

Safety Gadget for Child Safety Monitoring and Notification

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Project Development –Delivery of Sprint 2

Creating Node –Red service and connect with IBM cloud and Web UI

TITLE	IOT based child safety gadget for child safety monitoring and notification
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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.

At the bottom of the flow, there is 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" }  
  
11/10/2022, 10:00:46 PM node: 65909d20f5d4648
```

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 0). It branches into 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.

At the bottom of the flow, there is a "worldmap" node (connected 0). 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" }  
  
11/10/2022, 10:01:10 PM node: 65909d20f5d4648
```

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 ID: 613519106013@smartinternz.com. The main content area displays a success 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 and text state: "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, a status bar indicates "1 Simulation running".

The screenshot shows the IBM Watson IoT Platform dashboard with the "Browse API Keys" page. The top navigation bar includes the IBM logo and the user ID: velmuruganb.ug19.ec@mtcc.ac.in. The main content area displays a table of API keys.

Browse API Keys

This table shows a summary of the API keys that have been added for the organization. It can be filtered, organized, and search on using different criteria. To get started, you can add API keys by clicking Generate API Key, or by using the API. For more information about adding API keys, see [API key connection](#).

Key	Description	Role	Expires
a-hrsq7i-kmzwfsgye7	Bound to Bluemix Application	Standard Application	-

1 result

API Key Information

Key	a-hrsq7i-kmzwfsgye7	Last Edited By	-
Description	Bound to Bluemix Application	Expires	Never
Date Added	Nov 10, 2022 8:18 PM		
Last Update	Nov 10, 2022 8:18 PM		

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 = "latlonitem"
deviceId = "613510"
authMethod = "token"
authToken = "1092837465"
#api key {a-illzal-mbdxqo6z0s}
#api token {zSYzISuAWFxF_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=str(input("enter your child name:"))
while True:

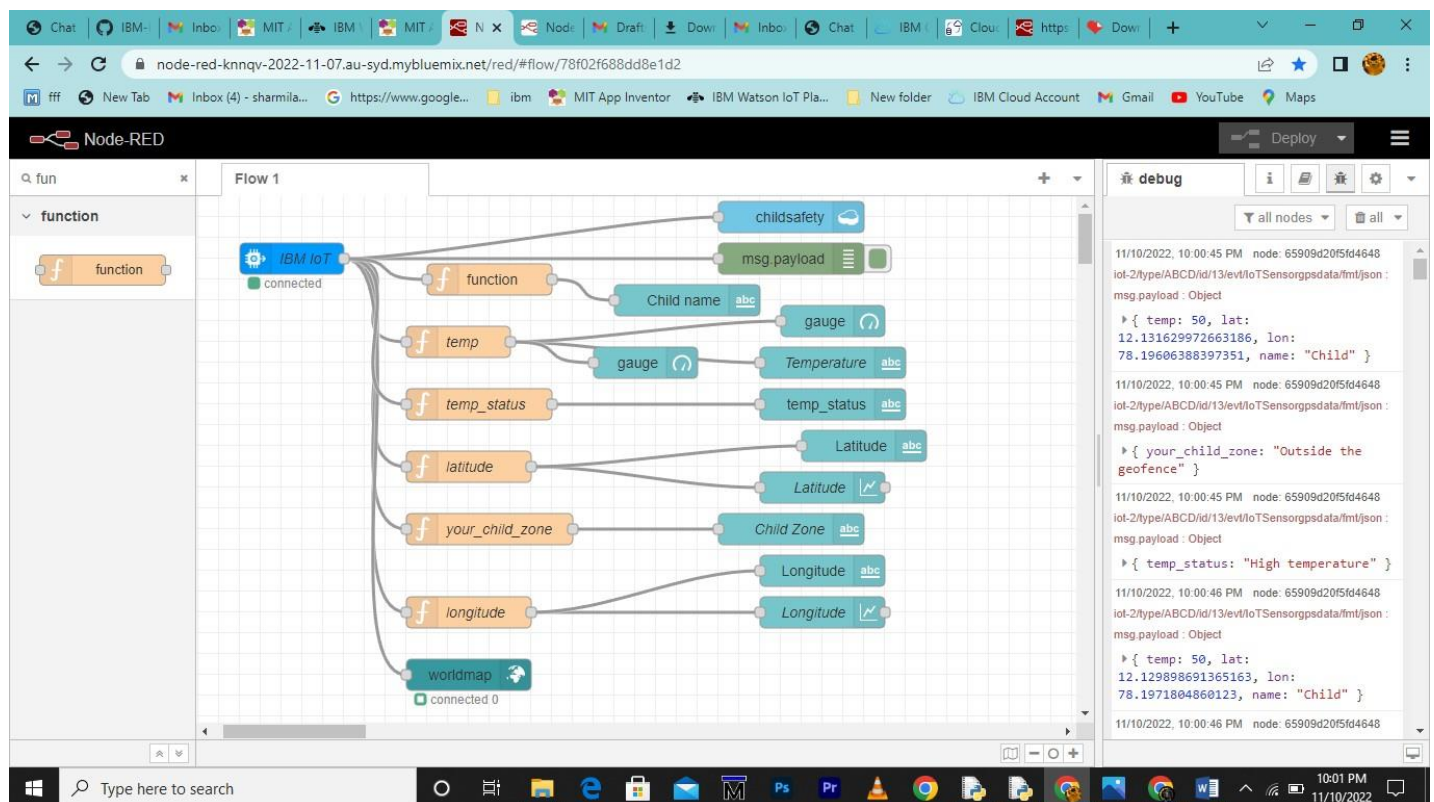
    temperature=random.randint(20,50)#random temperature for your child
    latitude=random.uniform(10.781377,10.78643)#random latitude for your child
    longitude=random.uniform(79.129113,79.134014)#random longitude for your child

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

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 success
11y: d:illzal:latlonitem: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 = 79.867253162 & to IBM Watson
Published Temperature = 39 C latitude = 10.782669248109656 & longitude = 79.1255540076 & to IBM Watson
Published Temperature = 43 C latitude = 10.781765104656792 & longitude = 79.077964707 & 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:

