

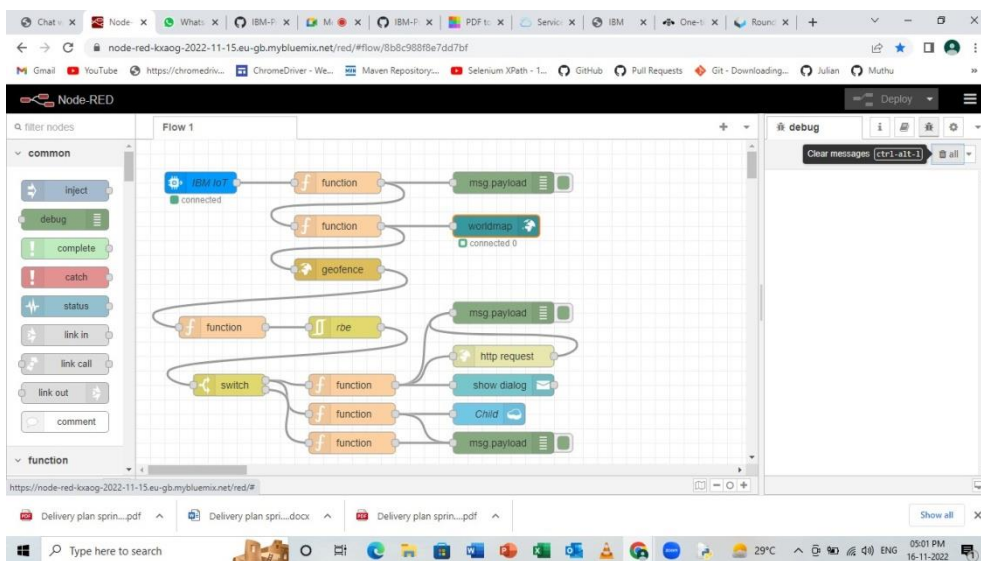
# Project Development – Sprint-3

## IoT Based Safety Gadget for Child Safety Monitoring & Notification

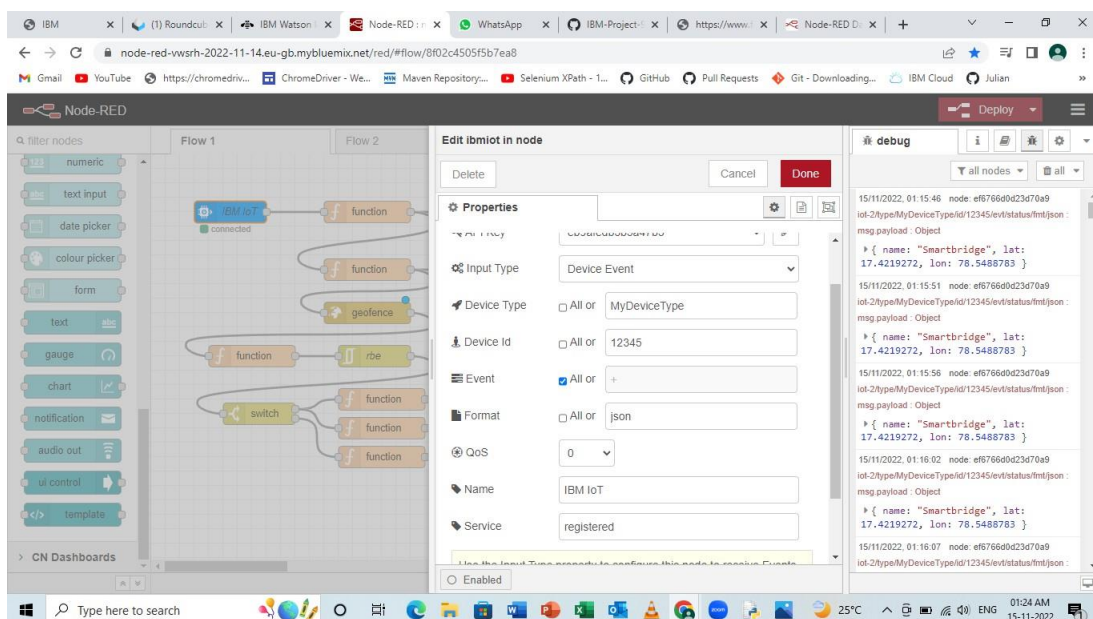
Date	14-11-2022
Team ID	PNT2022TMID27152
Project Name	Project - IOT based safety gadget for child safety monitoring and notification
Maximum Marks	4 Marks

## Creating Node-Red service and connecting with IBM cloud

### Creating Node-Red service:



### Codes in each Node:



Node-RED interface showing a flow with an IBM IoT node connected to a function node. The function node code is:

```
1 var name = msg.payload.name
2 var lat = msg.payload.lat
3 var lon = msg.payload.lon
4 global.set('latitude',lat)
5 global.set('longitude',lon)
6 global.set('name',name)
7 return msg;
```

