

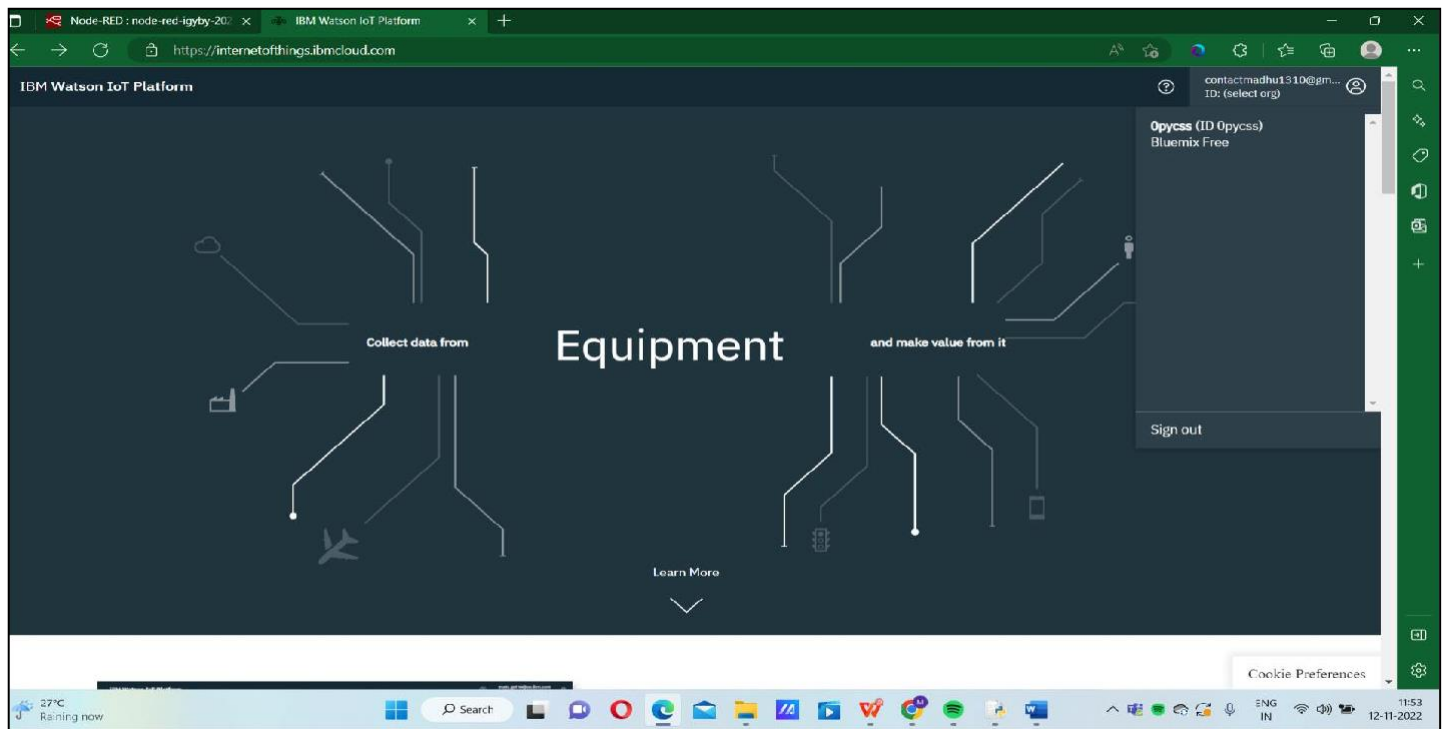
PANIMALAR ENGINEERING COLLEGE

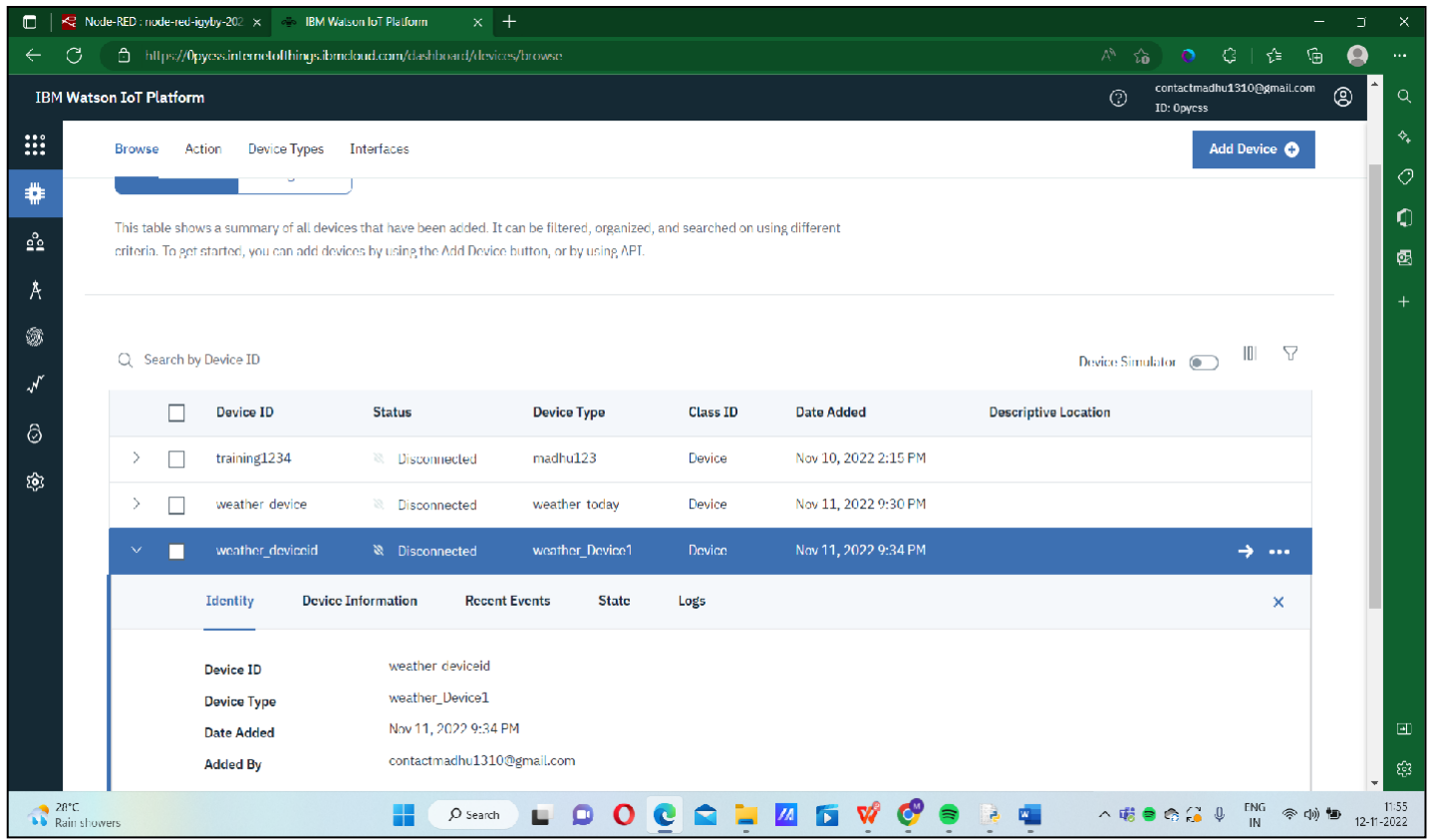
IBM NALAIYATHIRAN

TEAM ID	PNT2022TMID07742
PROJECT NAME	IOT based safety gadget for child safety monitoring and notification
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DELIVERY OF SPRINT 2

Creating IBM Cloud Service and IBM WATSON IoT PLATFORM:





Creating and Connecting IBM cloud for Project and Python Code

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "opycss"
```

```
deviceType = "weather_Device1"
```

```
deviceId = "weather_deviceid"
```

```
authMethod = "token"
```

```

authToken = "(j!jK*nvh9OKQD9!dJ"

#api key {a-illza1-mbdxqo6zos}

#api token {zSYzISuAWF&F_x7GkT}

try:

    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method":
authMethod, "auth-token": authToken}

    deviceCli = ibmiotf.device.Client(deviceOptions)

    #.....

except Exception as e:

    print("Caught exception connecting device: %s" % str(e))

    sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of
type

print("POWER ON ")

print("CHECKING CONNECTION TO IBM WATSON. ")

time.sleep(2)

deviceCli.connect()

print("dear user ..... welcome to IBM-IOT ")

print("You can know your child's live location and temperature ")

name=str(input("enter your child name:"))

while True:

    temperature=random.randint(20,50)#random temperature for your child

```

```

latitude=random.uniform(10.781377,10.78643)#random latitude for your child
longitude=random.uniform(79.129113,79.134014)#random longitude for your child

a="Child inside the geofence"
b=" Child outside the geofence"
c="High temperature"
d="Low temperature"

x={'your_child_Zone':a}
y={'your_child_Zone':b}
z={'temp_condition':c}
w={'temp_condition':d}


data = { 'temp' : temperature, 'lat': latitude,'lon':longitude,'name':name }

#print data

def myOnPublishCallback():

    print ("Published Temperature = %s C" % temperature, "latitude = %s %" % latitude,
"longitude = %s %" % longitude, "to IBM Watson")

    print("\n")

    success = deviceCli.publishEvent("IoTSensorgpsdata", "json", data, qos=0,
on_publish=myOnPublishCallback)

    if latitude>=10.78200 and latitude<=10.786000 and longitude >=79.130000 and
longitude <=79.133000:

```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=x,qos=0,on_publish=myOnPublishCallback)
```

```
    print(x)
```

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

```
else:
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=y,qos=0,on_publish=myOnPublishCallback)
```

```
    print(y)
```

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

```
if (temperature>35):
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=z,qos=0,on_publish=myOnPublishCallback)
```

```
    print(z)
```

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

```
else:
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=w,qos=0,on_publish=myOnPublishCallback)
```

```
    print(w)
```

