

## SPRINT 2

<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>	PNT2022TMID17635
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## Creating Node-Red service:

The screenshot shows the Node-RED web interface in a browser. The flow is titled "Flow 1" and starts with an "IBM IoT" node (connected). It branches into several parallel paths:

- A "function" node connected to a "Child name" node (abc) and a "gauge" node.
- A "temp" node connected to a "gauge" node and a "Temperature" node (abc).
- A "temp\_status" node connected to a "temp\_status" node (abc).
- A "latitude" node connected to a "Latitude" node (abc) and a "Latitude" node with a checkmark.
- A "your\_child\_zone" node connected to a "Child Zone" node (abc).
- A "longitude" node connected to a "Longitude" node (abc) and a "Longitude" node with a checkmark.

All these paths converge into a "worldmap" node (connected 0). The right sidebar shows the "debug" console with several log entries, including:

```
11/10/2022, 10:00:45 PM node: 65909d20f5d4648  
iot-2/type/ABCD/id/13/ev/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/ev/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/ev/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/ev/IoTSensorgpsdata/fmt/json :  
msg.payload : Object  
{ temp: 50, lat:  
12.129898691365163, lon:  
78.1971804860123, name: "Child" }
```

The screenshot shows the Node-RED web interface in a browser. The flow is titled "Flow 1" and starts with a "[get] /sensor" node connected to a "function" node, which then connects to an "http" node. The flow also includes several parallel paths:

- A "latitude" node connected to a "Latitude" node (abc) and a "Latitude" node with a checkmark.
- A "your\_child\_zone" node connected to a "Child Zone" node (abc).
- A "longitude" node connected to a "Longitude" node (abc) and a "Longitude" node with a checkmark.

The right sidebar shows the "debug" console with several log entries, including:

```
11/10/2022, 10:01:08 PM node: 65909d20f5d4648  
iot-2/type/ABCD/id/13/ev/IoTSensorgpsdata/fmt/json :  
msg.payload : Object  
{ temp: 44, lat:  
12.132579338848833, lon:  
78.19807517188046, name: "Child" }  
11/10/2022, 10:01:09 PM node: 65909d20f5d4648  
iot-2/type/ABCD/id/13/ev/IoTSensorgpsdata/fmt/json :  
msg.payload : Object  
{ your_child_zone: "Outside the  
geofence" }  
11/10/2022, 10:01:09 PM node: 65909d20f5d4648  
iot-2/type/ABCD/id/13/ev/IoTSensorgpsdata/fmt/json :  
msg.payload : Object  
{ temp_status: "High temperature" }  
11/10/2022, 10:01:09 PM node: 65909d20f5d4648  
iot-2/type/ABCD/id/13/ev/IoTSensorgpsdata/fmt/json :  
msg.payload : Object  
{ temp: 32, lat:  
12.133200423029475, lon:  
78.19856789114048, name: "Child" }
```

# Connecting with IBM Cloud:

## Using IBM IOT node through API key

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo and the user's email address, 613519106013@smartinternz.com, with the ID zwx6lb. The main content area displays a message: "The API key has been added." Below this message, there are two sections: "Generated Details" and "API Key Information".

**Generated Details**

API Key	a-zwx6lb-z7sryerler
Authentication Token	dO&H(qcUv)icaFOYcb

**API Key Information**

Description	-
Role	Standard Application
Expires	Never

A warning icon is present with the text: "Make a note of the generated authentication token. Lost authentication tokens cannot be recovered. If you lose the token, you must reregister the API to generate a new token."

At the bottom of the dashboard, there is a status bar indicating "1 Simulation running".

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo and the user's email address, 613519106013@smartinternz.com, with the ID zwx6lb. The main content area displays a table of API keys. The first key is selected, and its details are shown in a modal window.

Key	Description	Role	Expires
a-zwx6lb-97epyzrfc	-	Standard Application	-

**API Key Information**

Key	a-zwx6lb-97epyzrfc	Last Edited By	613519106013@smartinternz.com
Description	-	Expires	Never
Date Added	Nov 7, 2022 5:54 PM		
Last Update	Nov 7, 2022 5:54 PM		

At the bottom of the dashboard, there is a status bar indicating "1 Simulation running".