The debug console shows messages from the IoT node:

```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:36 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:54 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:59 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:20:04 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```

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3 var lon = msg.payload.lon
4 global.set('latitude',lat)
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16/11/2022, 00:19:54 node: cbc7c03a562d6099
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msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:59 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:20:04 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```

Node-RED interface showing a flow with an IBM IoT node connected to a function node. The function node code is:

```
1 msg.payload = {
2   "name": global.get('name'),
3   "lat": global.get('latitude'),
4   "lon": global.get('longitude')
5 }
6 return msg;
```

The debug console shows messages from the IoT node:

```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:36 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:54 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:19:59 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 00:20:04 node: cbc7c03a562d6099
iot-2typeMyDeviceTypeid/12345ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```

node-red-kxaog-2022-11-15.eu-gb.mybluemix.net/red/#flow/8b8c988f8e7dd7bf

Node-RED

Flow 1

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function

Edit worldmap node

Properties

- Group: [Child Tracker] Map
- Size: auto
- Start: Latitude 17.4226372, Longitude 78.5456505, Zoom 16
- Map list: 7 selected
- Base map: ESRI Satellite
- Overlays: 5 selected
- Cluster when zoom level is less than 0 (0, off - 19)
- Max age: Remove markers after 600 seconds
- Enabled

debug

```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:09:42 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:09:47 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:09:52 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:09:56 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```

node-red-kxaog-2022-11-15.eu-gb.mybluemix.net/red/#flow/8b8c988f8e7dd7bf

Node-RED

Flow 1

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function

Edit geofence node

Properties

Map

Enabled

debug

```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:13:21 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:13:26 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:13:31 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:13:36 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/evl/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```



Node-RED interface showing a flow with an IBM IoT node connected to a function node. The function node is being edited, showing the following code:

```
1 msg.payload=msg.location.inarea
2 return msg;
```

The debug console shows the following log entries:

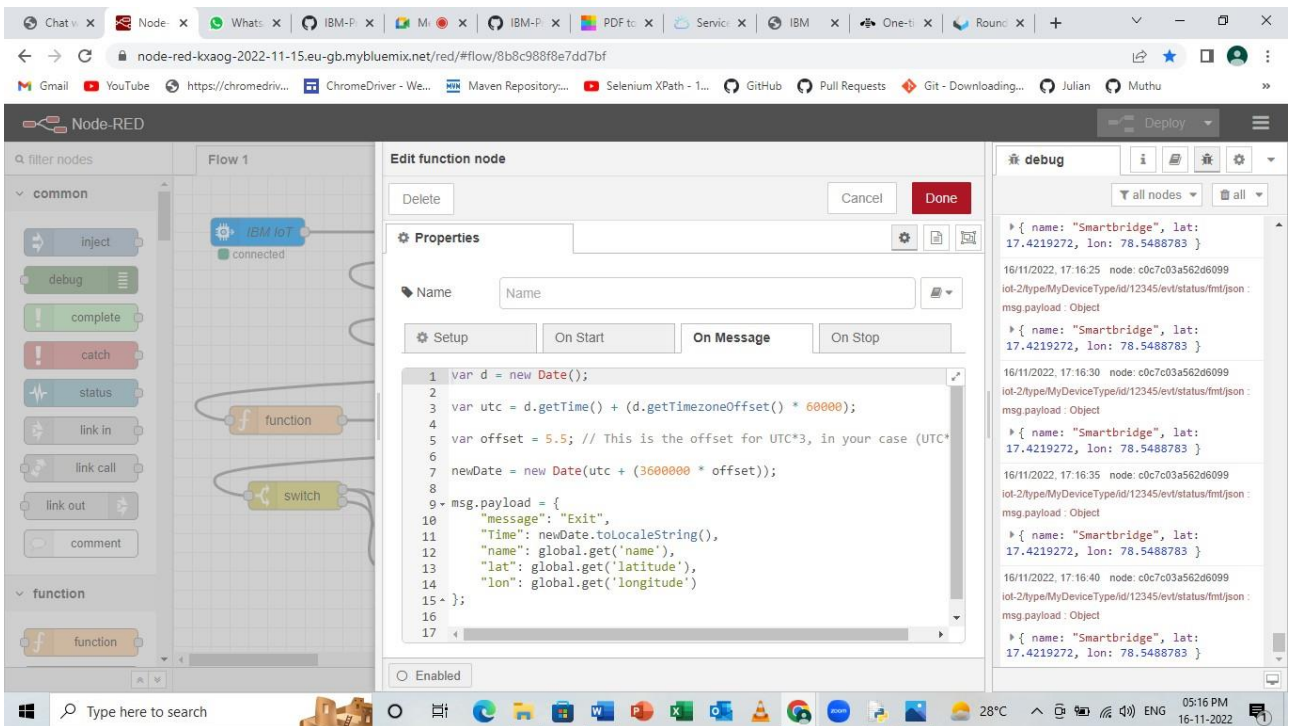
```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:14:07 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:14:12 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:14:17 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:14:22 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```

Node-RED interface showing a flow with an IBM IoT node connected to a function node. The function node is being edited, showing the following code:

```
1 msg.payload=msg.location.inarea
2 return msg;
```

The debug console shows the following log entries:

```
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:14:58 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:15:03 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:15:08 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
16/11/2022, 17:15:13 node: c0c7c03a562d6099
iot-2/type/MyDeviceType/id/12345/ev/status/fmt/json :
msg.payload : Object
{ name: "Smartbridge", lat: 17.4219272, lon: 78.5488783 }
```



Node-RED interface showing a flow with an IBM IoT node connected to a function node. The "Edit http request node" dialog is open, showing properties: Method (GET), URL (https://www.fast2sms.com/dev/bulkV2/authorizati), Payload (ignore), and Name (Name). The debug console shows messages from "Smartbridge" with latitude and longitude coordinates.

Node-RED interface showing the same flow. The "Edit notification node" dialog is open, showing properties: Layout (OK / Cancel Dialog), Send to all browser sessions (checked), Default action label (OK), and Name (Name). The debug console shows messages from "Smartbridge" with latitude and longitude coordinates.

Node-RED interface showing the same flow. The "Edit cloudant out node" dialog is open, showing properties: Service (External cloudant or couchdb service), Server (https://6fa49715-1aad-4426-aa9a-6857), Database (sample), Operation (insert), and Name (Child). The debug console shows messages from "Smartbridge" with latitude and longitude coordinates.



# Connecting with IBM Cloud: Using IBM IOT node through the API key

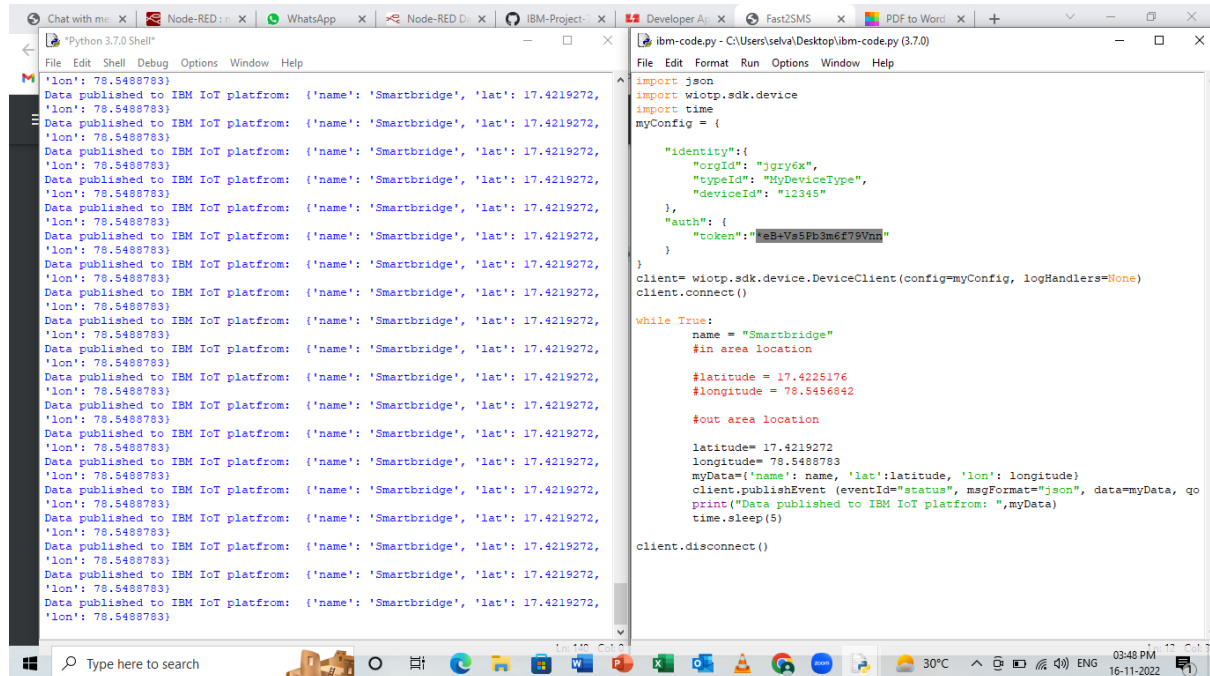
The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo, a search bar, and the user's profile (juliathomaspeniel16@gmail.com, ID: jgry6x). The main content area is titled "IBM Cloud Apps" and features a "Generate API Key" button. Below this, a table lists API keys. One key is visible, with details expanded in the "API Key Information" section.

Key	Description	Role	Expires
a-jgry6x-vocdjs6jzm	-	Standard Application	-

**API Key Information**

Key	a-jgry6x-vocdjs6jzm	Last Edited By	juliathomaspeniel16@gmail.com
Description	-	Expires	Never
Date Added	15 Nov 2022 23:40		
Last Update	15 Nov 2022 23:40		

## Transferring values from Python Code:



## Node-Red:

