

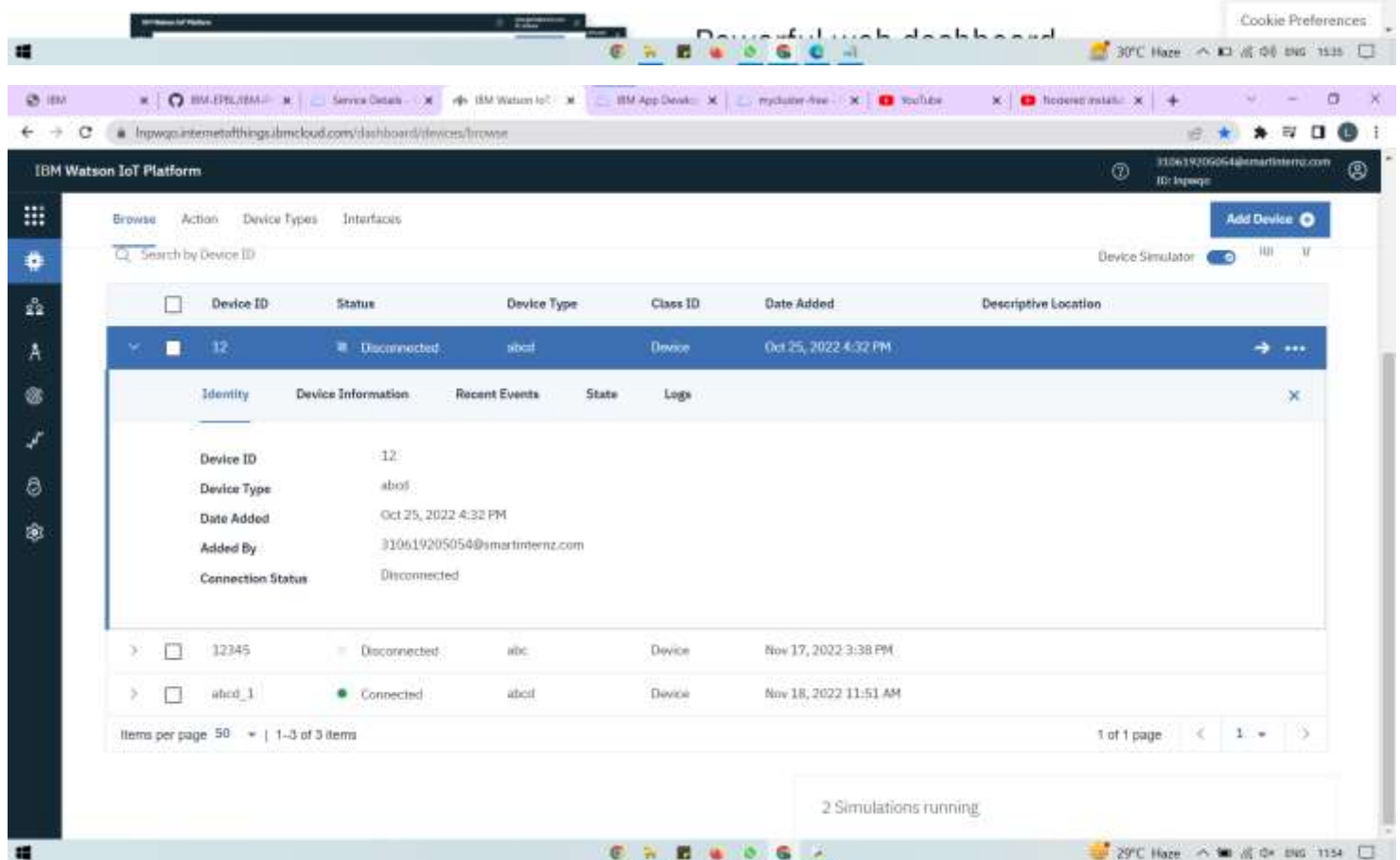
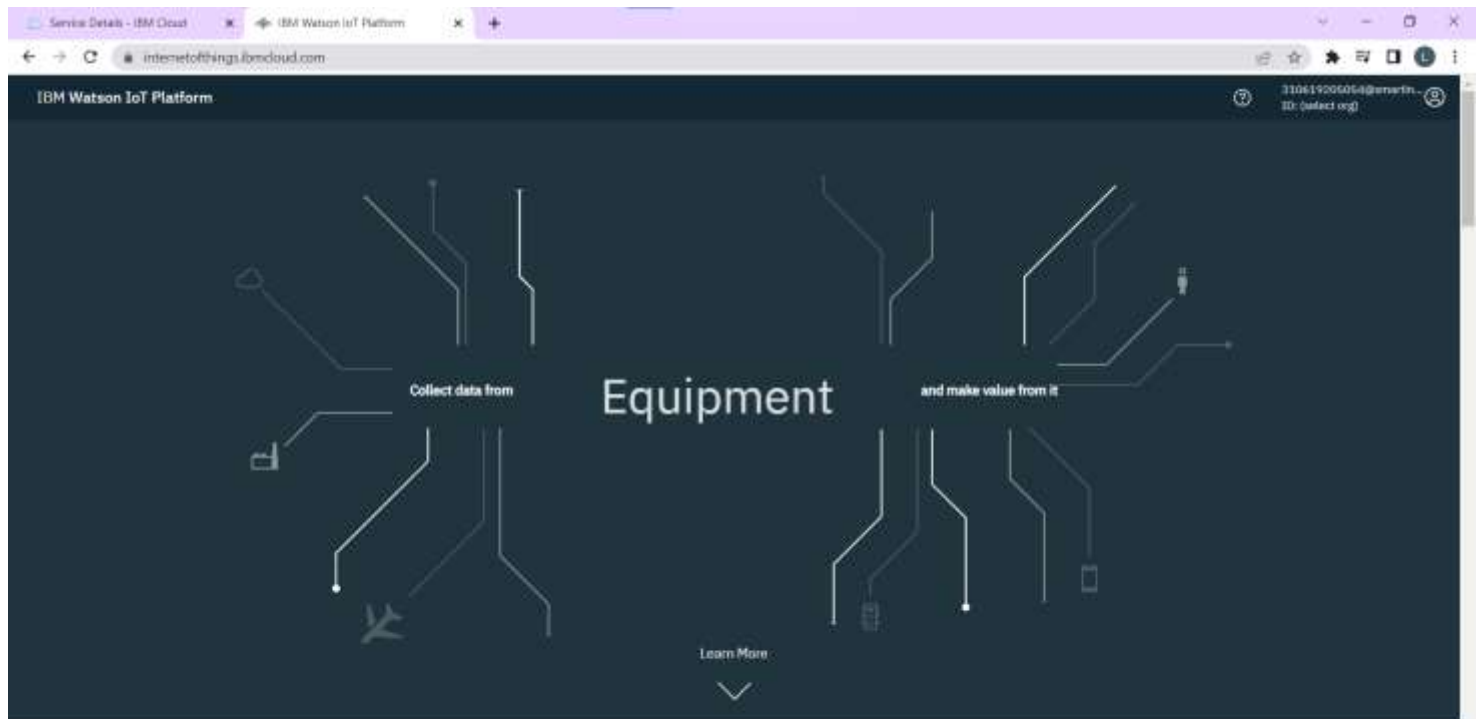
# **IOT Based Safety Gadget for Child Safety Monitoring and Notification**

## **Project Development –Delivery of Sprint 1**

**Creating and Connecting IBM cloud for Project and Python Code**

<b>TITLE</b>	IOT based child safety gadget for child safety monitoring and notification
<b>DOMAIN NAME</b>	INTERNET OF THINGS
<b>TEAM ID</b>	PNT2022TMID09639
<b>TEAM LEADERNAME</b>	A E S Loghapriya
<b>TEAM MEMBER NAME</b>	Aishwarya S Deepa Harshini C A Deepak M
<b>MENTOR NAME</b>	Mrs. K Johny Elma

## 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 = "lnpwqo"
deviceType = "abcd"
deviceId = "12"
authMethod = "use-token-auth"
authToken = "12345678"
#api key {a-lnpwqo-623qb5z8ny}
#api token {tJZoLa3sq5judZGuaw}

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=myO
nPublishCallback)
        print(x)
        print("\n")
    else:

deviceCli.publishEvent("IoTSensorgpsdata","json",data=y,qos=0,on_publish=myO
nPublishCallback)
        print(y)
        print("\n")

        if (temperature>35):

deviceCli.publishEvent("IoTSensorgpsdata","json",data=z,qos=0,on_publish=myO
nPublishCallback)
        print(c)
        print("\n")
    else:

deviceCli.publishEvent("IoTSensorgpsdata","json",data=w,qos=0,on_publish=myO
nPublishCallback)
        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:

```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

check wheather your child is Inside the geofence or Outside geofence

{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}
Published Temperature = 43 C latitude = 12.130 longitude = 78.198 to IBM Watson

check wheather your child is Inside the geofence or Outside geofence

{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}
Published Temperature = 39 C latitude = 12.131 longitude = 78.195 to IBM Watson

check wheather your child is Inside the geofence or Outside geofence

{'your_child_zone': 'Outside the geofence'}

{'temp_status': 'High temperature'}
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'}
```

IoT Dashboard Interface:

Navigation: Browse | Action | Device Types | Interfaces | Add Device

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": 12.132619998043411, "lon": 78...	json	a few seconds ago
IoTSensorgp...	{"temp_status": "Low temperature"}		
IoTSensorgp...	{"your_child_zone": "Outside the geofence"}		

1 Simulation running