

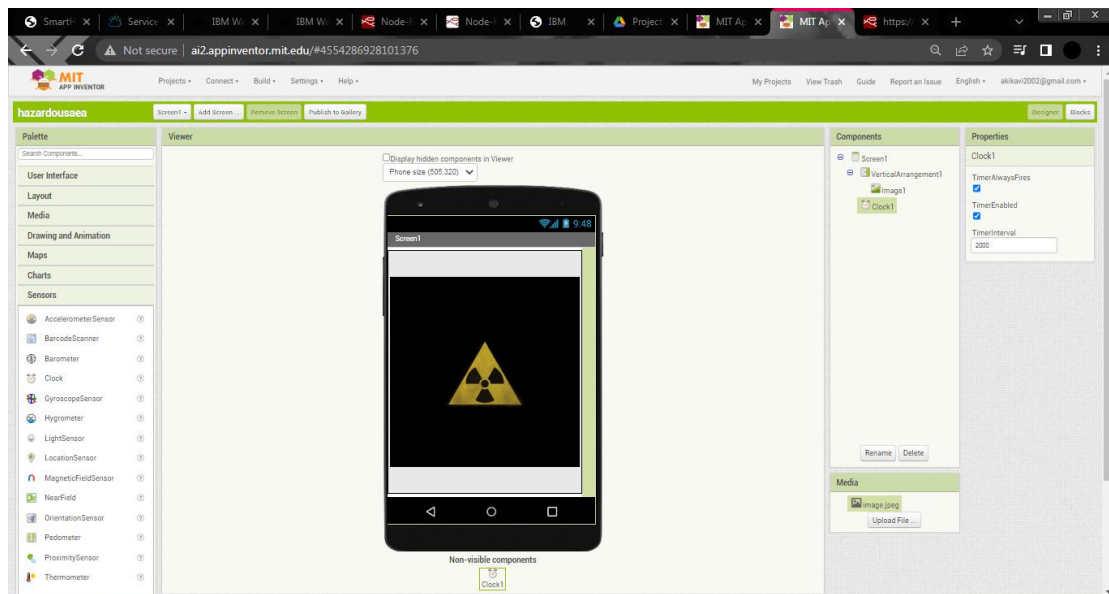
## Project Development Phase

### Sprint 4

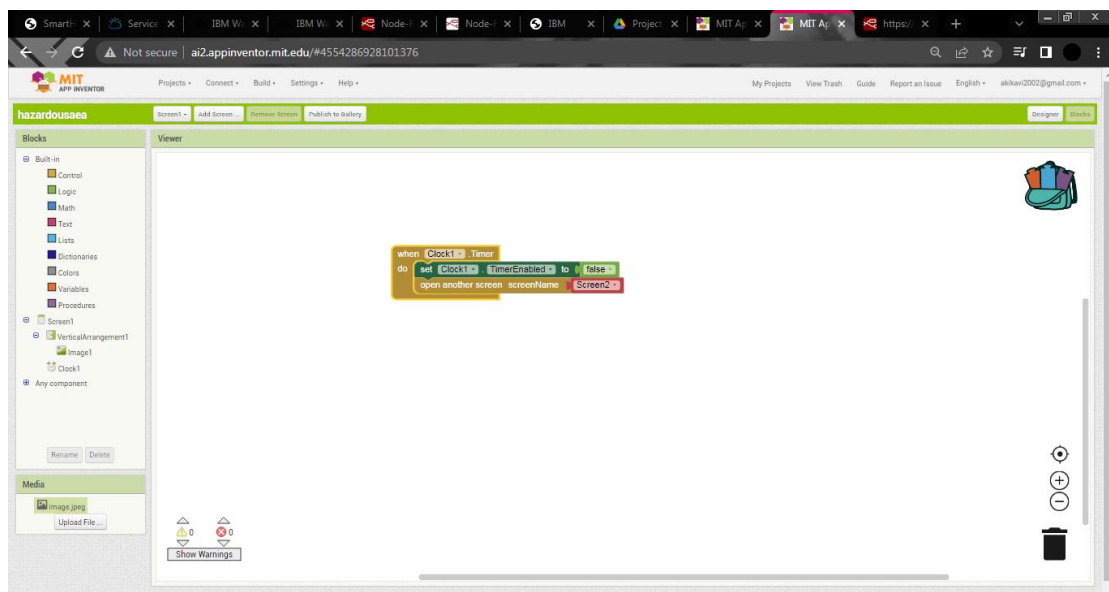
Date	19 November 2022
Team ID	PNT2022TMID46764
Project Name	Hazardous area monitoring for industrial plant powered by IOT

