Project Development Phase
Sprint - 1

Team ID	PNT2022TMID52802
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IoT
Maximum Marks	

Data Generation:

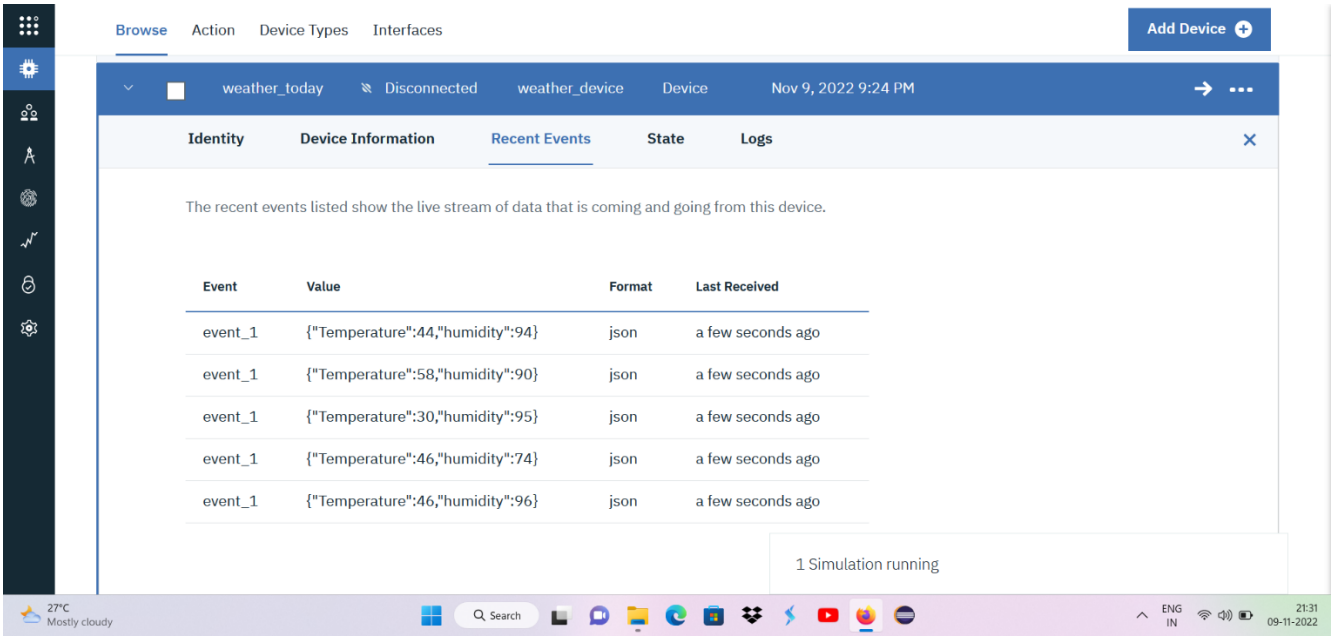
Using random function in python, the required sensor data have been generated and published to IBM Watson IoT Platform.

Python Source Code:

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

# Provide your IBM Watson Device Credentials
organization = "c1n0yk"
deviceType = "Hazard"
deviceId = "2"
authMethod = "token"
authToken = "123456789"

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod,
                     "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    deviceCli.connect()
```

```
# ..........................................

except ibmiotf.ConnectionException as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

while True:
    # Get Sensor Data from DHT11

    temp = random.randint(0, 100)

    mydata = {'temp': temp}

    def on_publish():
        print("Published Temperature = %s C" % temp, "to IBM Watson")



    success = deviceCli.publishEvent("Temp sensor", "json", mydata, qos=0,
on_publish=on_publish)
    if not success:
        print("Not connected to IoTF")
    time.sleep(2)

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

Output:


Browse
Action
Device Types
Interfaces
Add Device
weather_today
Disconnected
weather_device
Device
Nov 9, 2022 9:24 PM
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
event_1
{"Temperature":44,"humidity":94}
json
a few seconds ago
event_1
{"Temperature":58,"humidity":90}
json
a few seconds ago
event_1
{"Temperature":30,"humidity":95}
json
a few seconds ago
event_1
{"Temperature":46,"humidity":74}
json
a few seconds ago
event_1
{"Temperature":46,"humidity":96}
json
a few seconds ago
1 Simulation running
27°C
Mostly cloudy
Search
ENG
IN
21:31
09-11-2022