

PROJECT DEVELOPMENT PHASE

SPRINT-1

Team ID	PNT2022TMID14057
Project Name	Signs with Smart Connectivity for Better Road Safety

SPRINT-1:

- In sprint 1, we collect temperature and humidity data from OpenWeatherMap website for a particular city as input.
- We have developed the code for the same and to publish it to IBM IoT Watson, node-red and finally display them in MIT APP INVENTOR.
- We have also implemented a condition such that, if humidity is less than 100, then it displays a warning like “PLEASE SLOW DOWN”.

PYTHON CODE:

 *PROJECTFINALDND.py - D:/libm/PROJECTFINALDND.py (3.7.0)*

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```
#connect and send a datapoint "temp" with value integer value into the cloud as a type of event for every 10 seconds
deviceCli.connect()
```

```
while True:
```

```
#get sensor data from DHT11
```

```
a = "https://api.openweathermap.org/data/2.5/weather?q=Chennai,%20IN&appid=e2bea247ed9ad643a04d9a8e55499d5f"
r=requests.get(url=a)
data=r.json()
```

```
Temp= data['main']['temp']
Humd= data['main']['humidity']
data= {'temp':Temp, 'humid':Humd}
dist=random.randint(0,50)
dis={'dista':dist}
```

```
if (Humd<100):
    warn={'alert':'PLEASE SLOW DOWN!!!!!!'}
```

IBM IoT WATSON PLATFORM:

IBM Watson IoT Platform

211419106012@smartinternz.com
ID: 2s7yy7

Browse Action Device Types Interfaces

Add Device +

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