# Transferring values from Python Code:

```
Child Safety device.py - C:/Users/kutta/Desktop/IBM-Dr/Child Safety device.py (3.7.4)
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 = "illzal"
deviceType = "latlonstem"
deviceId = "613510"
authMethod = "token"
authToken = "1092837465"
#api key {a-illzal-mbdxqo6z0s}
#api token {zSyzISuAWf6F_x7GkT}

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

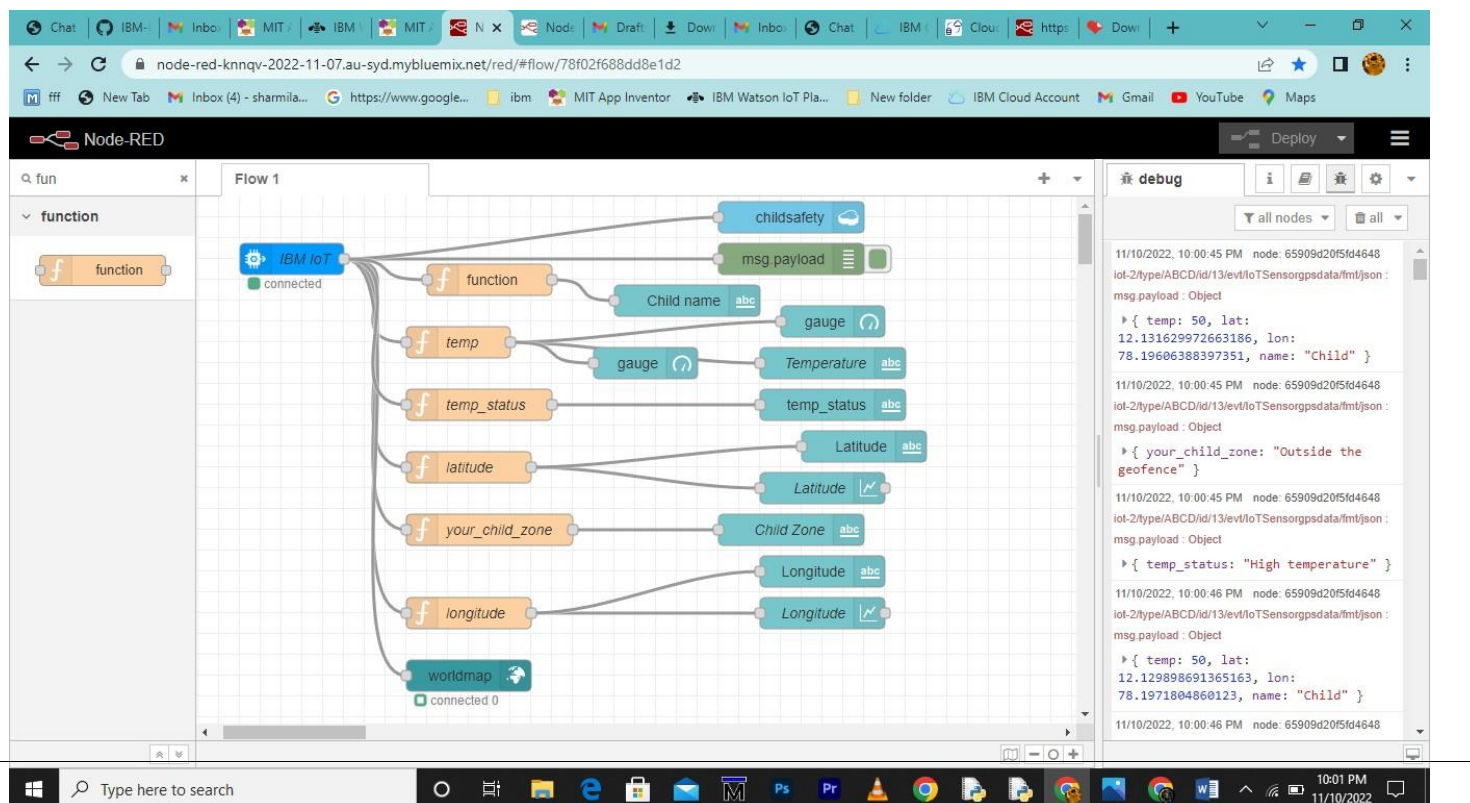
    data = { 'temp' : temperature, 'lat': latitude, 'lon':longitude, 'name':name }
    #print data
    def myOnPublishCallback():
        print("Published Temperature = %s C latitude = %s longitude = %s name = %s" % (temperature, latitude, longitude, name))

Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64-bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/kutta/Desktop/IBM-Dr/Child Safety device.py =====
power on
checking connection to waston iot...
2022-11-10 22:14:21,799 ibmiotf.device.Client INFO Connected successfully: d:illzal:latlonstem:613510
dear user ... welcome to IBM-IOT
i can provide your children live location and temperature

enter your child name:child
Published Temperature = 39 C latitude = 10.782749628132827 & longitude = 79.1867253162 & to IBM Watson
Published Temperature = 39 C latitude = 10.782669248109656 & longitude = 79.1255540076 & to IBM Watson
Published Temperature = 43 C latitude = 10.781765104656792 & longitude = 79.077864707 & to IBM Watson
Published Temperature = 30 C latitude = 10.786083936690018 & longitude = 79.2366715787 & to IBM Watson
Published Temperature = 31 C latitude = 10.784810558975826 & longitude = 79.0117359415 & to IBM Watson
Published Temperature = 45 C latitude = 10.785949922923024 & longitude = 79.5563867668 & to IBM Watson
Published Temperature = 24 C latitude = 10.784168891438233 & longitude = 79.9528906442 & to IBM Watson
Published Temperature = 23 C latitude = 10.786248060883958 & longitude = 79.4368596464 & to IBM Watson
Published Temperature = 27 C latitude = 10.783808327214418 & longitude = 79.951933729 & to IBM Watson
Published Temperature = 43 C latitude = 10.786340416981865 & longitude = 79.7748803969 & to IBM Watson
Published Temperature = 49 C latitude = 10.786208956579015 & longitude = 79.2192551409 & to IBM Watson
Published Temperature = 45 C latitude = 10.783690544907325 & longitude = 79.504415061 & to IBM Watson
```

# Node-Red:



# Node-Red Dashboard:

