

Safety Gadget for Child Safety Monitoring and Notification

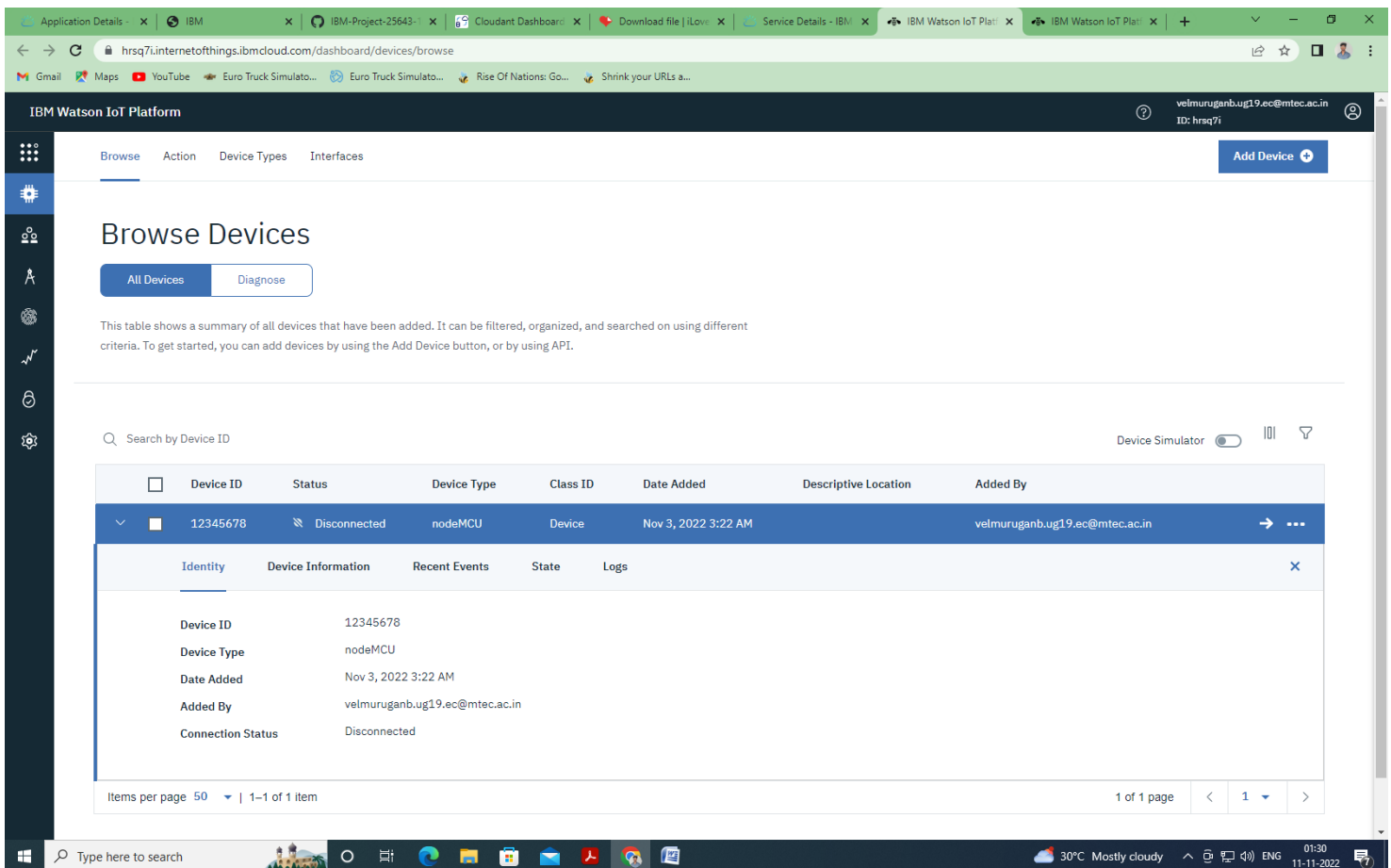
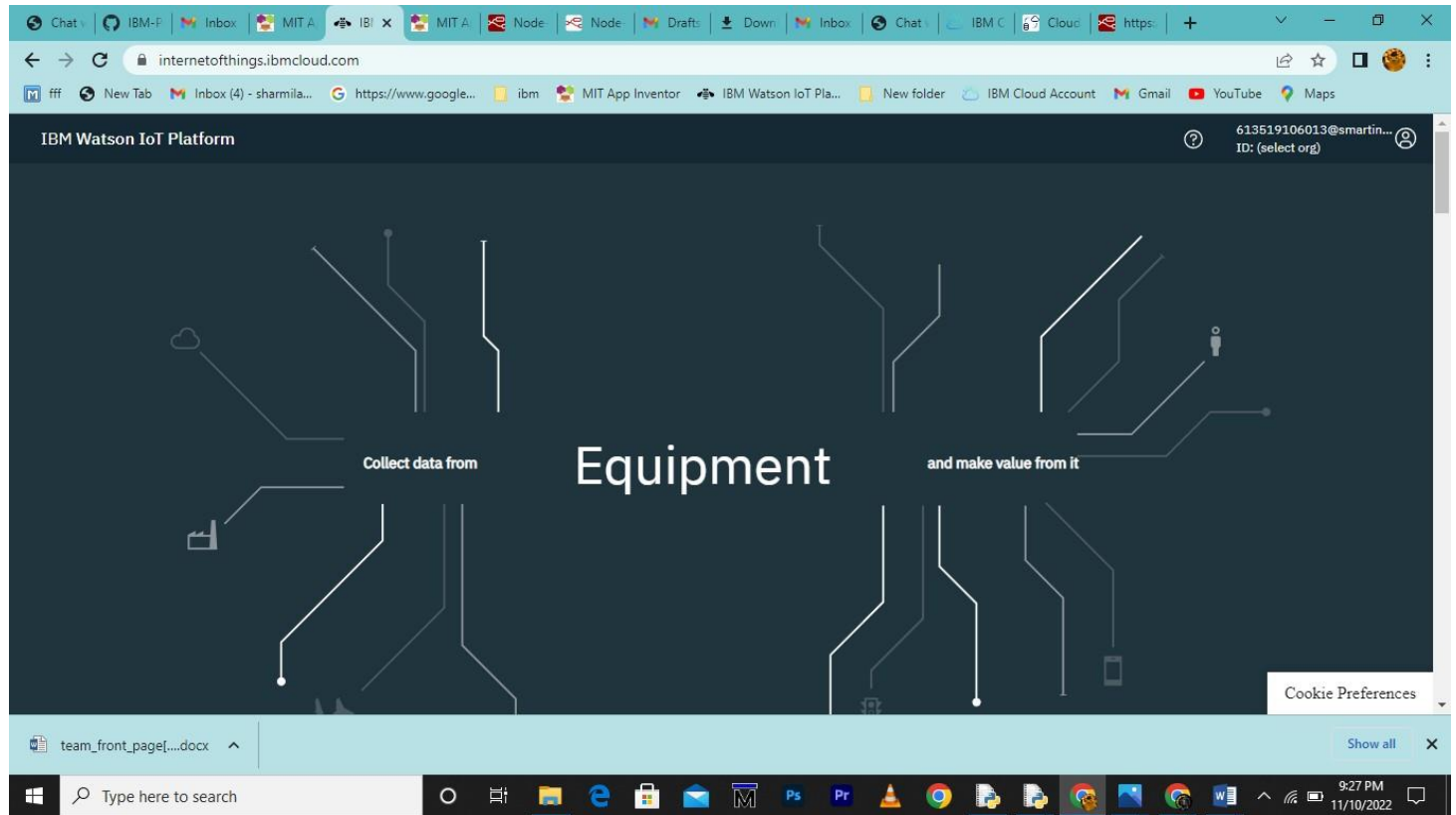
IBM NALAIYATHIRAN

Project Development –Delivery of Sprint 1

Creating and Connecting IBM cloud for Project and Python Code

TITLE	IOT based child safety gadget for child safety monitoring and notification
DOMAIN NAME	INTERNET OF THINGS
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Creating IBM Cloud Service and creating the device:



Creating Python Code:

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

#Provide your IBM Watson Device Credentials

organization = "zwx6lb"
deviceType="nodeMCU"
deviceId = "12345678"
authMethod = "token"
authToken = "12345678"

#api key {a-illza1-mbdxqo6z0s}
#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
"greeting" 10 times
print("power on ")
```

```

print("checking connection to waston iot...")
time.sleep(2)
deviceCli.connect()
print("dear user ... welcome to IBM-IOT ")
print("i can provide your children live location and temperature ")
print()
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=myOnPublishCallb
ack)

    print(x)
    print("\n")
else:

deviceCli.publishEvent("IoTSensorgpsdata","json",data=y,qos=0,on_publish=myOnPublishCallb
ack)

    print(y)
    print("\n")

if (temperature>35):

deviceCli.publishEvent("IoTSensorgpsdata","json",data=z,qos=0,on_publish=myOnPublishCallb
ack)

    print(c)
    print("\n")
else:

deviceCli.publishEvent("IoTSensorgpsdata","json",data=w,qos=0,on_publish=myOnPublishCall
back)

    print(d)

```

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

if not success:

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

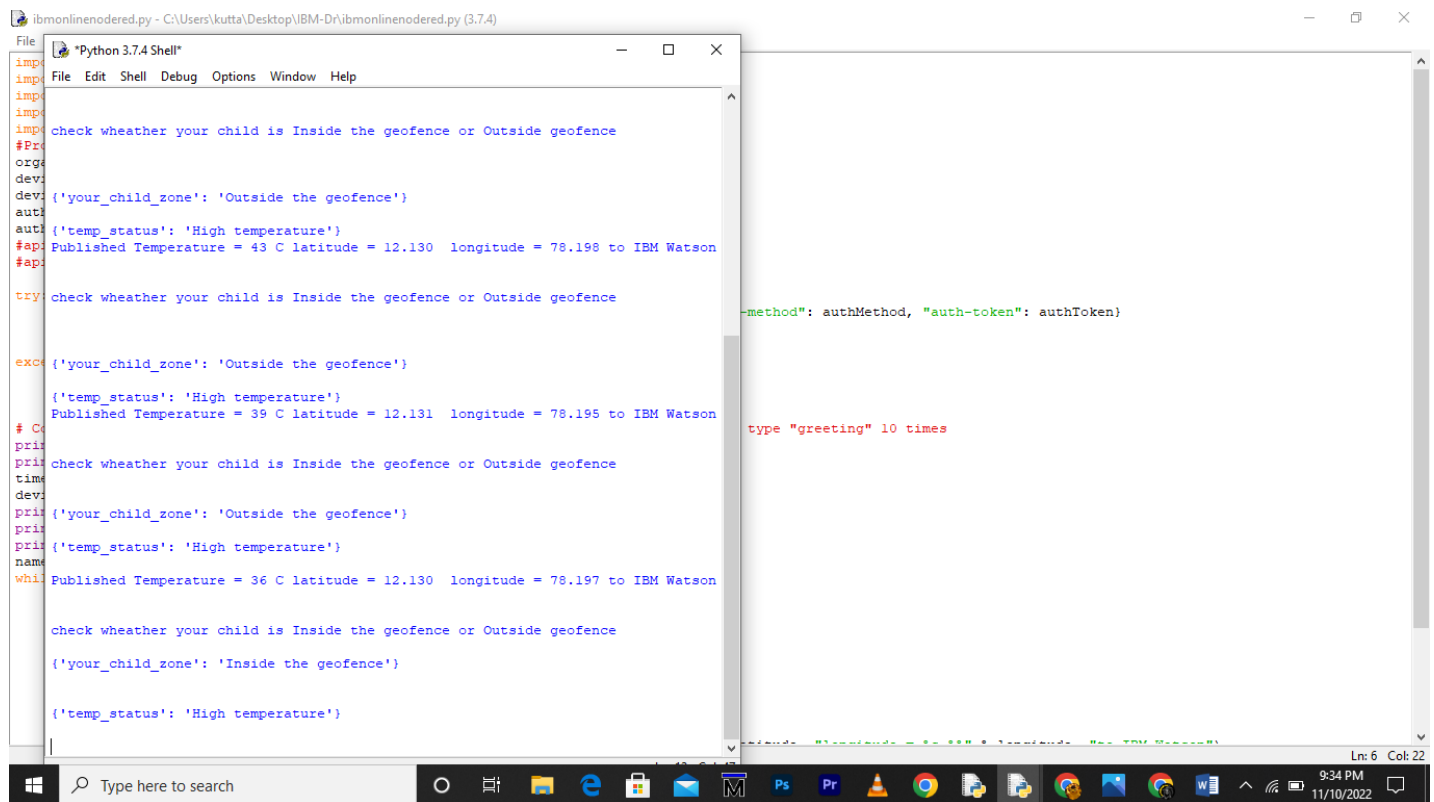
```
print("\n")
```

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

Disconnect the device and application from the cloud

```
deviceCli.disconnect()
```

Connecting IBM Watson and python Code:



The screenshot shows a Python IDE with a file named `ibmonlinenodered.py` open. The code is a Python script that interacts with IBM Watson IoT. It includes comments and code for checking if a child is inside or outside a geofence, publishing temperature data, and connecting to the cloud. A terminal window titled "Python 3.7.4 Shell" is open, showing the execution of the script. The terminal output includes the following lines:

```
check wheather your child is Inside the geofence or Outside geofence
dev: {'your_child_zone': 'Outside the geofence'}
aut: {'temp_status': 'High temperature'}
#ap: Published Temperature = 43 C latitude = 12.130 longitude = 78.198 to IBM Watson
#ap:
try: check wheather your child is Inside the geofence or Outside geofence
except: {'your_child_zone': 'Outside the geofence'}
{'temp_status': 'High temperature'}
Published Temperature = 39 C latitude = 12.131 longitude = 78.195 to IBM Watson
# Co:
pri: check wheather your child is Inside the geofence or Outside geofence
time:
dev:
pri: {'your_child_zone': 'Outside the geofence'}
pri: {'temp_status': 'High temperature'}
name:
whil: Published Temperature = 36 C latitude = 12.130 longitude = 78.197 to IBM Watson

check wheather your child is Inside the geofence or Outside geofence
{'your_child_zone': 'Inside the geofence'}
{'temp_status': 'High temperature'}
```

The IDE also shows a snippet of code for connecting to IBM Watson:

```
-method": authMethod, "auth-token": authToken)

type "greeting" 10 times
```

The taskbar at the bottom shows the Windows Start button, a search bar, and several application icons including File Explorer, Edge, Mail, and various development tools. The system clock indicates 9:34 PM on 11/10/2022.

Chat v IBM-P Inbox MIT A IBI x MIT A Node Node Draft Down Inbox Chat IBM C Cloud https +

zwx6lb.internetofthings.ibmcloud.com/dashboard/devices/browse

ff New Tab Inbox (4) - sharmila... https://www.google... ibm MIT App Inventor IBM Watson IoT Pla... New folder IBM Cloud Account Gmail YouTube Maps

IBM Watson IoT Platform 613519106013@smartinternz.com ID: zwx6lb

Browse Action Device Types Interfaces

Add Device +

13 Connected ABCD Device Nov 2, 2022 10:55 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_status":"High temperature"}	json	a few seconds ago
IoTSensorgp...	{"your_child_zone":"Outside the geofence"}	json	a few seconds ago
IoTSensorgp...	{"temp":50,"lat":12.132819998043411,"lon":78...	json	a few seconds ago
IoTSensorgp...	{"temp_status":"Low temperature"}		
IoTSensorgp...	{"your_child_zone":"Outside the geofence"}		

1 Simulation running

team_front_page{....docx Show all

Type here to search

9:35 PM 11/10/2022