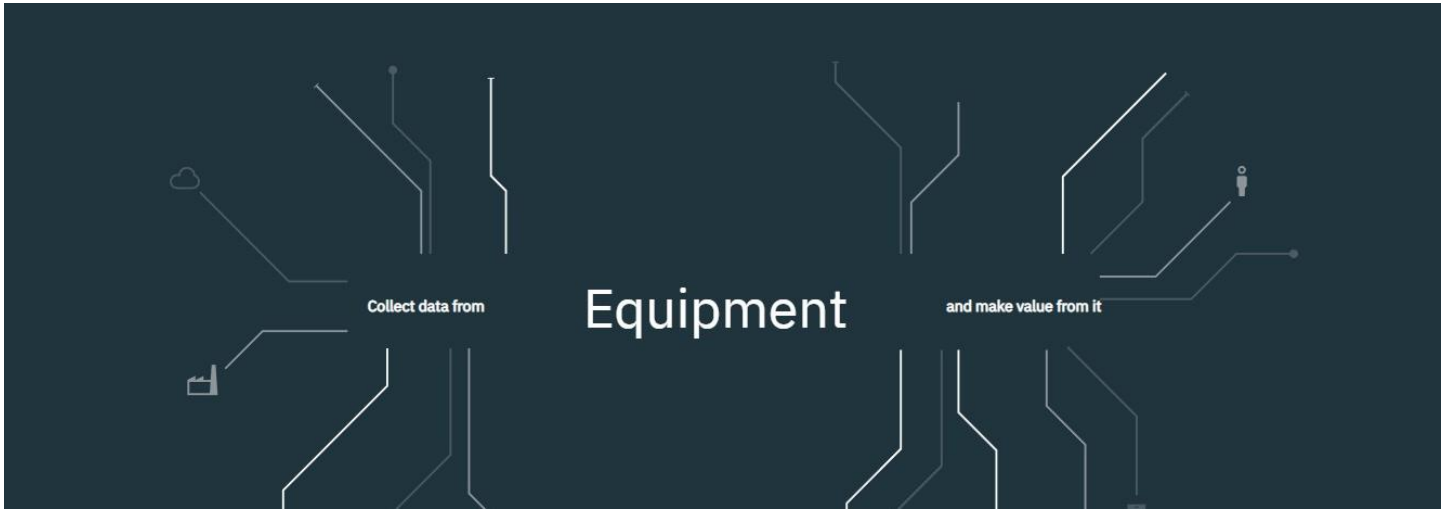# IOT Based Safety Gadget for Child Safety Monitoring and Notification

Project Development –Delivery of Sprint 1
Creating and Connecting IBM cloud for Project and Python Code

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

Creating IBM Cloud Service and creating the device:

Creating Python Code:

```python
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 ")
```

```python
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)
```

```python
    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 IoTF")

      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'}
```

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"}		1 Simulation running
IoTSensorgp...	{"your_child_zone":"Outside the geofence"}		