

SPRINT-3

Team ID	PNT2022TMID19670
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 = "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 IoTTF") time.sleep(1)

    deviceCli.commandCallback = myCommandCallback


# Disconnect the device and application from the cloud

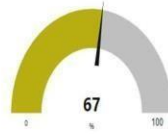
deviceCli.disconnect()

UI Dashboard

```

hazardmonitoring

Humidity



ALERT

Temperature

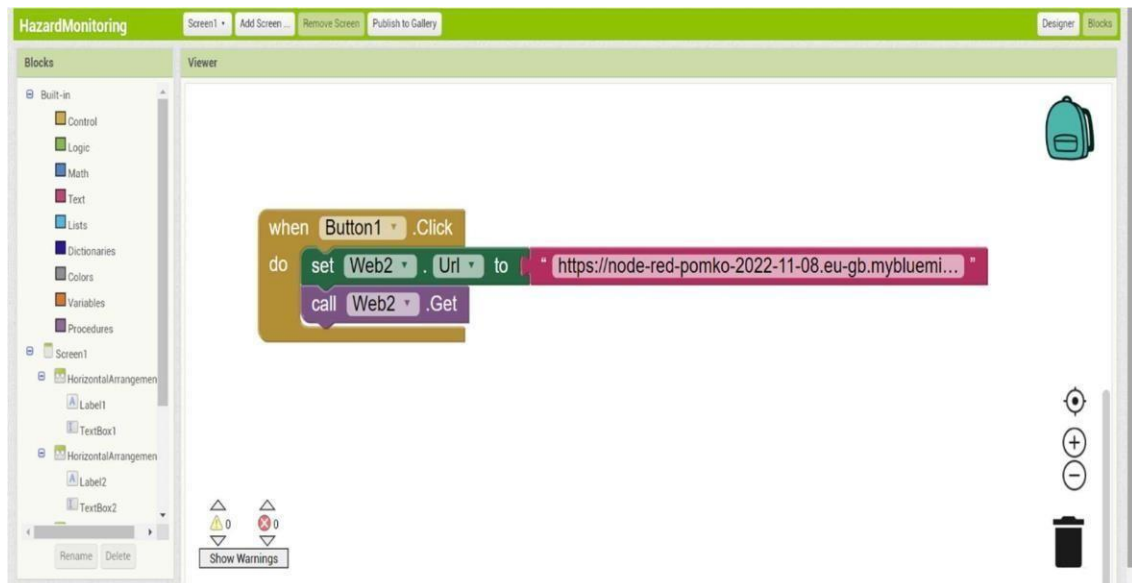


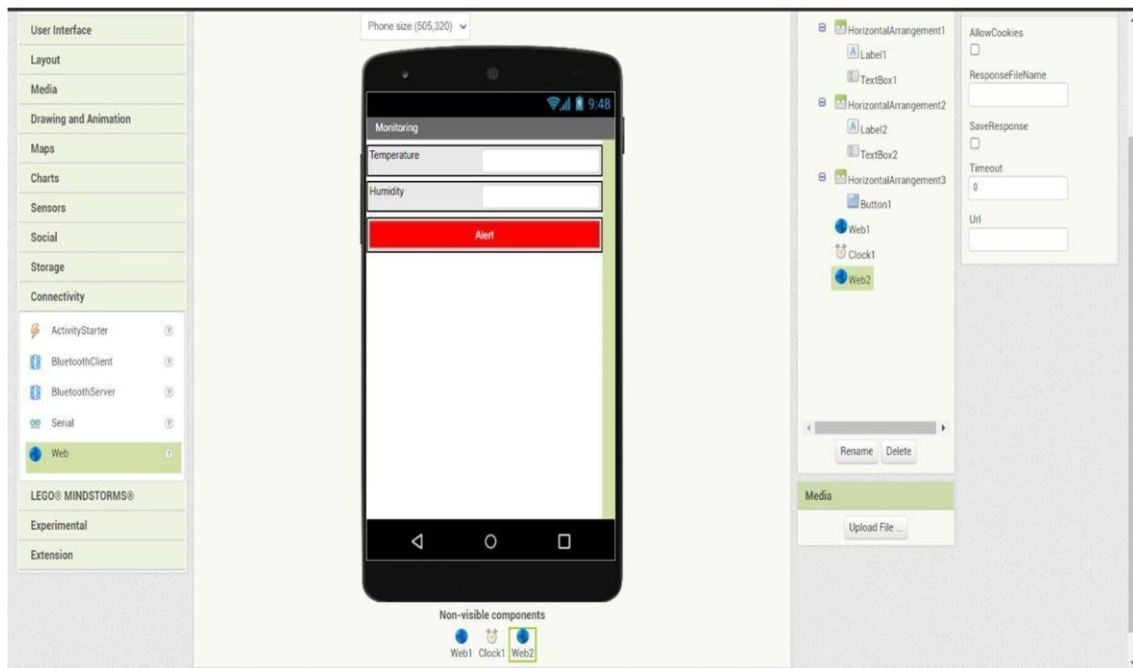
```

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

```

Design the application for the project using MIT App Inventor





Alert Command

