



**GOVERNMENT COLLEGE OF ENGINEERING
CHETTIKARAI, DHARMAPURI**



Signs with Smart Connectivity For Better Road Safety

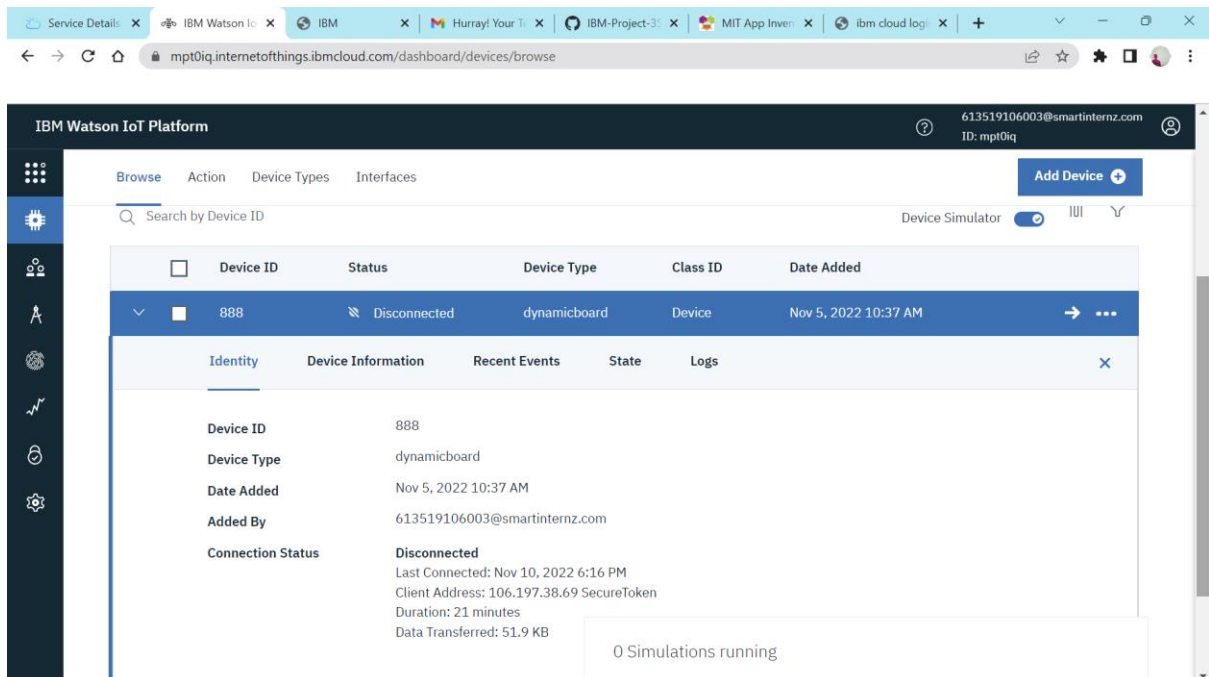
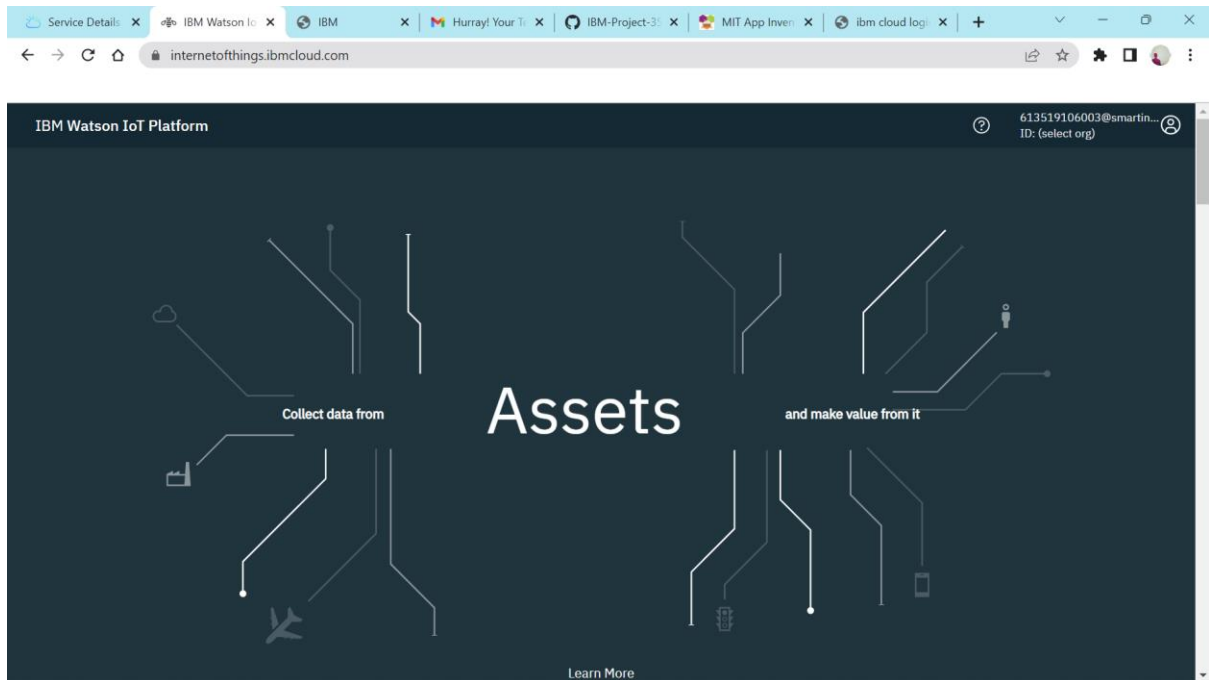
IBM NALAIYATHIRAN

Project Development – Delivery of sprint 1

Creating And Connecting For Project And Python Code

TITLE	Signs with Smart Connectivity for Better Road Safety
DOMAIN NAME	INTERNET OF THINGS
TEAM ID	PNT2022TMID41261
TEAM LEADERNAME	AJAYSEKAR C
TEAM MEMBER NAME	AAKASH A DOURMILKUMAR G DHIVAGAR K
MENTOR NAME	Dr. DINESH G

CREATING IBM CLOUD DEVICE:



CREATING PYTHON CODE:

```
#IBM Watson IOT Platform

#pip install wiotp-sdk

import wiotp.sdk.device

import time

import random

myConfig = {
    "identity": {
        "orgId": "mpt0iq",
        "typeId": "dynamicboard",
        "deviceId": "888"
    },
    "auth": {
        "token": "0987654321"
    }
}

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:
    temperature=random.randint(-20,125)
    vehiclescount=random.randint(0,100)
    rest=random.randint(0,100)
    hospital_distance=random.randint(0,500)
```

```

schooltime=random.randint(1,24)
a="Your Preferred Speed"
b="Speed Limit is 30 km\hr"
c="Take Diversion"
d="As Your Wish"
x={'Condition_for_Speed':a}
y={'Condition_for_Speed':b}
k={'Condition_for_Speed_limit_School':a}
l={'Condition_for_Speed_limit_School':b}
z={'Condition_for_Direction':c}
w={'Condition_for_Direction':d}
p="No Horn"
q={'caution':p}
distance1={'Distance_for_Hospital':hospital_distance}
myData1={'Temperature':temperature}
myData2={'Vehiclescount':vehiclescount}
myData3={'Restaurant_distance': rest}
myData5={'Hospital_distance':hospital_distance}
myData4={'Schooltime':schooltime}
client.publishEvent(eventId="status",msgFormat="json",data=myData1,qos=0,onPublish=None)
print("Published:%s",myData1)
if temperature>=20:

    client.publishEvent(eventId="status", msgFormat="json",data=x,qos=0,onPublish=None)
    print(x)
    print("\n")
else :
    client.publishEvent(eventId="status", msgFormat="json",data=y,qos=0,onPublish=None)
    print(y)
    print("\n")

```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData2,qos=0,onPublish=None)
print("Published:%s",myData2)
```

```
if vehiclescount>=50:
```

```
    client.publishEvent(eventId="status",msgFormat="json",data=z,qos=0,onPublish=None)
    print(z)
    print("\n")
```

```
else:
```

```
    client.publishEvent(eventId="status",msgFormat="json",data=w,qos=0,onPublish=None)
    print(w)
    print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData4,qos=0,onPublish=None)
print("Published:%s",myData4)
```

```
if 8<=schooltime and schooltime<=10 or 15<=schooltime and schooltime<=18:
```

```
    client.publishEvent(eventId="status",msgFormat="json",data=l,qos=0,onPublish=None)
    print(l)
    print("\n")
```

```
else :
```

```
    client.publishEvent(eventId="status",msgFormat="json",data=k,qos=0,onPublish=None)
    print(k)
    print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData5,qos=0,onPublish=None)
```

```
if 0<=hospital_distance and hospital_distance<=200:
```

```
    client.publishEvent(eventId="status",msgFormat="json",data=distance1,qos=0,onPublish=None)
    print(distance1)
    client.publishEvent(eventId="status",msgFormat="json",data=q,qos=0,onPublish=None)
```

```
print(q)
```

```
print("\n")
```

```
else:
```

```
print(x)
```

```
print("\n")
```

```
client.publishEvent(eventId="status",msgFormat="json",data=myData3,qos=0,onPublish=None)
```

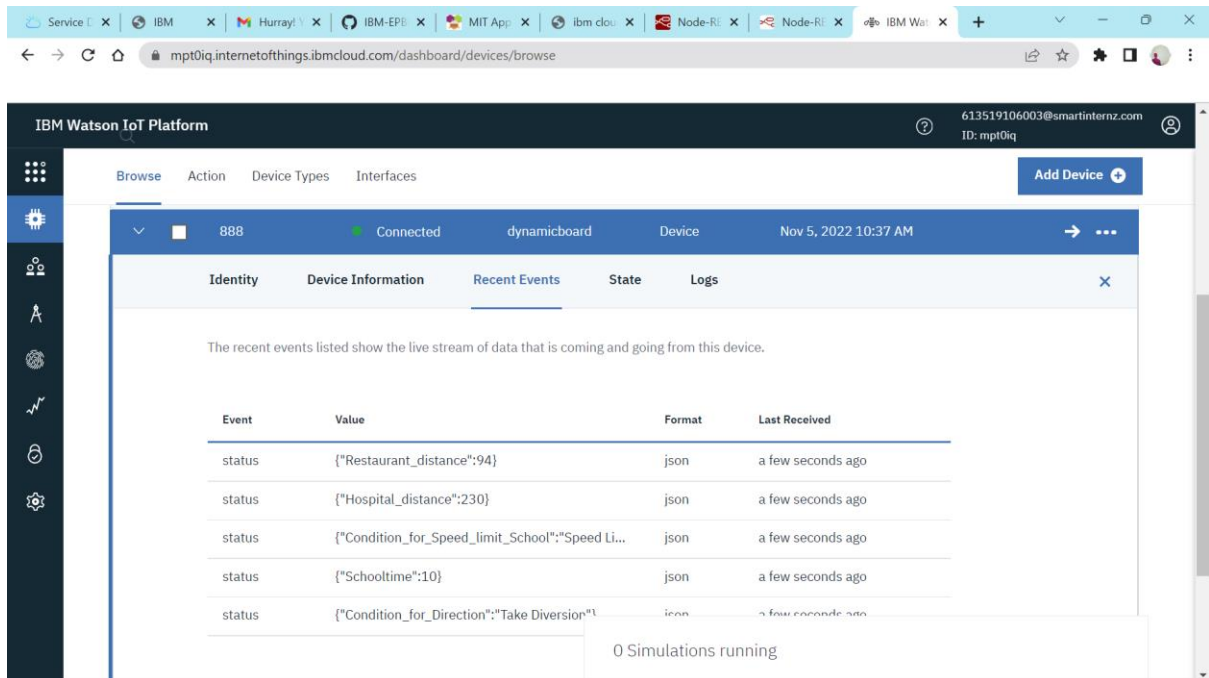
```
print("Published:%s",myData3)
```

```
client.commandCallback=myCommandCallback
```

```
time.sleep(20)
```

```
client.disconnect()
```

CONNECTING IBM WATSON AND PYTHON CODE:



IBM Watson IoT Platform

613519106003@smartinternz.com
ID: mpt0iq

Browse Action Device Types Interfaces

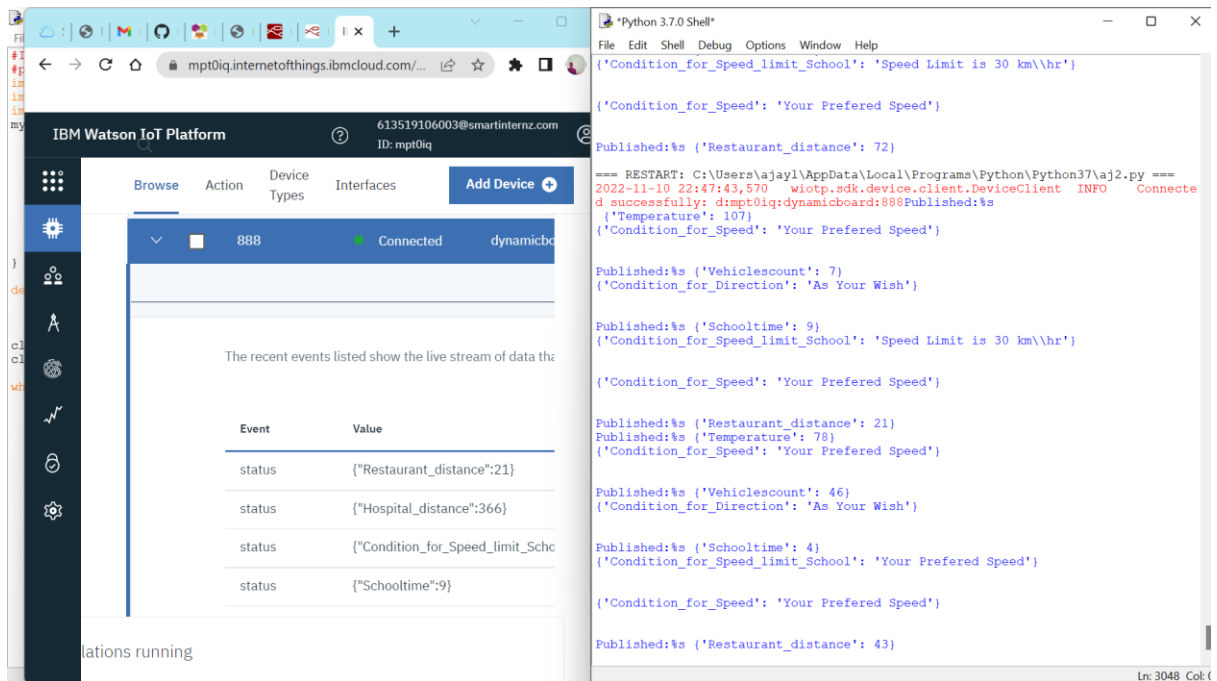
888 Connected dynamicboard Device Nov 5, 2022 10:37 AM

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	{"Restaurant_distance":94}	json	a few seconds ago
status	{"Hospital_distance":230}	json	a few seconds ago
status	{"Condition_for_Speed_limit_School":"Speed Li...	json	a few seconds ago
status	{"Schooltime":10}	json	a few seconds ago
status	{"Condition_for_Direction":"Take Diversion"	json	a few seconds ago

0 Simulations running



IBM Watson IoT Platform

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ID: mpt0iq

Browse Action Device Types Interfaces

888 Connected dynamicboard

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value
status	{"Restaurant_distance":21}
status	{"Hospital_distance":366}
status	{"Condition_for_Speed_limit_School":"Speed Limit is 30 km\\hr"}
status	{"Schooltime":9}

0 Simulations running

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
('Condition_for_Speed_limit_School': 'Speed Limit is 30 km\\hr')

('Condition_for_Speed': 'Your Preferred Speed')

Published: %s ('Restaurant_distance': 72)

=== RESTART: C:\Users\ajay1\AppData\Local\Programs\Python\Python37\aj2.py ===
2022-11-10 22:47:43,570 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d:mpt0iq:dynamicboard:888Published: %s
({'Temperature': 107})
('Condition_for_Speed': 'Your Preferred Speed')

Published: %s ('Vehiclescount': 7)
('Condition_for_Direction': 'As Your Wish')

Published: %s ('Schooltime': 9)
('Condition_for_Speed_limit_School': 'Speed Limit is 30 km\\hr')

('Condition_for_Speed': 'Your Preferred Speed')

Published: %s ('Restaurant_distance': 21)
Published: %s ('Temperature': 78)
('Condition_for_Speed': 'Your Preferred Speed')

Published: %s ('Vehiclescount': 46)
('Condition_for_Direction': 'As Your Wish')

Published: %s ('Schooltime': 4)
('Condition_for_Speed_limit_School': 'Your Preferred Speed')

('Condition_for_Speed': 'Your Preferred Speed')

Published: %s ('Restaurant_distance': 43)
```

Ln: 3048 Col: 1