IoT Sensor	{\"dista\":1}	json	a few seconds ago
IoT Sensor	{\"alert\":\"PLEASE SLOW DOWN!!!!!!\"}	json	a few seconds ago
IoT Sensor	{\"temp\":300.14,\"humid\":94}	json	a few seconds ago
IoT Sensor	{\"inst\":\"stop\"}	json	a few seconds ago
IoT Sensor	{\"dista\":0}	json	a few seconds ago

1 Simulation running

NODE-RED:

Node-RED

Flow 1

connected

temperature

humidity

alert

function

msggg

[get] /inst

function

http

[get] /traffic

function

http

debug

11/13/2022, 12:54:50 PM node: 12f2649a-0d0d98
iot-2/type/projectid/projectid/evt/iotSensorfmt/json :
msg payload : Object
> { dista: 5 }

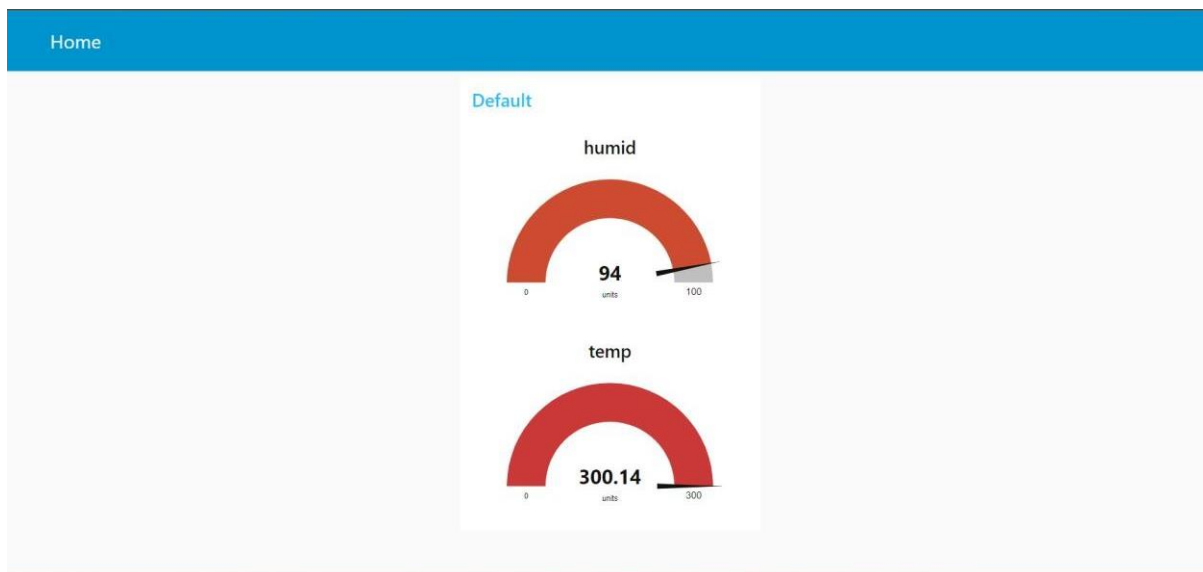
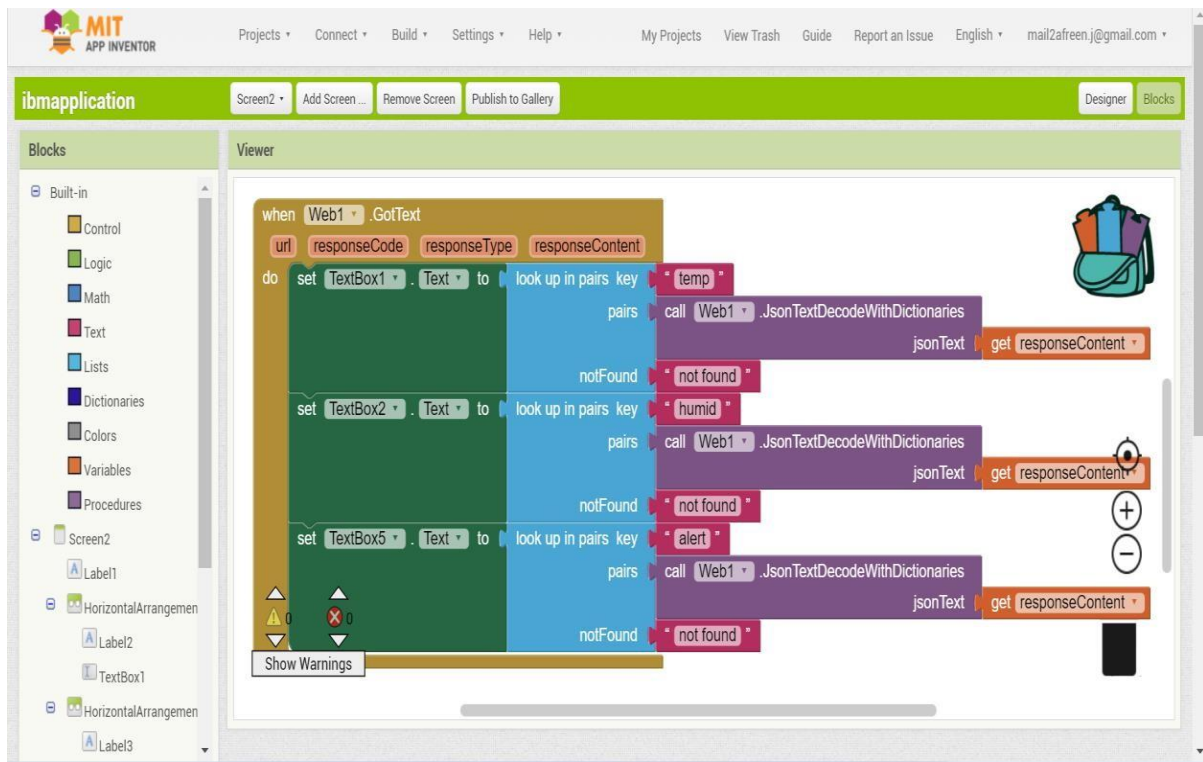
11/13/2022, 12:54:51 PM node: 12f2649a-0d0d98
iot-2/type/projectid/projectid/evt/iotSensorfmt/json :
msg payload : Object
> { inst: "stop" }

11/13/2022, 12:54:51 PM node: 12f2649a-0d0d98
iot-2/type/projectid/projectid/evt/iotSensorfmt/json :
msg payload : Object
> { temp: 300.14, humid: 94 }

11/13/2022, 12:54:51 PM node: 12f2649a-0d0d98
iot-2/type/projectid/projectid/evt/iotSensorfmt/json :
msg payload : Object
> { alert: "PLEASE SLOW DOWN!!!!!!" }

11/13/2022, 12:54:51 PM node: 12f2649a-0d0d98
iot-2/type/projectid/projectid/evt/iotSensorfmt/json :
msg payload : Object
> { dista: 6 }

MIT APP INVENTOR:



USER APP SCREENSHOT:

WEATHER UPDATE

TEMPERATURE : 300.14

HUMIDITY : 94

BACK

**PLEASE
SLOW
DOWN!!!!!!**