

## Sprint – 4

Team ID: PNT2022TMID49056

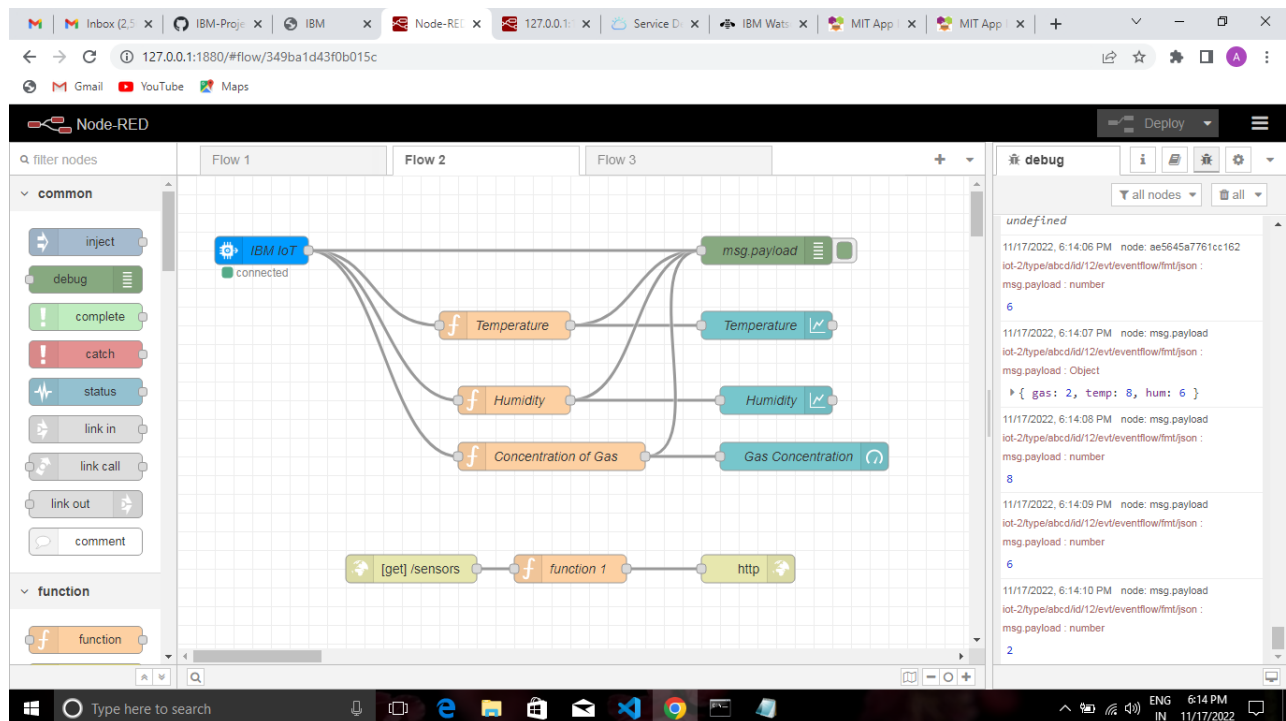
### Task:

To receive the data from Node-RED to the Mobile App developed Using MIT App Inventor.

### Procedure:

1. In Node-RED **http** node is added to post the data gathered from IBM Watson IoT Platform to a webpage.
2. Screen – 3 is developed to gather data from the website where the data is published by Node-RED.
3. In case of abnormal environmental conditions. An alert message is generated by MIT App.

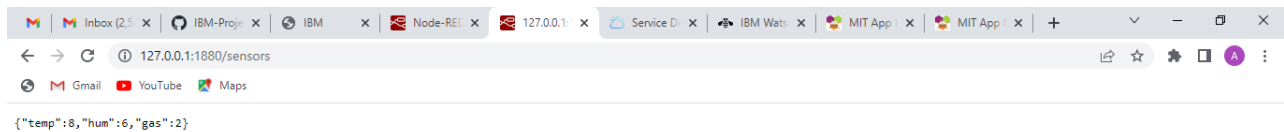
### 1. Node-RED:



## **Function1 in node-red:**

This function is responsible to post the sensor data to the webpage from where the data is gathered by MIT App.

## **2. Web page:**



## **3. MIT App:**

Blocks for screen 3 has been developed.