Step 1:

Screen 1(Designer)



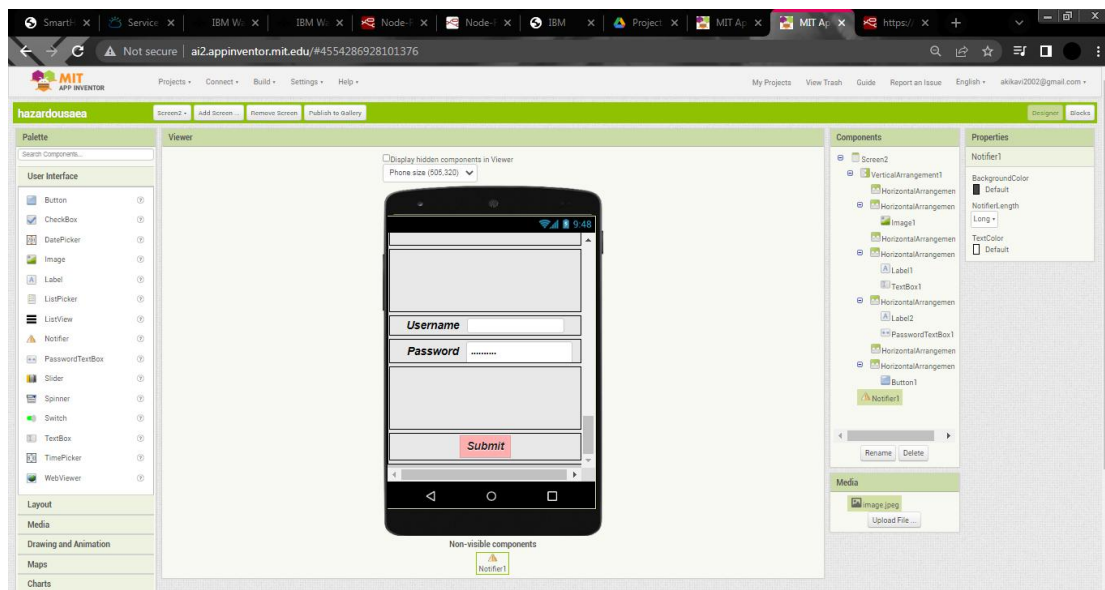
Screen 1(Blocks)



