# SPRINT-3

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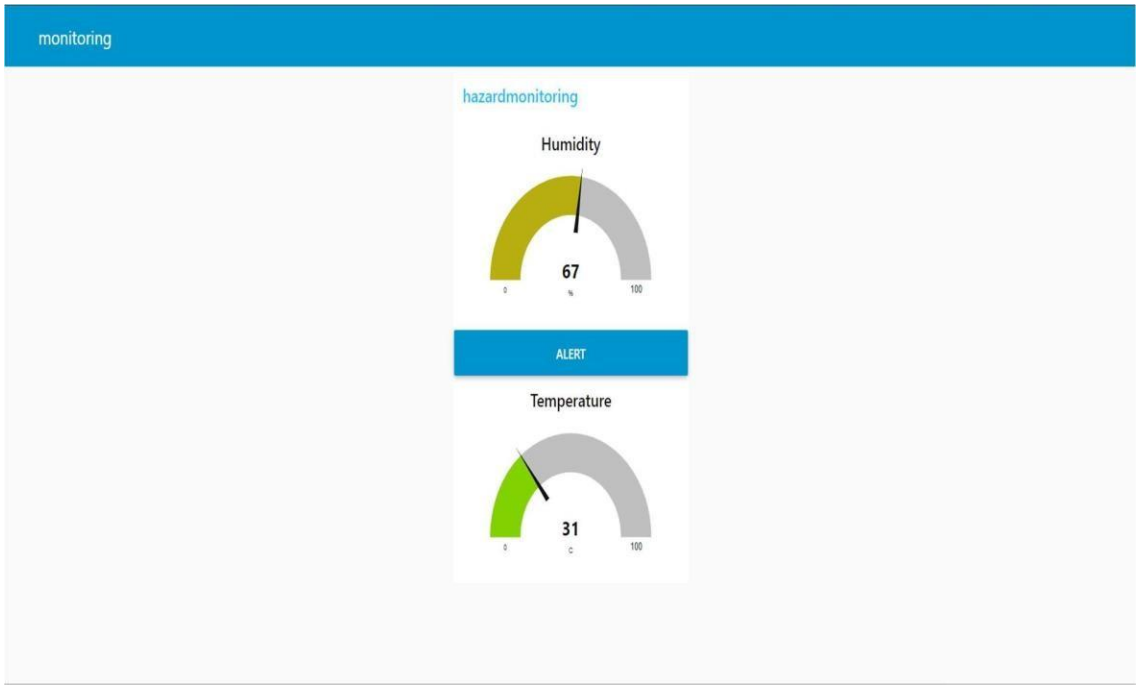
|---|---|
| Team ID | PNT2022TMID41855 |
| Project Name | Hazardous Area Monitoring forindustrial Plant powered by IoT |

## Python code for the Temperature Alert and Humidity check

```
import time import sys
import ibmiotf.application
import ibmiotf.device
import random
# Initialize GPIO

#Provide your IBM Watson Device
Credentials organization = "0vbvyp"
deviceType = "hazardous_monitoring"
deviceId = "hazard_report" authMethod =
"token" authToken =
"7jZ6JKfpj!Cq7tTO5M"

def myCommandCallback(cmd):     print("Command
received: %s" % cmd.data['command'])
Status=cmd.data['command']     if Status=="Alert":
print("Alert")
 #print(cmd)

try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method":
authMethod, "auth-token": authToken}
        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 "greeting" 10 times
deviceCli.connect()
while True:
    #Get Sensor Data from DHT11
temp  =random.randint(0,100)
humid =random.randint(0,100)
oxygen =random.randint(0,100)

    data = { 'temp' : temp, 'humidity': humid ,'oxygen': oxygen}
data1 = { 'High temperature' : temp>60}
    #print data      def
myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "humidity = %s %%" % humid,"alert",  "to IBM Watson")
     success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)

 if not success:          print("Not
connected to IoTF") time.sleep(1)
    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

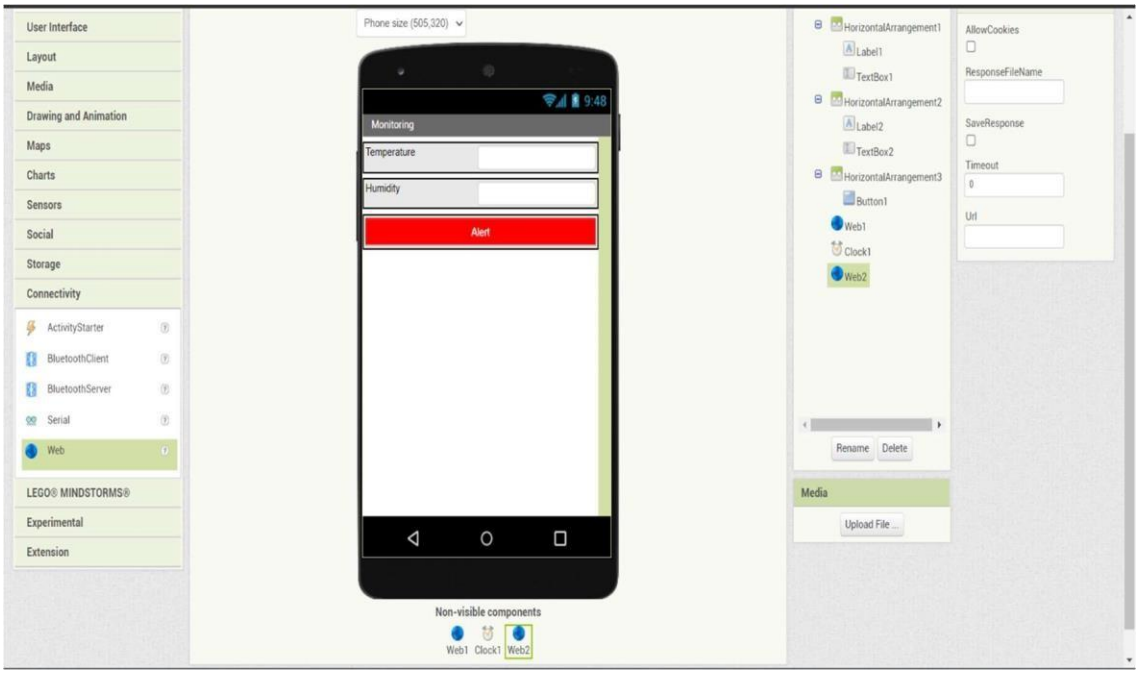
UI Dashboard



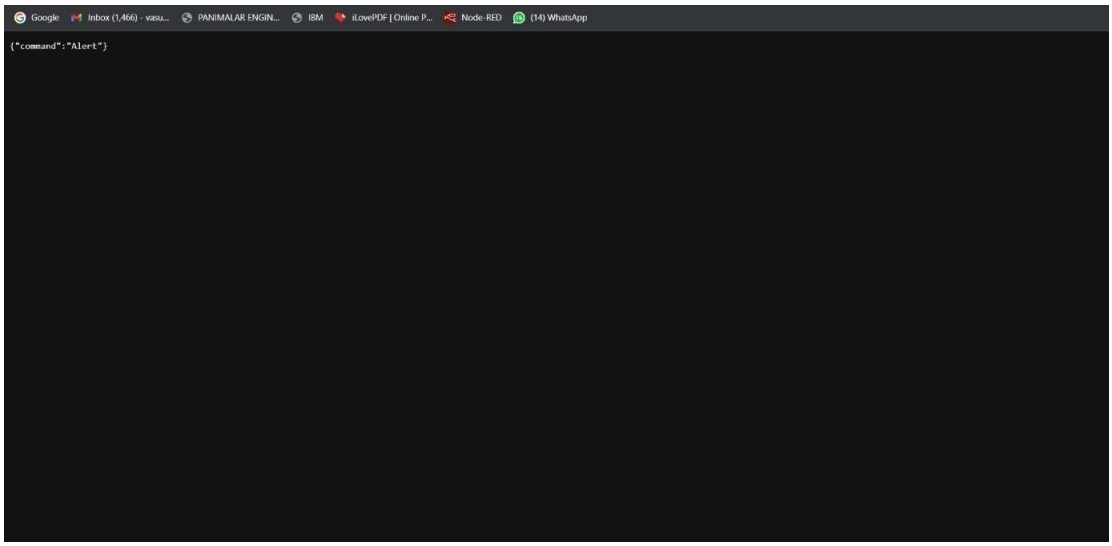

```
Published Temperature = 70 C humidity = 7 % alert to IBM Watson
Published Temperature = 36 C humidity = 39 % alert to IBM Watson
Published Temperature = 2 C humidity = 13 % alert to IBM Watson
Published Temperature = 36 C humidity = 3 % alert to IBM Watson
Published Temperature = 46 C humidity = 87 % alert to IBM Watson
Published Temperature = 57 C humidity = 95 % alert to IBM Watson
Published Temperature = 59 C humidity = 43 % alert to IBM Watson
Published Temperature = 50 C humidity = 33 % alert to IBM Watson
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Published Temperature = 59 C humidity = 95 % alert to IBM Watson
Published Temperature = 86 C humidity = 19 % alert to IBM Watson
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Published Temperature = 17 C humidity = 59 % alert to IBM Watson
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Published Temperature = 6 C humidity = 67 % alert to IBM Watson
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Command received: Alert:High Temperature
Published Temperature = 22 C humidity = 27 % alert to IBM Watson
Command received: Alert:High Temperature
Published Temperature = 99 C humidity = 16 % alert to IBM Watson
Published Temperature = 98 C humidity = 7 % alert to IBM Watson
Published Temperature = 94 C humidity = 85 % alert to IBM Watson
```

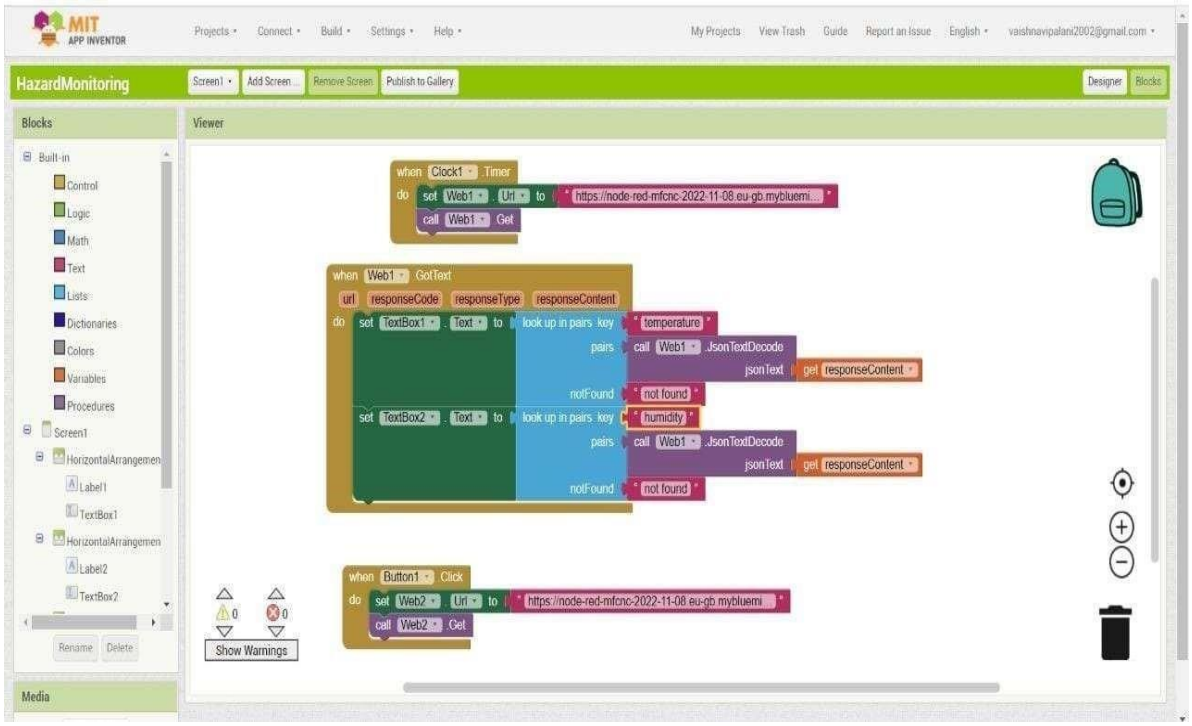
Ln: 5052 Col: 4

Design the application for the project using MIT App Inventor


Alert Command




MIT APP INVENTOR
Projects
Connect
Build
Settings
Help
My Projects
View Trash
Guide
Report an Issue
English
vaishnavipalani2002@gmail.com
HazardMonitoring
Screen1
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
HorizontalArrangemen
Label1
TextBox1
HorizontalArrangemen
Label2
TextBox2
Rename
Delete
Media
Viewer
when Clock1 Timer
do set Web1 Url to https://node-red-mfcnc-2022-11-08.eu-gb.mybluemi...
call Web1 Get
when Web1 GotText
url responseCode responseType responseContent
do set TextBox1 Text to look up in pairs key temperature
pairs call Web1 JsonTextDecode
jsonText get responseContent
notFound not found
set TextBox2 Text to look up in pairs key humidity
pairs call Web1 JsonTextDecode
jsonText get responseContent
notFound not found
when Button1 Click
do set Web2 Url to https://node-red-mfcnc-2022-11-08.eu-gb.mybluemi
call Web2 Get
0
0
Show Warnings