Blocks are capable of generating notification when,

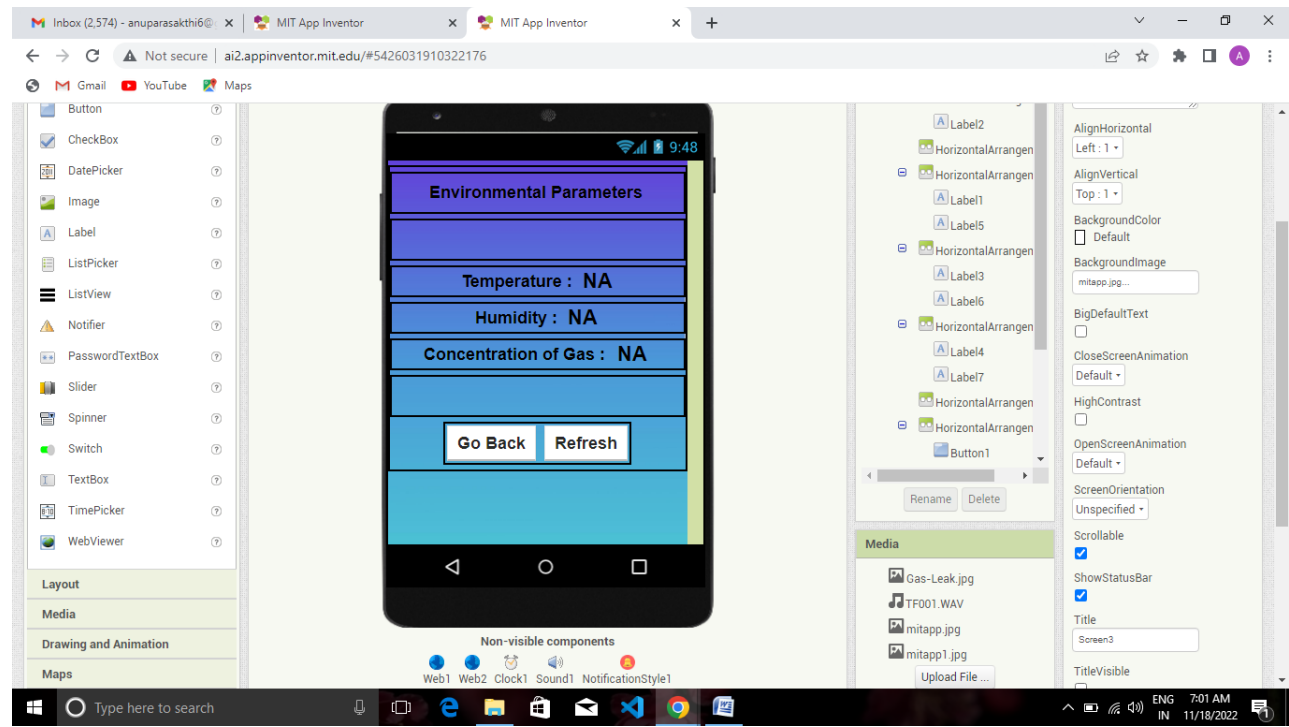
Temperature is greater than 40°C

Humidity is greater than 30%

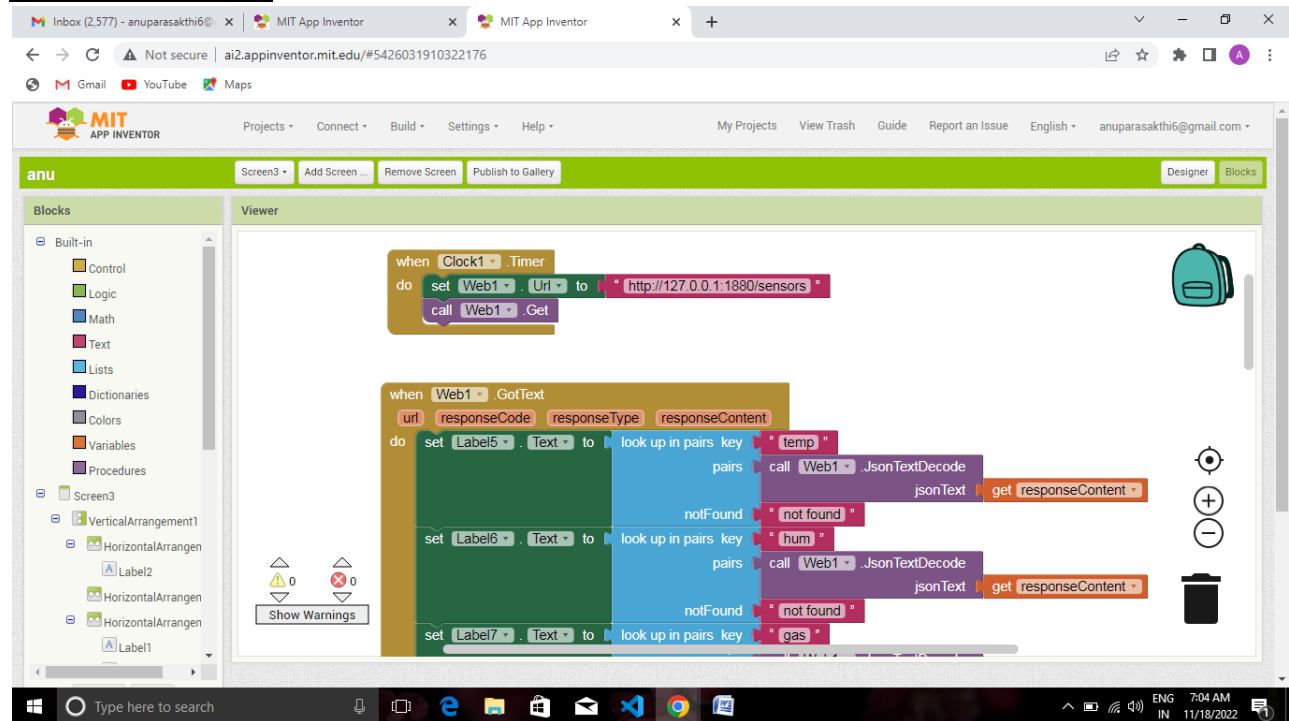
Concentration of gas is greater than 50%

Not only notification, this also rings an alarm whenever abnormal

## Screen3:



## Screen3 Blocks:



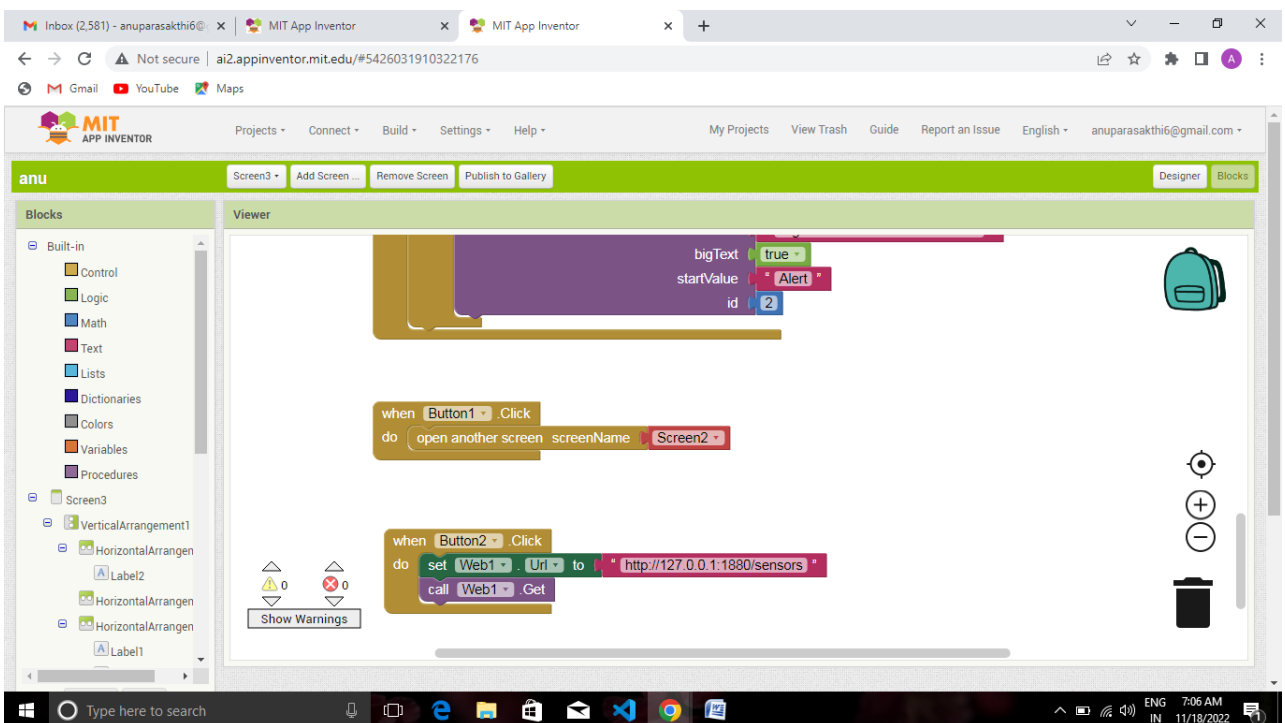
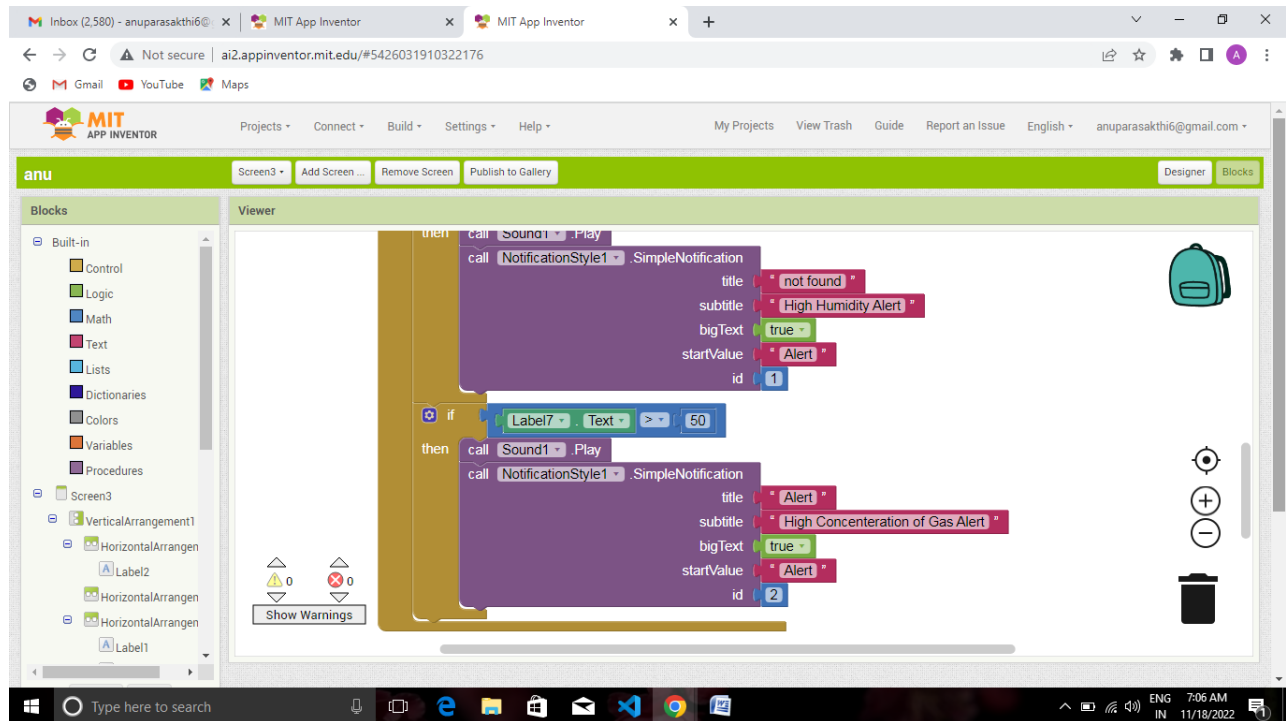
## Screen 3 (Blocks):

This screenshot shows the MIT App Inventor interface for a project named 'anu'. The 'Blocks' panel on the left lists various categories: Built-in, Control, Logic, Math, Text, Lists, Dictionaries, Colors, Variables, Procedures, and Screen3. Under Screen3, there are sub-categories: VerticalArrangement1, HorizontalArrangement, Label2, HorizontalArrangement, and Label1. The 'Viewer' panel on the right displays a sequence of blocks for a 'when Web1 GotText' event. The blocks are: a 'do' loop containing three 'set LabelX Text to look up in pairs key' blocks (for 'temp', 'hum', and 'gas'), each followed by a 'call Web1 JsonTextDecode' block and a 'jsonText get responseContent' block. Below the 'do' loop is an 'if Label5 Text > 40' block. If true, it calls 'Sound1 Play' and 'NotificationStyle1 SimpleNotification'.

```
when Web1 GotText
do
  set Label5 Text to look up in pairs key temp
  call Web1 JsonTextDecode
  jsonText get responseContent
  set Label6 Text to look up in pairs key hum
  call Web1 JsonTextDecode
  jsonText get responseContent
  set Label7 Text to look up in pairs key gas
  call Web1 JsonTextDecode
  jsonText get responseContent
  if Label5 Text > 40
  then
    call Sound1 Play
    call NotificationStyle1 SimpleNotification
```

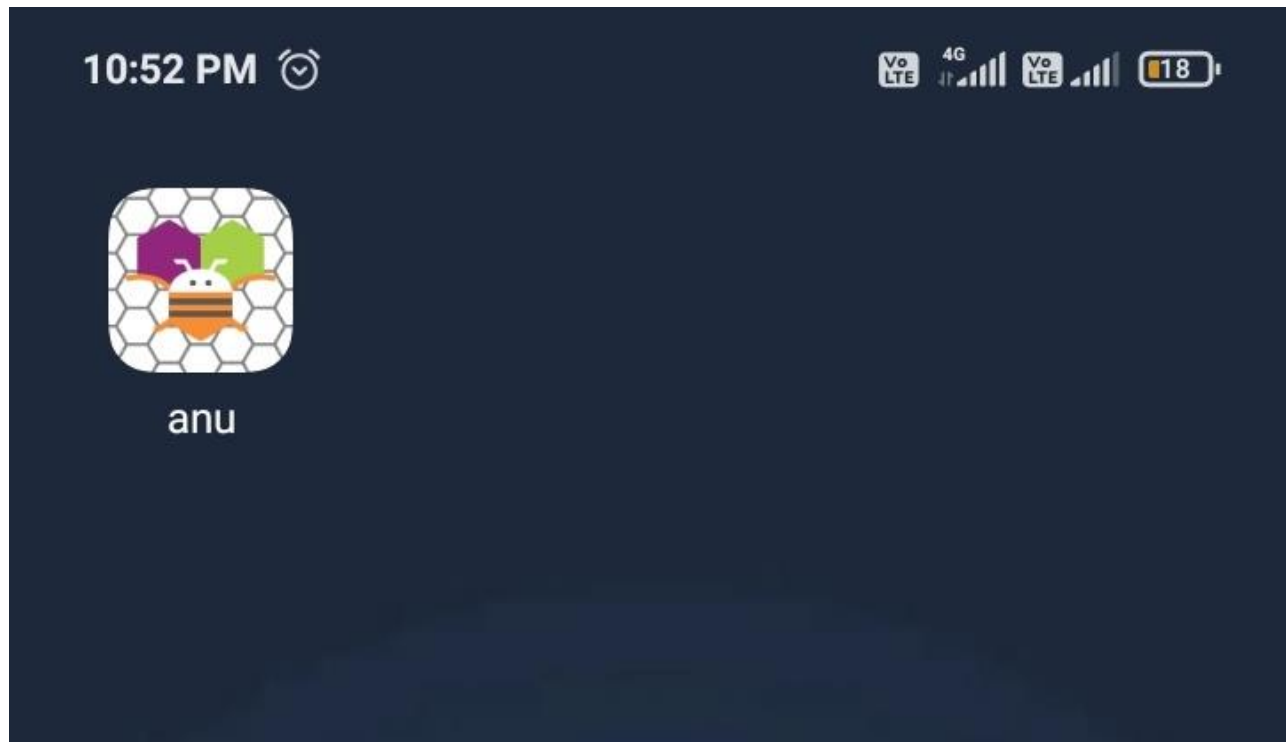
This screenshot shows the MIT App Inventor interface for the same project 'anu'. The 'Blocks' panel is the same as in the previous screenshot. The 'Viewer' panel shows a different sequence of blocks. It starts with an 'if Label5 Text > 40' block. If true, it calls 'Sound1 Play' and 'NotificationStyle1 SimpleNotification' with title 'Alert', subtitle 'High Temperature Alert', bigText 'true', startValue '1', and id '0'. Below this is another 'if Label6 Text > 30' block. If true, it calls 'Sound1 Play' and 'NotificationStyle1 SimpleNotification' with title 'not found', subtitle 'High Humidity Alert', bigText 'true', startValue 'Alert', and id '1'.

```
if Label5 Text > 40
then
  call Sound1 Play
  call NotificationStyle1 SimpleNotification
  title Alert
  subtitle High Temperature Alert
  bigText true
  startValue 1
  id 0
  if Label6 Text > 30
  then
    call Sound1 Play
    call NotificationStyle1 SimpleNotification
    title not found
    subtitle High Humidity Alert
    bigText true
    startValue Alert
    id 1
```



These above written blocks are responsible for bringing the data to the mobile app and to generate alarms incase of emergency.

## Application in Mobile:



### Screen3 in Mobile:

