

**GOVERNMENT COLLEGE OF ENGINEERING  
CHETTIKARAI, DHARMAPURI**



## **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**

<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>	PNT2022TMID41271
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## Creating IBM Cloud Service and creating the device:

The screenshot shows the IBM Watson IoT Platform homepage. The header includes the IBM logo and the text "IBM Watson IoT Platform". The main content area features a large graphic with the word "Equipment" in the center, flanked by the phrases "Collect data from" and "and make value from it". The background of the graphic is dark blue with white circuit-like lines. The top navigation bar shows the user's email address "613519106013@smartint...". The bottom of the page shows a Windows taskbar with various application icons and the system clock displaying "9:27 PM 11/10/2022".

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo and the text "IBM Watson IoT Platform". The main content area displays a list of devices with columns for Device ID, Status, Device Type, Class ID, and Date Added. A device with ID 13 is highlighted, and its details are shown in a modal window. The details include Device ID, Device Type, Date Added, Added By, and Connection Status. The Connection Status is "Disconnected" with additional information: "Last Connected: Nov 10, 2022 7:48 PM", "Client Address: 106.211.215.236 SecureToken", "Duration: a few seconds", and "Data Transferred: 18.9 KB". A notification bubble in the bottom right corner states "1 Simulation running". The bottom of the page shows a Windows taskbar with various application icons and the system clock displaying "9:28 PM 11/10/2022".

Device ID	Status	Device Type	Class ID	Date Added
13	Disconnected	ABCD	Device	Nov 2, 2022 10:55 PM

Identity	Device Information	Recent Events	State	Logs
Device ID	13			
Device Type	ABCD			
Date Added	Nov 2, 2022 10:55 PM			
Added By	613519106013@smartinternz.com			
Connection Status	Disconnected			
	Last Connected: Nov 10, 2022 7:48 PM			
	Client Address: 106.211.215.236 SecureToken			
	Duration: a few seconds			
	Data Transferred: 18.9 KB			

## Creating Python Code:

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

#Provide your IBM Watson Device Credentials
organization = "zwx6lb"
deviceType = "ABCD"
deviceId = "13"
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")
```

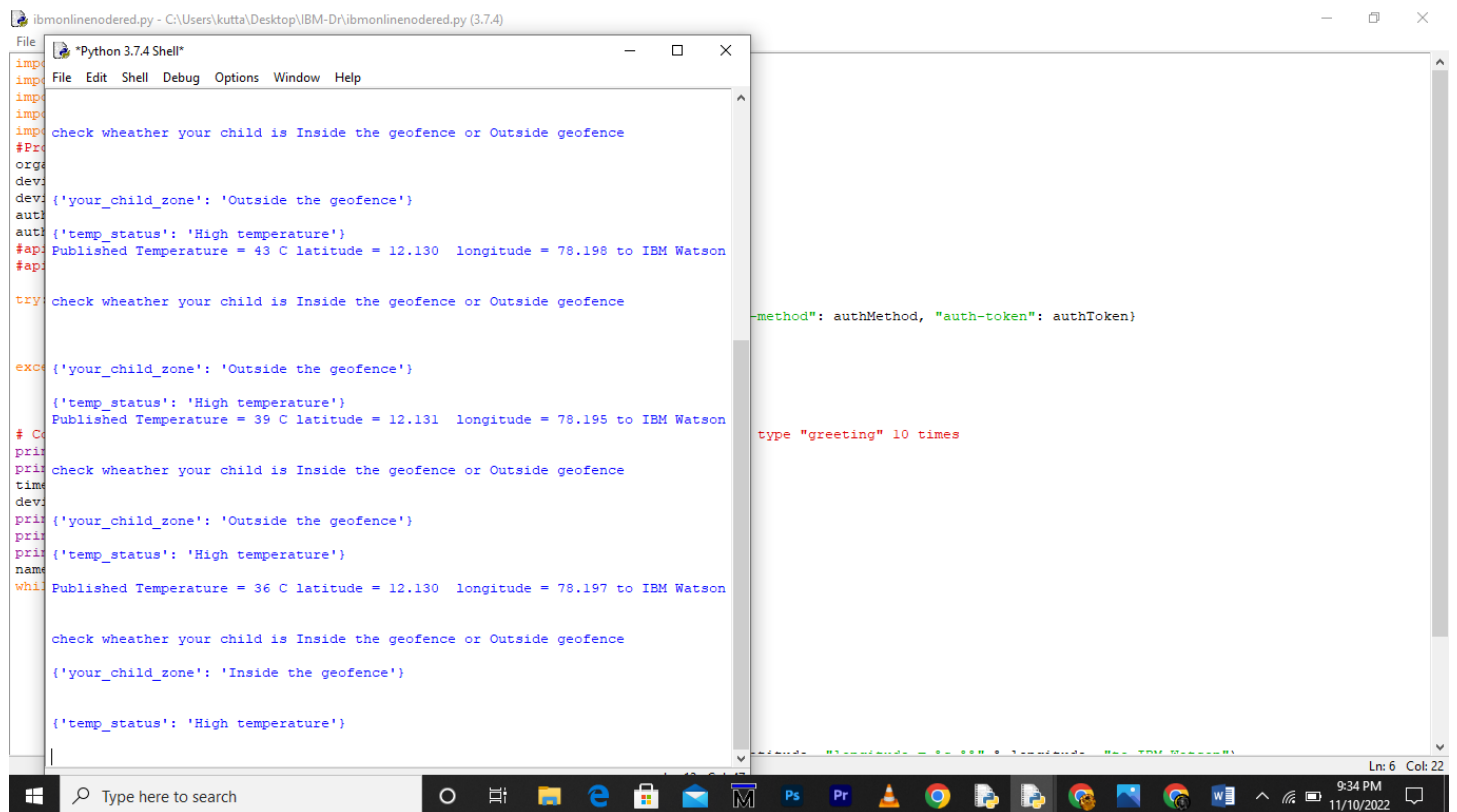
```
print("\n")
```

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

## # Disconnect the device and application from the cloud

```
deviceCli.disconnect()
```

## Connecting IBM Watson and python Code:



The screenshot displays the IBM Watson IoT Platform interface. At the top, the navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search icon is also present. On the right, the user's profile is shown with the email '613519106013@smartinternz.com' and ID 'zwx6lb'. A blue 'Add Device' button is located in the top right corner.

The main content area shows a device named 'ABCD' with a status of 'Connected'. Below the device header, there are tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is selected, displaying a message: 'The recent events listed show the live stream of data that is coming and going from this device.'

A table of recent events is shown below the message:

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"}		

At the bottom of the events table, a status message reads '1 Simulation running'. The bottom of the browser window shows the Windows taskbar with various application icons and the system clock indicating 9:35 PM on 11/10/2022.