SPRINT 2

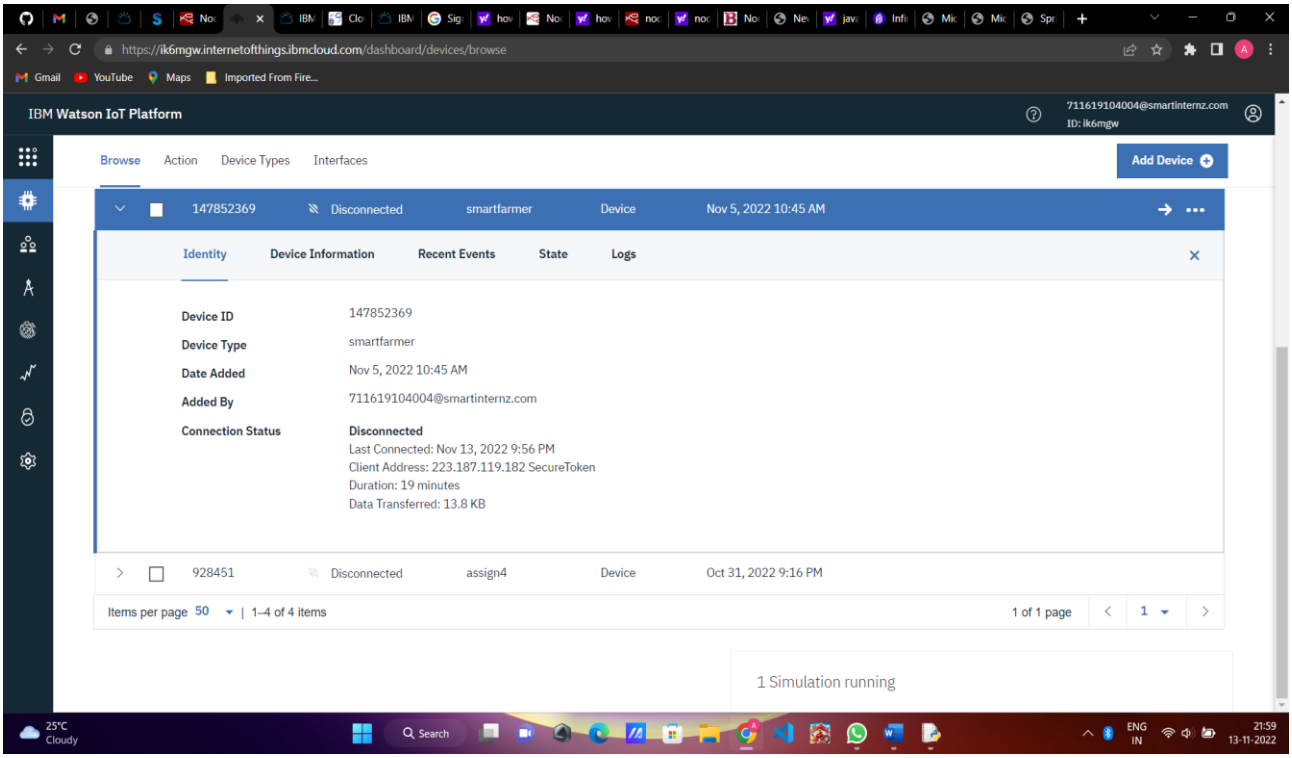
Date	14th November - 2022
Team ID	PNT2022TMID42737
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