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

if not success:

```
print("Not connected to IoT")
```

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

```
time.sleep(3)
```

Disconnect the device and application from the cloud

```
deviceCli.disconnect()
```

Connecting IBM Watson and python Code:

```
temphumid.py - C:/Users/GOWTHAMAN/OneDrive/Documents/temphumid.py (3.7.0)
File Edit Format Run Options Window Help

import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "0pycss"
deviceType = "weather_Device1"
deviceId = "weather_deviceid"
authMethod = "token"
authToken = "(j!jK*nvh9OKQD9!d)"
#api key (a-illza1-mbdxqo6z0s)
#api token (zSYzISuAWF&F_x7GkT)
try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    # Connect and send a datapoint "hello" with value "world" into the cloud as an event
    print("POWER ON ")
    print("CHECKING CONNECTION TO IBM WATSON...")
    time.sleep(2)
    deviceCli.connect()
    print("dear user ... welcome to IBM-IOT ")
    print("You can know your child's live location and temperature ")
    name=str(input("enter your child name:"))
    while True:

        temperature=random.randint(20,50)#random temperature for your child
        latitude=random.uniform(10.781377,10.78643)#random latitude for your child
        longitude=random.uniform(79.129113,79.134014)#random longitude for your child
        a="Child inside the geofence"
        b=" Child outside the geofence"
        c="High temperature"
        d="Low temperature"
        x=('your_child_zone':a)
        y=('your_child_zone':b)
        z=('temp_condition':c)
        w=('temp_condition':d)

        data = { 'temp' : temperature, 'lat': latitude, 'lon':longitude, 'name':name }
```

```
*Python 3.7.0 Shell*
File Edit Shell Debug Options Window Help

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/GOWTHAMAN/OneDrive/Documents/temphumid.py =====
POWER ON
CHECKING CONNECTION TO IBM WATSON...
dear user ... welcome to IBM-IOT 2022-11-12 11:29:13,466 ibmiotf.device.Client
INFO Connected successfully: d:0pycss:weather_Device1:weather_deviceid

You can know your child's live location and temperature
enter your child name:MADHU
({'your_child_zone': 'Child inside the geofence'})Published Temperature = 27 C

latitude = 10.784974615744863 %
longitude = 79.1316217625215 % to IBM Watson

({'temp_condition': 'Low temperature'})Published Temperature = 27 C

latitude = 10.784974615744863 %
longitude = 79.1316217625215 % to IBM Watson

Published Temperature = 27 C latitude = 10.784974615744863 % longitude = 79.1316217625215 % to IBM Watson

({'your_child_zone': ' Child outside the geofence'})Published Temperature = 47 C

latitude = 10.785885682265294 %
longitude = 79.12934190828224 % to IBM Watson

({'temp_condition': 'High temperature'})Published Temperature = 47 C

latitude = 10.785885682265294 %
longitude = 79.12934190828224 % to IBM Watson

Ln: 56 Col: 0
```

Ln: 24 Col: 42

27°C
Raining now

11:29
12-11-2022

Node-RED : node-red-igby-202 x IBM Watson IoT Platform x +

https://0pycss.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

contactmadhu1310@gmail.com
ID: 0pycss

Browse Action Device Types Interfaces

weather_device Disconnected weather_today Device Nov 11, 2022 9:30 PM

weather_deviceid Connected weather_Device1 Device Nov 11, 2022 9:34 PM

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
IoTSensorgp...	{"temp_condition":"Low temperature"}	json	a few seconds ago
IoTSensorgp...	{"your_child_Zone":"Child outside the geofence"}	json	a few seconds ago
IoTSensorgp...	{"temp":30,"lat":10.785361477535123,"lon":79...	json	a few seconds ago
IoTSensorgp...	{"temp_condition":"Low temperature"}	json	a few seconds ago
IoTSensorgp...	{"your_child_Zone":"Child inside the geofence"}	json	a few seconds ago

Items per page 50 | 1-3 of 3 items

1 of 1 page

27°C Raining now

Search

11:30 12-11-2022

NODE RED CONNECTIONS:

Node-RED

Flow 1

function

function

IBM IoT

connected

chilidsafety

msg.payload

Child name abc

gauge

Temperature abc

temp_status abc

Latitude abc

Child Zone abc

Longitude abc

worldmap

connected 0

debug

all nodes

11/10/2022, 10:00:45 PM node: 65909d20f5d4648
iot-2/type/ABCD/id/13/evnt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp: 50, lat: 12.131629972663186, lon: 78.19606388397351, name: "Child" }

11/10/2022, 10:00:45 PM node: 65909d20f5d4648
iot-2/type/ABCD/id/13/evnt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ your_child_zone: "Outside the geofence" }

11/10/2022, 10:00:45 PM node: 65909d20f5d4648
iot-2/type/ABCD/id/13/evnt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp_status: "High temperature" }

11/10/2022, 10:00:46 PM node: 65909d20f5d4648
iot-2/type/ABCD/id/13/evnt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp: 50, lat: 12.129898691365163, lon: 78.1971804860123, name: "Child" }

11/10/2022, 10:00:46 PM node: 65909d20f5d4648

NODE-RED OUPUT:

