

SPRINT-3

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|--------------|---|
| Team ID | PNT2022TMID02630 |
| Project Name | Hazardous Area Monitoring for industrial 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 = "ID3lhmFj"
deviceType = "efgh"
deviceId = " 56789"
authMethod = "use-token-auth"
authToken = "123456789"
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 IoT")

time.sleep(1)

deviceCli.commandCallback =

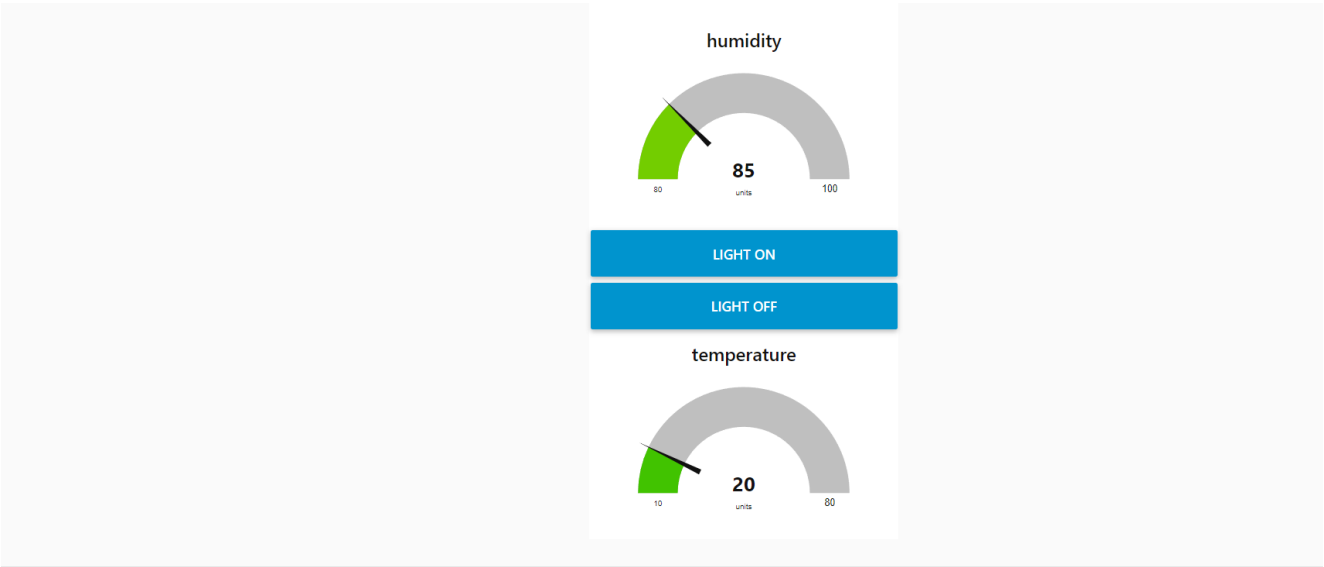
myCommandCallback


# Disconnect the device and application from the cloud

deviceCli.disconnect()

```

UI Dashboard



Sprint - 1 (1).pdf

29°C Haze

Search

Taskbar icons: File Explorer, Microsoft Edge, Calendar, Mail, Teams, OneDrive, Chrome, Spotify, Word, Excel, PowerPoint, Outlook, Settings, Network, Volume, Language (ENG/IN), and Wi-Fi.

Design the application for the project using MIT App Inventor

The image displays the MIT App Inventor web interface, used for designing mobile applications. The top section shows the project name "HazardousArea" and navigation options like "Screen1", "Add Screen...", "Remove Screen", and "Publish to Gallery".

The left sidebar contains a "Blocks" palette with categories: Lists, Dictionaries, Colors, Variables, Procedures, and Screen1. The "Screen1" category is expanded, showing components like HorizontalArrangement, Label1, TextBox1, Label2, TextBox2, Button1, Button2, Web1, and Clock1.

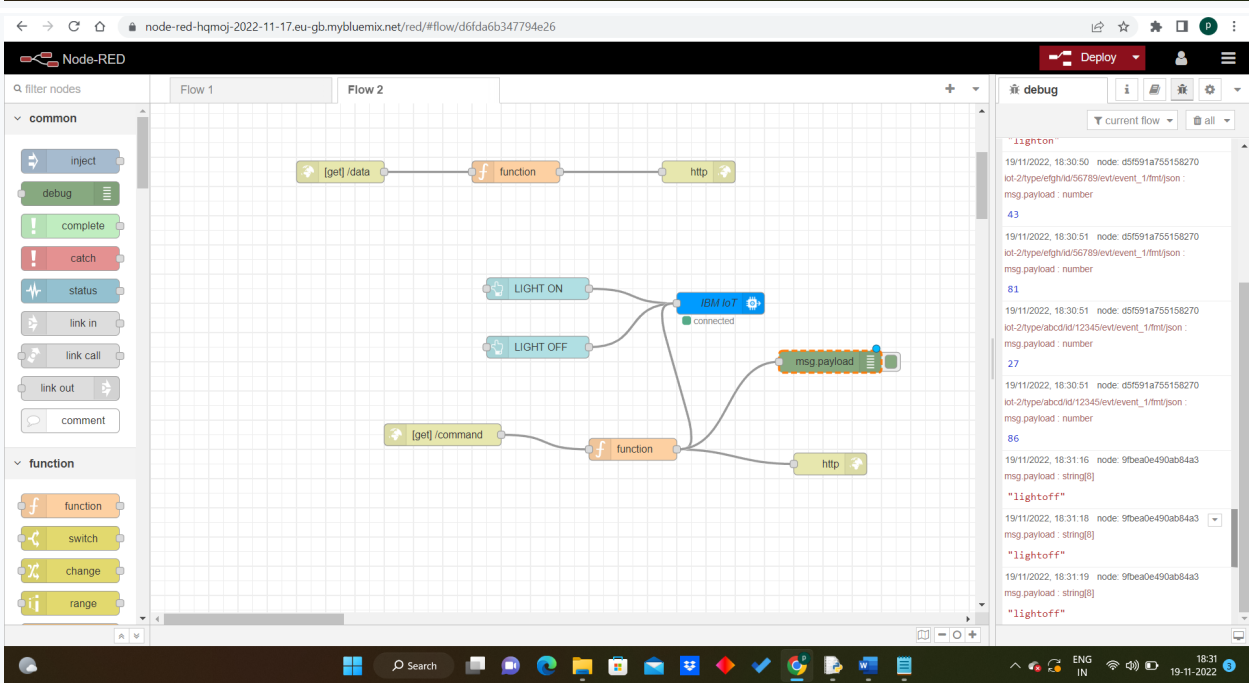
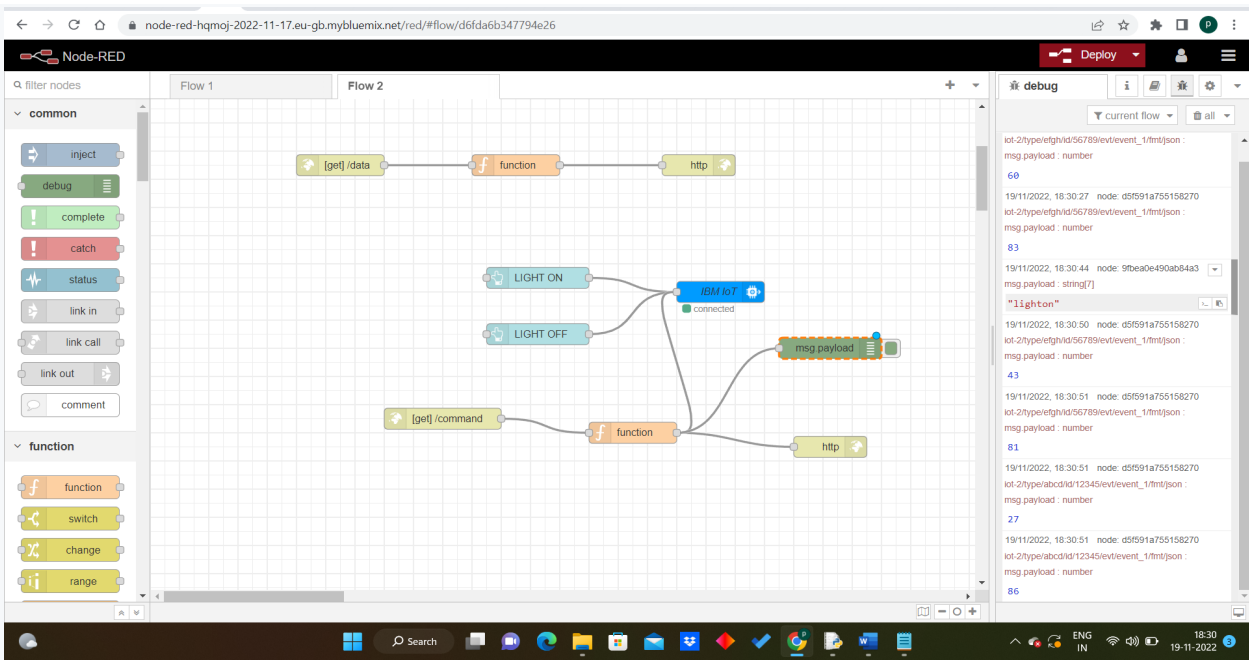
The main workspace shows the "Viewer" area with the following code blocks:

- when Clock1.Timer**
 - do**
 - set Web1.Url to** "https://node-red-hqmoj-2022-11-17.eu-gb.mybluemix..."
 - call Web1.Get**
- when Web1.GoToText**
 - url** responseCode responseType responseContent
 - do**
 - set TextBox1.Text to** look up in pairs key "Temperature" pairs call Web1.JsonTextDecode jsonText get responseContent
 - set TextBox2.Text to** look up in pairs key "Humidity" pairs call Web1.JsonTextDecode jsonText get responseContent

The bottom section shows a mobile app preview on a smartphone screen. The app displays "Temperature" and "Humidity" labels with corresponding input fields. Below these are two buttons: "LIGHT ON" (green) and "LIGHT OFF" (red). The right sidebar shows the "Components" and "Properties" panels. The "Properties" panel for "Screen1" includes settings like "AboutScreen", "AccentColor", "AlignHorizontal", "AlignVertical", "AppName" (HazardousArea), "BackgroundColor", "BackgroundImage", "BigDefaultText", "BlocksToolkit", "CloseScreenAnimation", "DefaultFileScope", "HighContrast", and "Icon".

The bottom status bar shows the system clock as 14:30 on 19-11-2022, along with various system icons and the language set to ENG IN.

LIGHT ON AND LIGHT OFF COMMAND



MIT
APP INVENTOR

ProjectsConnectBuildSettingsHelp

My ProjectsView TrashGuideReport an IssueEnglishpriyadharshini.sb.2019.iti@rajalakshmi.edu.in

HazardousArea

Screen1Add Screen...Remove ScreenPublish to Gallery

DesignerBlocks

Blocks

Lists

Dictionarys

Colors

Variables

Procedures

Screen1

HorizontalArrangemer

Label1

TextBox1

HorizontalArrangemer

Label2

TextBox2

Button1

Button2

Web1

Clock1

Any component

Media

Upload File...

Viewer

when Clock1 - Timer

do

set Web1 - Uri to "https://node-red-hqmoj-2022-11-17.eu-gb.mybluemix.net"

call Web1 - Get

when Web1 - Got Text

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 Web1 - Uri to "https://node-red-hqmoj-2022-11-17.eu-gb.mybluemix.net"

call Web1 - Delote

when Button2 - Click

do

set Web1 - Uri to "https://node-red-hqmoj-2022-11-17.eu-gb.mybluemix.net"

call Web1 - Get

00

Show Warnings

25°C
AQI 72

Search

ENG
IN

19:00
19-11-2022

node-red-hqmoj-2022-11-17.eu-gb.mybluemix.net/command?command=lighton

lighton