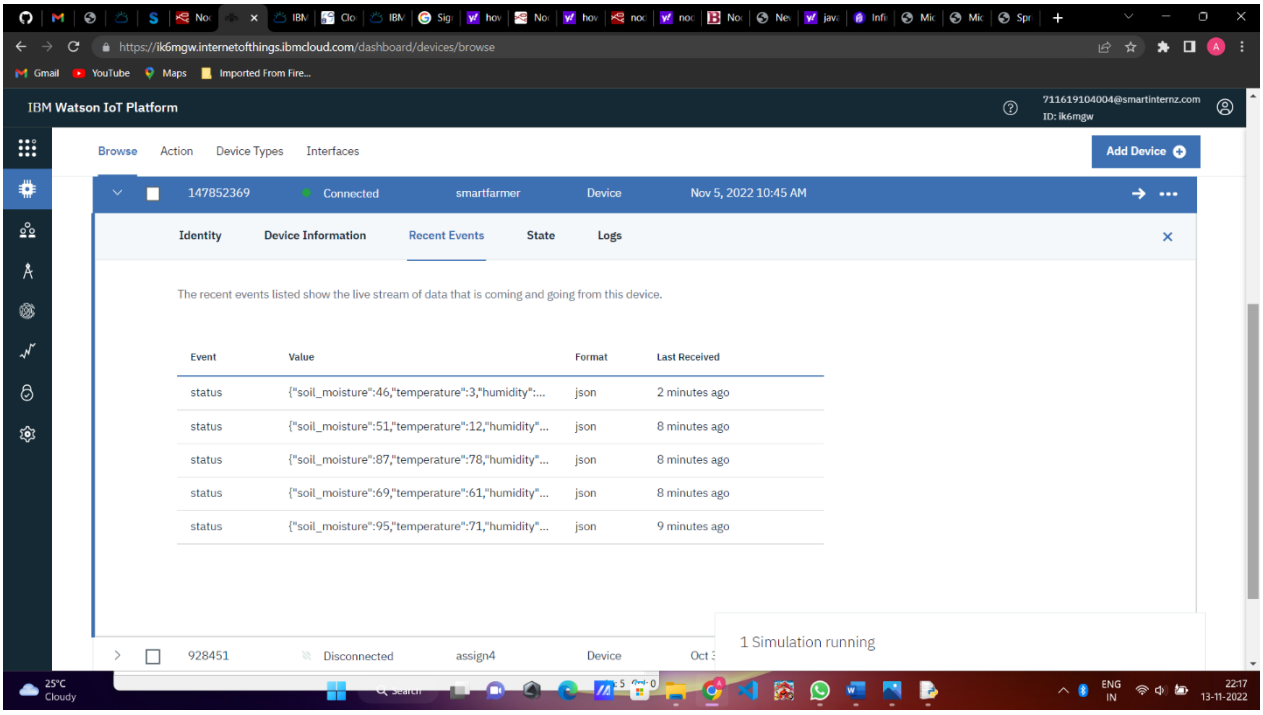
Python code with random values generator:

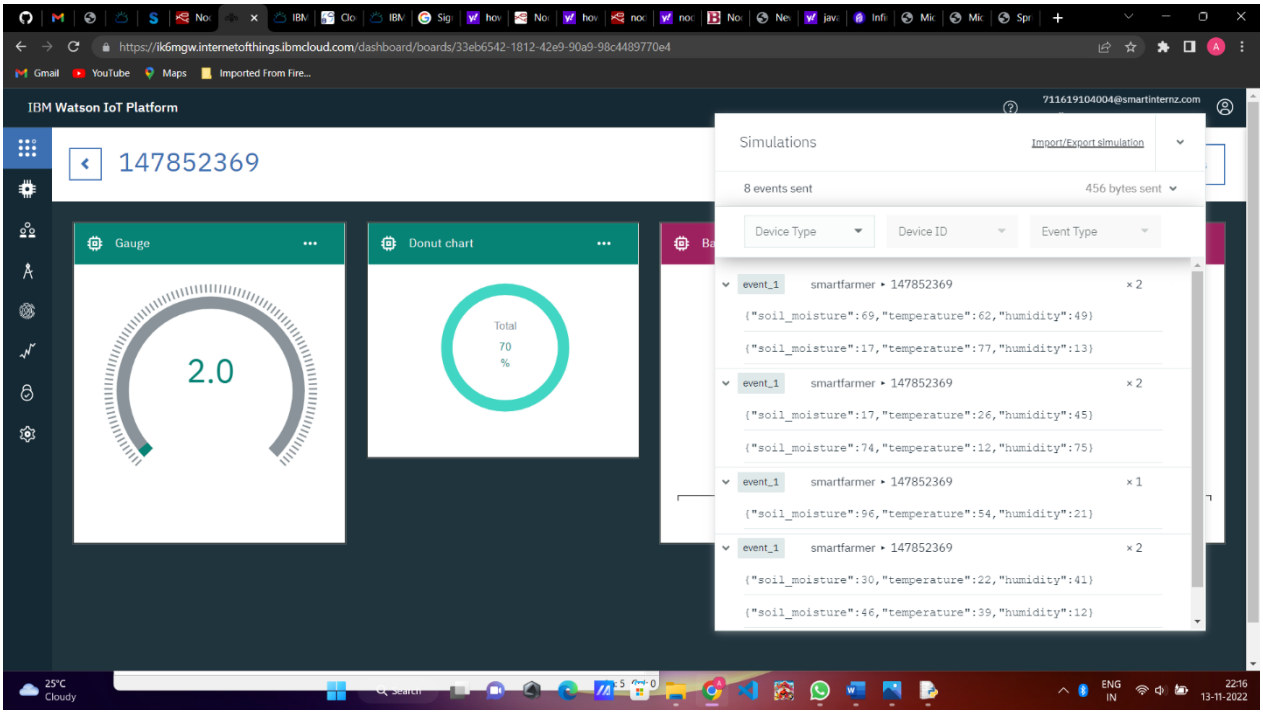
```
import wiotp.sdk.device
import time
import os
import datetime
import random
myConfig = {
    "identity":{
        "orgId": "ik6mgw",
        "typeId": "smartfarmer",
        "deviceId": "147852369"
},
   "auth": {
        "token": "9790375943"
}
 }
client = wiotp.sdk.device.DeviceClient (config=myConfig, logHandlers=None)
client.connect()

def myCommandCallback(cmd) :
    print("Message received from IBM IoT Platform:  %s" % cmd.data['command'])
    m=cmd.data['command']
    if(m== "motoron"):
```

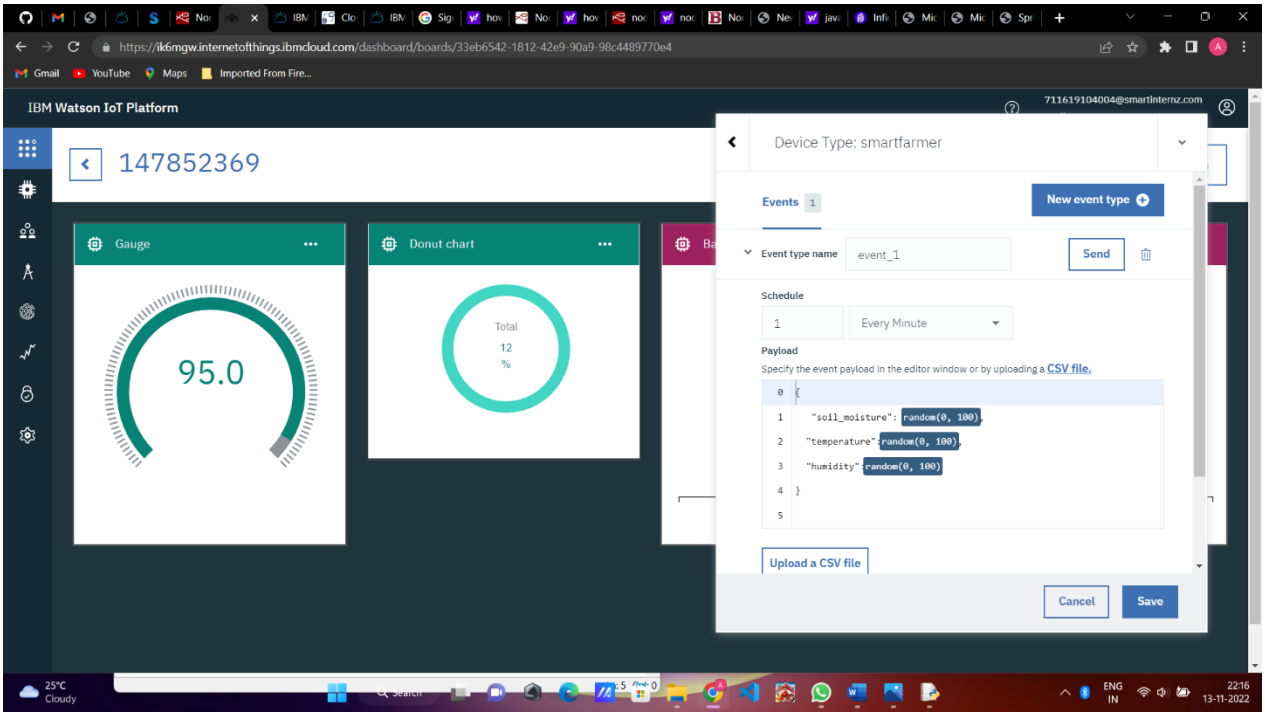
```
print("Motor is switched on")
    elif (m== "motoroff"):
        print ("Motor is switched OFF")
    print(" ")
while True:
    soil=random.randint(0,100)
    temp=random.randint(0,100)
    hum=random.randint(0,100)
    myData={'soil_moisture': soil, 'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
    print("Published data Successfully: %s", myData)
    time.sleep(10)
    client.commandCallback = myCommandCallback
client.disconnect();
```

