Successfully: %s {'waterlevel': 4, 'lightintensity': 104}
Published data Successfully: %s {'waterlevel': 29, 'lightintensity': 0}
Published data Successfully: %s {'waterlevel': 96, 'lightintensity': 22}
Published data Successfully: %s {'waterlevel': 60, 'lightintensity': 135}
Published data Successfully: %s {'waterlevel': 16, 'lightintensity': 106}
Published data Successfully: %s {'waterlevel': 20, 'lightintensity': 38}
Published data Successfully: %s {'waterlevel': 14, 'lightintensity': 41}
Published data Successfully: %s {'waterlevel': 40, 'lightintensity': 159}
Published data Successfully: %s {'waterlevel': 46, 'lightintensity': 166}
Published data Successfully: %s {'waterlevel': 0, 'lightintensity': 161}
Published data Successfully: %s {'waterlevel': 24, 'lightintensity': 271}

data

sensor