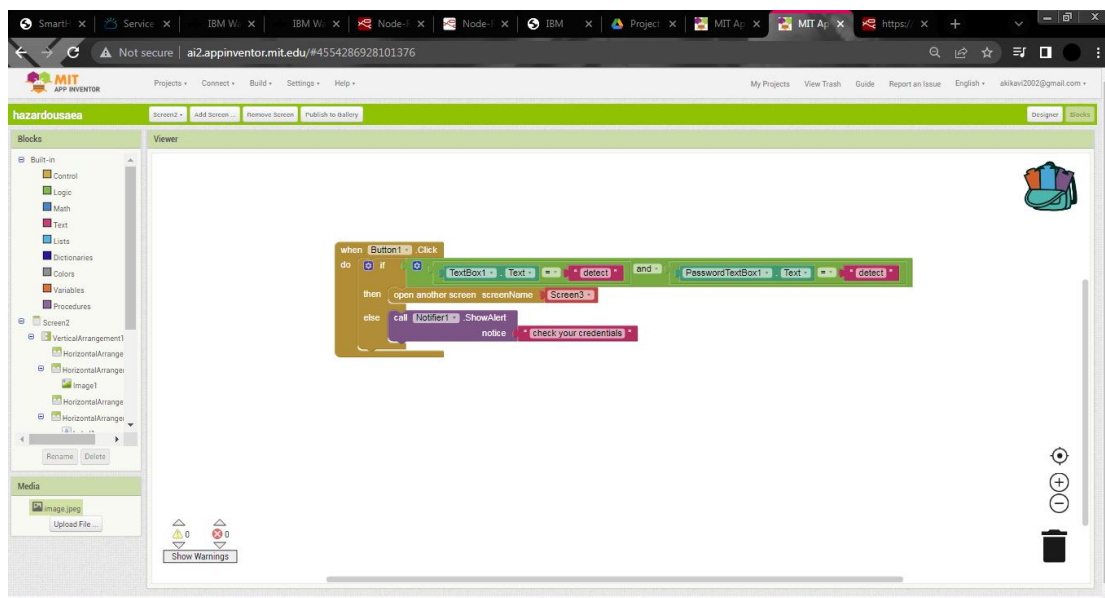
Step 2:

Screen 2(Designer)

Login page

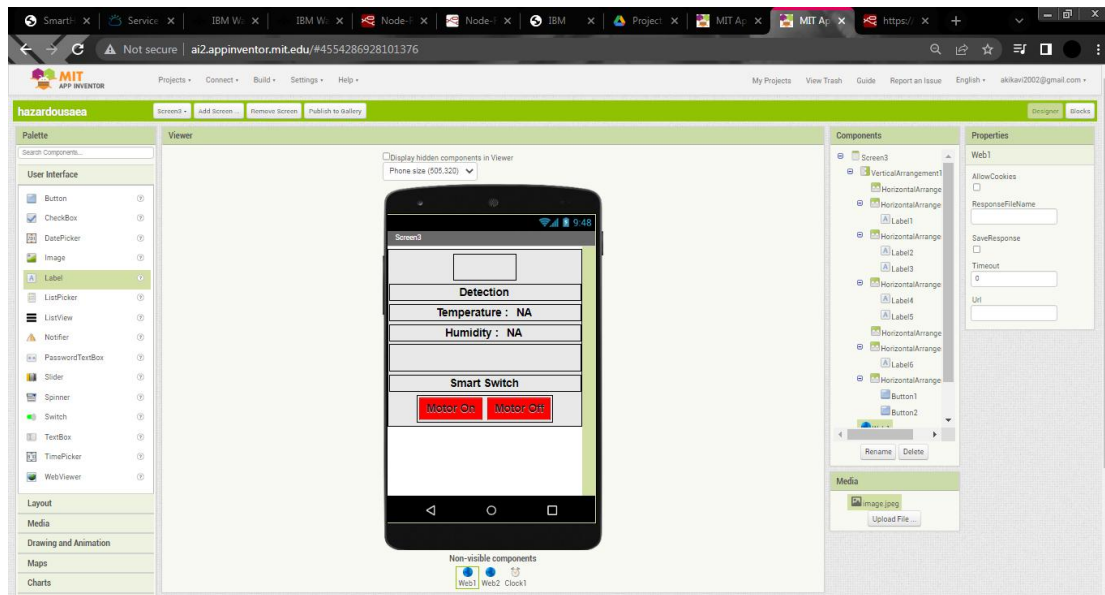


Screen 2(Blocks)

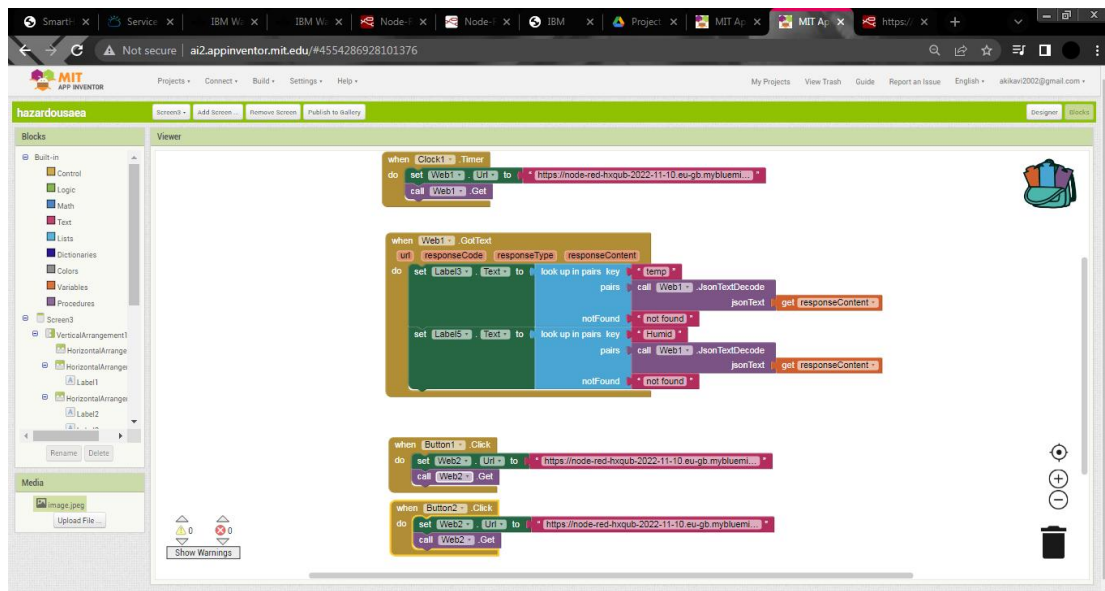


Step 3:

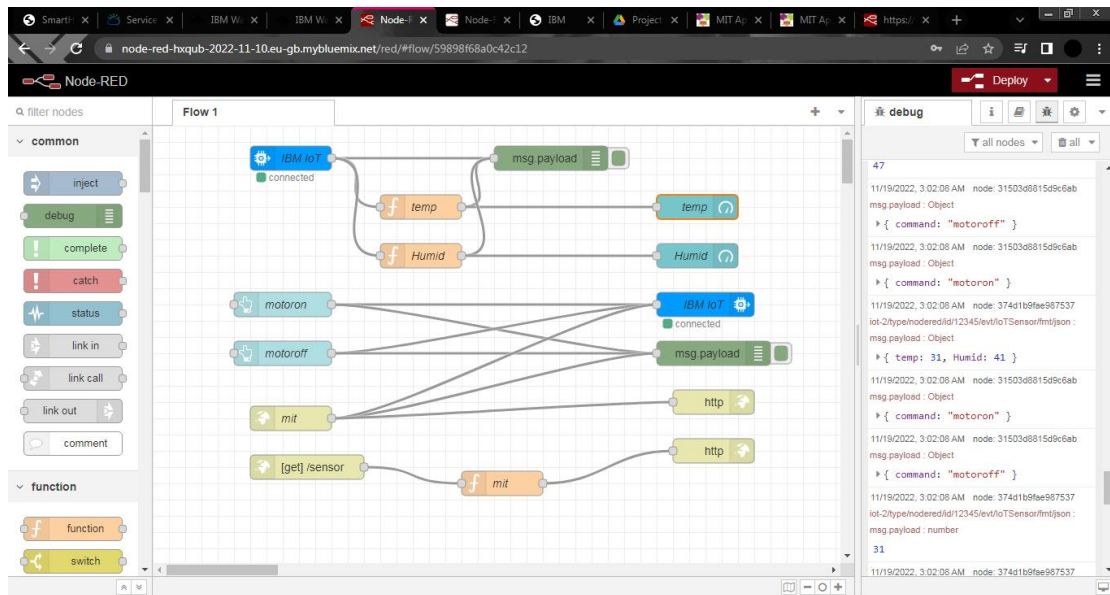
Screen 3(Designer)



Screen 3(Blocks)



Node red output:



Pyhton code output:

```

pythonibm.py - C:\Users\Admin\AppData\Local\Programs\Python\Python37\pythonibm.py (3.7.0)
File Edit Format Run Options Window Help

import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "usgov4v"
deviceType = "node-red"
deviceId = "12345"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    else:
        print ("motor is off")
    #print(cmd)

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "a":
    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
deviceCli.connect()

```

```

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help

Published Temperature = 63 C Humidity = 17 % to IBM Watson
Published Temperature = 100 C Humidity = 40 % to IBM Watson
Published Temperature = 47 C Humidity = 63 % to IBM Watson
Published Temperature = 15 C Humidity = 15 % to IBM Watson
Published Temperature = 91 C Humidity = 83 % to IBM Watson
Published Temperature = 81 C Humidity = 34 % to IBM Watson
Published Temperature = 62 C Humidity = 48 % to IBM Watson
Published Temperature = 52 C Humidity = 21 % to IBM Watson
Published Temperature = 32 C Humidity = 94 % to IBM Watson
Published Temperature = 4 C Humidity = 79 % to IBM Watson
Published Temperature = 29 C Humidity = 1 % to IBM Watson
Published Temperature = 75 C Humidity = 93 % to IBM Watson
Published Temperature = 44 C Humidity = 64 % to IBM Watson
Published Temperature = 54 C Humidity = 59 % to IBM Watson
Command received: motoron
motor is on
Published Temperature = 52 C Humidity = 25 % to IBM Watson
Published Temperature = 90 C Humidity = 98 % to IBM Watson
Published Temperature = 63 C Humidity = 16 % to IBM Watson
Published Temperature = 45 C Humidity = 76 % to IBM Watson
Published Temperature = 32 C Humidity = 57 % to IBM Watson
Published Temperature = 48 C Humidity = 52 % to IBM Watson
Published Temperature = 15 C Humidity = 75 % to IBM Watson
Published Temperature = 46 C Humidity = 19 % to IBM Watson
Command received: motoroff
motor is off
Published Temperature = 3 C Humidity = 75 % to IBM Watson
Published Temperature = 60 C Humidity = 90 % to IBM Watson
Published Temperature = 28 C Humidity = 85 % to IBM Watson
Published Temperature = 15 C Humidity = 60 % to IBM Watson
Published Temperature = 94 C Humidity = 60 % to IBM Watson
Published Temperature = 96 C Humidity = 54 % to IBM Watson
Published Temperature = 6 C Humidity = 83 % to IBM Watson
Published Temperature = 54 C Humidity = 18 % to IBM Watson
Published Temperature = 92 C Humidity = 88 % to IBM Watson
Published Temperature = 6 C Humidity = 57 % to IBM Watson
Published Temperature = 52 C Humidity = 27 % to IBM Watson
Published Temperature = 91 C Humidity = 64 % to IBM Watson
Published Temperature = 98 C Humidity = 56 % to IBM Watson

```

IBM watson IOT platform Device:

IBM Watson IoT Platform

Browse Action Device Types Interfaces

## Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device ID	Status	Device Type	Class ID	Date Added
12345	Connected	nodered	Device	Nov 11, 2022 12:04 AM

Items per page 50 | 1-1 of 1 item

1 of 1 page

0 Simulations running

Output:

IBM Watson IoT Platform

Browse Action Device Types Interfaces

12345 Connected nodered Device Nov 11, 2022

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensor	{"temp":71,"Humid":75}	json	a few seconds ago
IoTSensor	{"temp":55,"Humid":79}	json	a few seconds ago
IoTSensor	{"temp":84,"Humid":77}	json	a few seconds ago
IoTSensor	{"temp":35,"Humid":25}	json	a few seconds ago
IoTSensor	{"temp":28,"Humid":10}	json	a few seconds ago