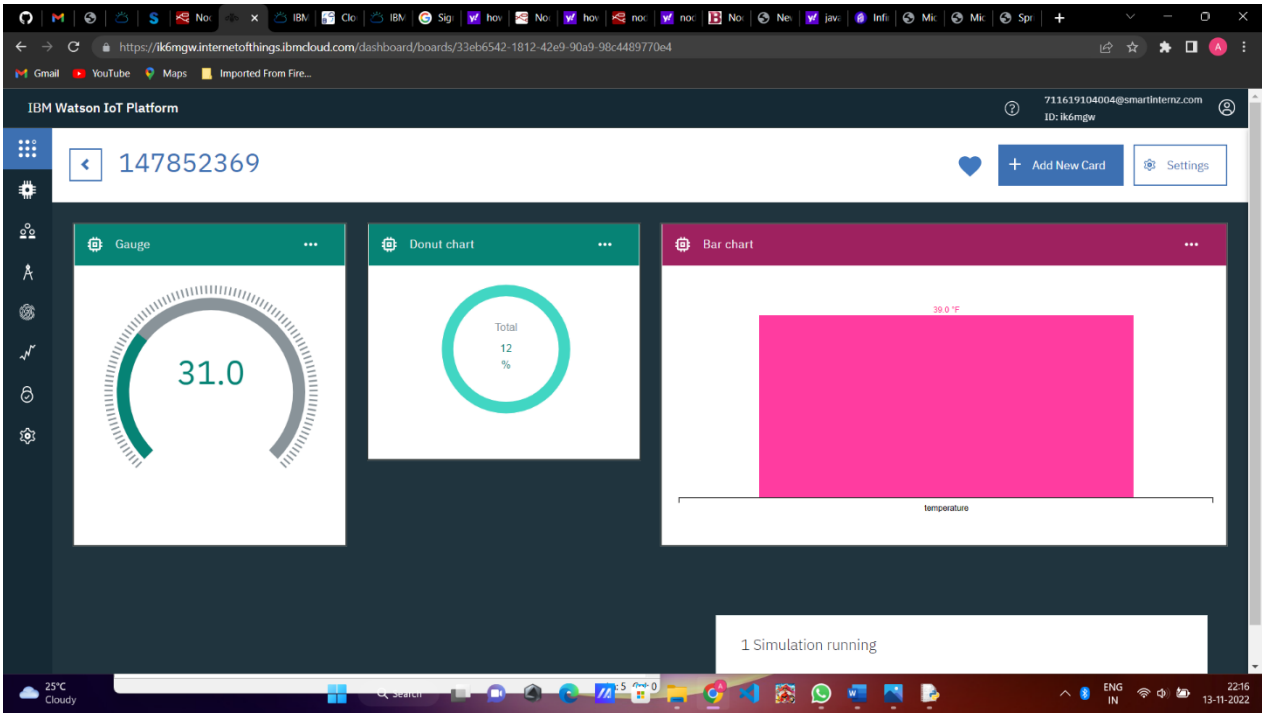
Connecting IoT Simulator to IBM Watson IoT Platform:




https://ik6mgw.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
711619104004@smartinternz.com
ID: ik6mgw
Browse
Action
Device Types
Interfaces
Add Device
147852369
Connected
smartfarmer
Device
Nov 5, 2022 10:45 AM
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
status
{"soil_moisture":46,"temperature":3,"humidity":...
json
2 minutes ago
status
{"soil_moisture":51,"temperature":12,"humidity"...
json
8 minutes ago
status
{"soil_moisture":87,"temperature":78,"humidity"...
json
8 minutes ago
status
{"soil_moisture":69,"temperature":61,"humidity"...
json
8 minutes ago
status
{"soil_moisture":95,"temperature":71,"humidity"...
json
9 minutes ago
928451
Disconnected
assign4
Device
1 Simulation running
25°C
Cloudy
ENG
IN
22:17
13-11-2022


https://ik6mgw.internetofthings.ibmcloud.com/dashboard/boards/33eb6542-1812-42e9-90a9-98c4489770e4
IBM Watson IoT Platform
711619104004@smartinternz.com
147852369
Gauge
2.0
Donut chart
Total
70
%
Simulations
Import/Export simulation
8 events sent
456 bytes sent
Device Type
Device ID
Event Type
event_1
smartfarmer ▸ 147852369
× 2
{"soil_moisture":69,"temperature":62,"humidity":49}
{"soil_moisture":17,"temperature":77,"humidity":13}
event_1
smartfarmer ▸ 147852369
× 2
{"soil_moisture":17,"temperature":26,"humidity":45}
{"soil_moisture":74,"temperature":12,"humidity":75}
event_1
smartfarmer ▸ 147852369
× 1
{"soil_moisture":96,"temperature":54,"humidity":21}
event_1
smartfarmer ▸ 147852369
× 2
{"soil_moisture":30,"temperature":22,"humidity":41}
{"soil_moisture":46,"temperature":39,"humidity":12}
25°C
Cloudy
ENG
IN
22:16
13-11-2022


IBM Watson IoT Platform
147852369
Gauge
95.0
Donut chart
Total
12
%
Device Type: smartfarmer
Events 1
New event type
Event type name
event_1
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"soil_moisture": random(0, 100),
"temperature": random(0, 100),
"humidity": random(0, 100)
}
Upload a CSV file
Cancel
Save


IBM Watson IoT Platform
147852369
Add New Card
Settings
Gauge
31.0
Donut chart
Total
12
%
Bar chart
39.0 °F
temperature
1 Simulation running

Configuration of Node-Red to collect Data from Ibm cloud: