

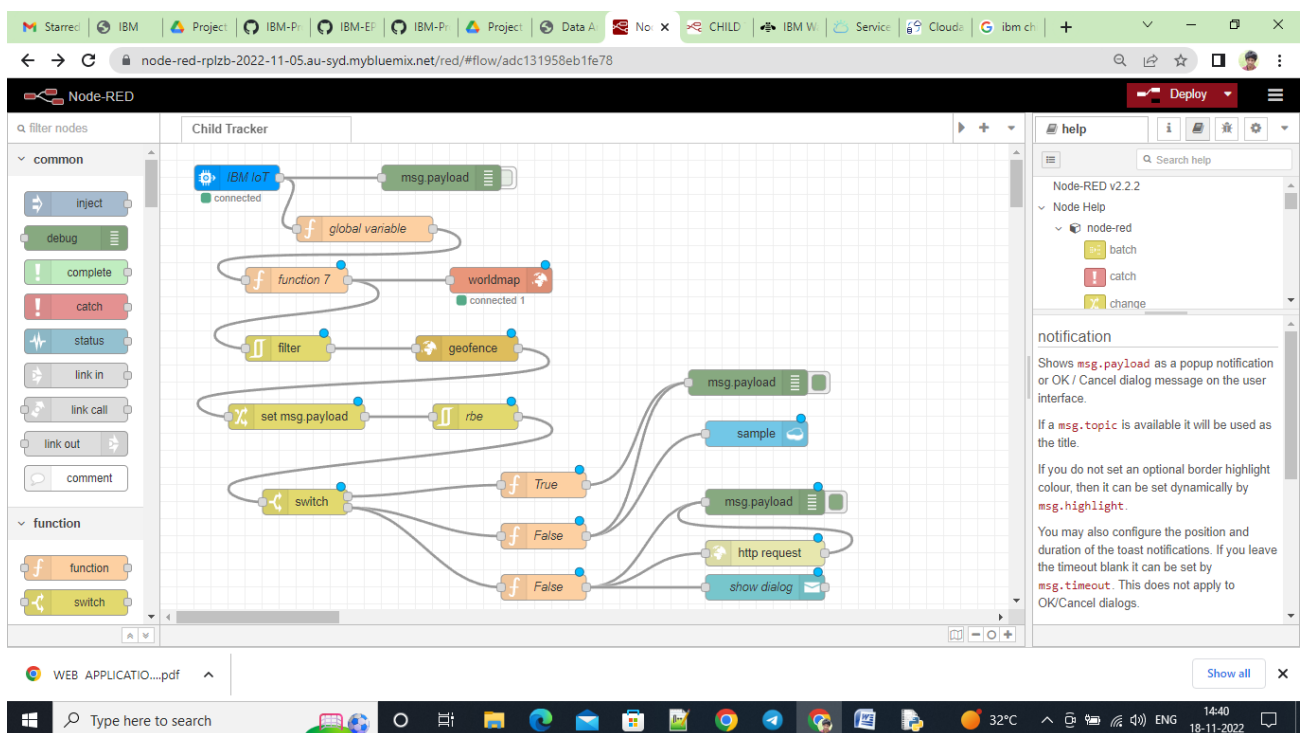
## Project Development Phase

### Project Development Delivery of Sprint 3

Date	08 November 2022
Team ID	PNT2022TMID13499
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and Notification
Maximum Marks	4 Marks

### IoT Based Safety Gadget for Child Safety Monitoring and Notification :

### WEB APPLICATION USING NODE-RED :



### CODE FOR GLOBAL VARIABLE NODE:

Node-RED interface showing the 'Edit function node' dialog for a node named 'global variable'. The code in the 'On Message' tab is:

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

The help panel on the right explains the 'function' node and the 'msg' object.

## CODE FOR FUNCTION 7 NODE:

Node-RED interface showing the 'Edit function node' dialog for a node named 'function 7'. The code in the 'On Message' tab is:

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

The help panel on the right explains the 'function' node and the 'msg' object.

## WORLD MAP:

S

Node-RED interface showing the 'Edit worldmap node' dialog. The dialog includes properties for Start (Latitude: 11.7345, Longitude: 78.202, Zoom: 9), Map list (1 selected), Base map (OpenStreetMap), Overlays (6 selected), Cluster when zoom level is less than 0, Max age (600 seconds), User menu (Show), Layer menu (Hide), Lock map (False), Lock zoom (False), Auto-pan (Disable), and Right click (Disable). The 'Enabled' checkbox is checked. The background shows a Node-RED flow with nodes like 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', 'comment', 'function', and 'switch'.

## GEOFENCE :

Node-RED interface showing the 'Edit geofence node' dialog. The dialog includes properties for Floor (ground), Ceiling (infinity), Action (add 'inarea' property), Enable output of zones to WorldMap node (unchecked), Name (Geofence name), and a checkbox for 'Enabled'. The background shows a Node-RED flow with nodes like 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', 'comment', 'function', and 'switch'.

## SET.MSG.PAYLOAD:

The screenshot displays the Node-RED web interface in a browser. The main workspace shows a flow titled 'Child Tracker' with several nodes: 'IBM IoT' (connected), 'global variable', 'function 7', 'worldmap' (connected 1), 'filter', 'geofence', 'set msg payload', 'rbe', 'switch', and 'True'/'False' function nodes. The 'set msg payload' node is selected, and the 'Edit change node' dialog is open. In the 'Properties' section, the 'Name' field is empty. The 'Rules' section shows a single rule: 'Set' with 'msg: payload' as the target and 'to the value' as the source. The 'Deep copy value' checkbox is unchecked. The 'Enabled' checkbox is checked. The right sidebar shows the 'help' panel with a search bar and a list of nodes. The 'change' node is highlighted, and its description is visible: 'Set, change, delete or move properties of a message, flow context or global context. The node can specify multiple rules that will be applied in the order they are defined. Details: The available operations are: Set: set a property. The value can be a variety of different types, or can be taken from an existing message or context property. Change: search & replace parts of the property. If regular expressions are enabled, the'.

## SWITCH:

The screenshot displays the Node-RED web interface in a browser. The main workspace shows the same 'Child Tracker' flow as the previous screenshot. The 'switch' node is selected, and the 'Edit switch node' dialog is open. In the 'Properties' section, the 'Name' field is empty. The 'Property' dropdown is set to 'msg: payload'. The 'Rules' section shows two rules: 'is true' with a count of '1' and 'is false' with a count of '2'. The 'checking all rules' dropdown is set to 'checking all rules'. The 'recreate message sequences' checkbox is unchecked. The 'Enabled' checkbox is checked. The right sidebar shows the 'help' panel with a search bar and a list of nodes. The 'switch' node is highlighted, and its description is visible: 'Route messages based on their property values or sequence position. Details: When a message arrives, the node will evaluate each of the defined rules and forward the message to the corresponding outputs of any matching rules. Optionally, the node can be set to stop evaluating rules once it finds one that matches. The rules can be evaluated against an individual message property, a flow or global context property, environment variable or the result of a JavaScript expression'.

## TRUE NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow titled 'Child Tracker' with nodes including 'IBM IoT', 'global variable', 'function 7', 'filter', 'set msg payload', and 'switch'. The 'Edit function node' dialog is open, showing the 'Properties' tab with the name 'True'. The 'On Message' tab is selected, displaying the following JavaScript code:

```
1 var d=new Date();
2 var utc=d.getTime() + (d.getTimezoneOffset() * 60000);
3 var offset=5.5;
4 var newDate = new Date(utc + (3600000*offset));
5 msg.payload={
6   "message":"Entry",
7   "Date and Time":newDate.toLocaleString(),
8   "name":global.get('name'),
9   "lat":global.get('latitude'),
10  "lon":global.get('longitude')
11 };
12 return msg;
```

The right sidebar shows the 'help' panel for the 'function' node, explaining its purpose and usage. The bottom of the screen shows the Windows taskbar with the search bar and system tray.

## FALSE NODE:

The screenshot shows the Node-RED web interface in a browser, similar to the first one. The 'Edit function node' dialog is open, but the name is set to 'False'. The 'On Message' tab is selected, displaying the following JavaScript code:

```
1 var d=new Date();
2 var utc=d.getTime() + (d.getTimezoneOffset() * 60000);
3 var offset=5.5;
4 var newDate = new Date(utc + (3600000*offset));
5 msg.payload={
6   "message":"Exit",
7   "Date and Time":newDate.toLocaleString(),
8   "name":global.get('name'),
9   "lat":global.get('latitude'),
10  "lon":global.get('longitude')
11 };
12 return msg;
```

The right sidebar shows the 'help' panel for the 'function' node, explaining its purpose and usage. The bottom of the screen shows the Windows taskbar with the search bar and system tray.

## FALSE NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow titled 'Child Tracker'. The flow starts with an 'IBM IoT' node connected to a 'global variable' node, which then connects to a 'function 7' node. The 'function 7' node is configured with the following JavaScript code:

```
1 msg.payload={
2   "message": "Person is not in the specified area"
3 };
4
5 return msg;
```

The 'Edit function node' dialog is open, showing the 'On Message' tab. The 'Name' field is set to 'False'. The 'Enabled' checkbox is checked. The right sidebar shows the 'function' node type selected in the help panel.

## SAMPLE NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow titled 'Child Tracker'. The flow starts with an 'IBM IoT' node connected to a 'global variable' node, which then connects to a 'function 7' node. The 'function 7' node is configured with the following JavaScript code:

```
1 msg.payload={
2   "message": "Person is not in the specified area"
3 };
4
5 return msg;
```

The 'Edit cloudant out node' dialog is open, showing the 'Properties' tab. The 'Service' field is set to 'node-red-norfo-2022-11-05-au-syd.mybluemix.net'. The 'Database' field is set to 'sample'. The 'Operation' field is set to 'insert'. The 'Only store msg.payload object?' checkbox is checked. The 'Name' field is set to 'Name'. The 'Enabled' checkbox is checked. The right sidebar shows the 'cloudant out' node type selected in the help panel.



## SHOW DIALOG NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace contains a flow with several nodes: 'IBM IoT' (connected), 'global variable', 'function 7', 'worldmap' (connected 1), 'filter', 'geofence', 'set msg.payload', 'rbe', and a 'switch' node with three outgoing paths labeled 'True' and 'False'. The left sidebar shows the 'filter nodes' category with various common and function nodes. The right sidebar shows the 'Edit notification node' configuration panel. The 'Properties' section includes a 'Layout' dropdown set to 'OK / Cancel Dialog', a checked 'Send to all browser sessions' option, a 'Default action label' of 'OK', and a 'Secondary action label' (optional). There are checkboxes for 'Accept raw HTML/JavaScript input in msg.payload to format popup.' and 'Class' set to '[msg.className]'. The 'Topic' is 'Person is not in the specified area' and the 'Name' is 'show dialog'. A note at the bottom states: 'Note: checking Accept raw HTML/JavaScript can allow injection of code. Ensure the input comes from trusted sources.' The rightmost sidebar shows the 'notification' node help text, which describes its function and configuration options.

## HTTP REQUEST NODE:

The screenshot shows the Node-RED web interface in a browser, similar to the first image. The main workspace contains the same flow. The left sidebar is identical. The right sidebar shows the 'Edit http request node' configuration panel. The 'Properties' section includes a 'Method' dropdown set to 'GET', a 'URL' field with the value 'https://www.fast2sms.com/dev/bulkV2?authorizati', and a 'Payload' dropdown set to 'Send as request body'. There are checkboxes for 'Enable secure (SSL/TLS) connection', 'Use authentication', 'Enable connection keep-alive', 'Use proxy', and 'Only send non-2xx responses to Catch node'. The 'Return' dropdown is set to 'a UTF-8 string' and the 'Name' field is 'Name'. The rightmost sidebar shows the 'http request' node help text, which describes its function and configuration options.