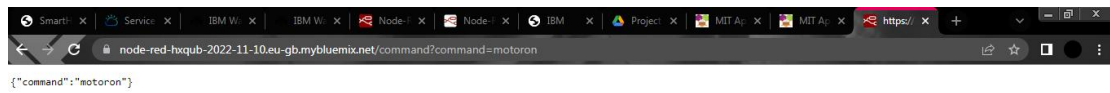
0 Simulations running

Python 3.7.0 Shell

```
Published Temperature = 43 C Humidity = 75 % to IBM W
Published Temperature = 36 C Humidity = 8 % to IBM W
Published Temperature = 24 C Humidity = 44 % to IBM W
Published Temperature = 42 C Humidity = 29 % to IBM W
Published Temperature = 37 C Humidity = 4 % to IBM W
Published Temperature = 50 C Humidity = 32 % to IBM W
Published Temperature = 30 C Humidity = 6 % to IBM W
Published Temperature = 46 C Humidity = 52 % to IBM W
Published Temperature = 33 C Humidity = 75 % to IBM W
Published Temperature = 75 C Humidity = 24 % to IBM W
Published Temperature = 4 C Humidity = 65 % to IBM W
Published Temperature = 20 C Humidity = 91 % to IBM W
Published Temperature = 24 C Humidity = 19 % to IBM W
Published Temperature = 49 C Humidity = 52 % to IBM W
Published Temperature = 37 C Humidity = 63 % to IBM W
Published Temperature = 1 C Humidity = 60 % to IBM W
Published Temperature = 96 C Humidity = 7 % to IBM W
Published Temperature = 14 C Humidity = 14 % to IBM W
Published Temperature = 35 C Humidity = 68 % to IBM W
Published Temperature = 52 C Humidity = 61 % to IBM W
Published Temperature = 52 C Humidity = 21 % to IBM W
Published Temperature = 44 C Humidity = 26 % to IBM W
Published Temperature = 75 C Humidity = 3 % to IBM W
Published Temperature = 15 C Humidity = 98 % to IBM W
Published Temperature = 36 C Humidity = 86 % to IBM W
Published Temperature = 16 C Humidity = 27 % to IBM W
Published Temperature = 79 C Humidity = 51 % to IBM W
Published Temperature = 48 C Humidity = 56 % to IBM W
Published Temperature = 23 C Humidity = 46 % to IBM W
Published Temperature = 97 C Humidity = 59 % to IBM W
Published Temperature = 49 C Humidity = 7 % to IBM W
Published Temperature = 63 C Humidity = 10 % to IBM W
Published Temperature = 7 C Humidity = 24 % to IBM W
Published Temperature = 83 C Humidity = 6 % to IBM W
Published Temperature = 28 C Humidity = 10 % to IBM W
Published Temperature = 35 C Humidity = 25 % to IBM W
Published Temperature = 84 C Humidity = 77 % to IBM W
Published Temperature = 55 C Humidity = 79 % to IBM W
Published Temperature = 71 C Humidity = 31 % to IBM W
```

GET/command=motoron:

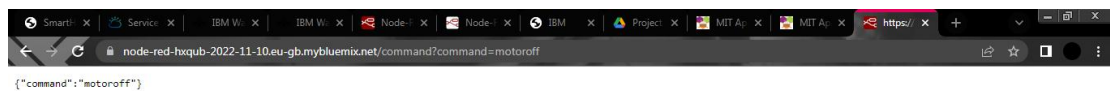




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http link : <https://node-red-hxqub-2022-11-10.eu-gb.mybluemix.net/command?command=motoron>

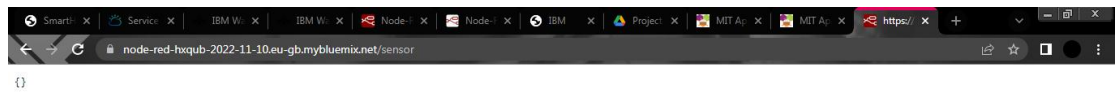
GET/command=motoroff:



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http link : <https://node-red-hxqub-2022-11-10.eu-gb.mybluemix.net/command?command=motoroff>

GET/sensor:



http link : <https://node-red-hxqub-2022-11-10.eu-gb.mybluemix.net/sensor>