

## SPRINT-1

### SIMULATION CREATION

Date	13 November 2022
Team ID	PNT2022TMID42278
Project Name	Hazardous Area Monitoring for Industrial Power Plant powered by IOT

#### PYTHON CODE:

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "7v14xw",
```

```
        "typeId": "Sowmi",
```

```
        "deviceId": "1"
```

```
    },
```

```
    "auth": {
```

```
        "token": "Sowmi@12"
```

```
    }
```

```
}
```

```
def myCommandCallback(cmd):    print("Message received from IBM IoT
```

```
Platform: %s" % cmd.data['command'])    m=cmd.data['command'] client =
```

```
wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
```

```
client.connect() while True:
```

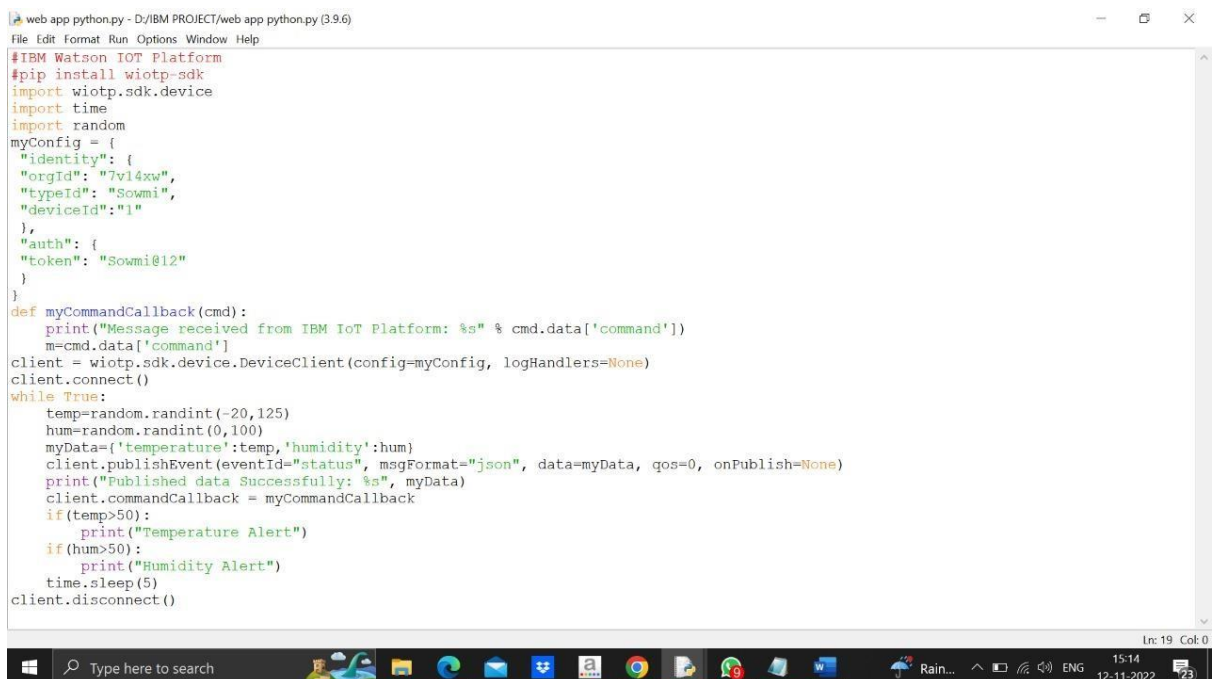
```
    temp=random.randint(-20,125)
```

```
    hum=random.randint(0,100)
```

```
    myData={'temperature':temp,'humidity':hum}
```

```
    client.publishEvent(eventId="status", msgFormat="json",
```

```
data=myData, qos=0, onPublish=None) print("Published  
data Successfully: %s", myData) client.commandCallback =  
myCommandCallback  
  
if(temp>50):  
    print("Temperature Alert")  
  
if(hum>50):  
    print("Humidity Alert")  
  
time.sleep(5)  
  
client.disconnect() CODE:
```



```
web app python.py - D:/IBM PROJECT/web app python.py (3.9.6)
File Edit Format Run Options Window Help
#IBM Watson IoT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "7v14xw",
        "typeId": "Sowmi",
        "deviceId": "1"
    },
    "auth": {
        "token": "Sowmi@12"
    }
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp,'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    if(temp>50):
        print("Temperature Alert")
    if(hum>50):
        print("Humidity Alert")
    time.sleep(5)
client.disconnect()
```

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## PYTHON OUTPUT:

```

IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
2022-11-12 15:14:41,346 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:7v14xw:Sowmi:1
Published data Successfully: %s {'temperature': 73, 'humidity': 67}
Temperature Alert
Humidity Alert
Published data Successfully: %s {'temperature': -7, 'humidity': 54}
Humidity Alert
Published data Successfully: %s {'temperature': 113, 'humidity': 78}
Temperature Alert
Humidity Alert
Published data Successfully: %s {'temperature': 80, 'humidity': 1}
Temperature Alert
Published data Successfully: %s {'temperature': 21, 'humidity': 49}
Published data Successfully: %s {'temperature': -3, 'humidity': 21}
Published data Successfully: %s {'temperature': 61, 'humidity': 50}
Temperature Alert
Published data Successfully: %s {'temperature': -6, 'humidity': 37}
Published data Successfully: %s {'temperature': 58, 'humidity': 74}
Temperature Alert
Humidity Alert
Published data Successfully: %s {'temperature': 5, 'humidity': 66}
Humidity Alert
Published data Successfully: %s {'temperature': 17, 'humidity': 94}
Humidity Alert
Published data Successfully: %s {'temperature': 124, 'humidity': 8}
Temperature Alert
Published data Successfully: %s {'temperature': 46, 'humidity': 69}
Humidity Alert
Published data Successfully: %s {'temperature': 94, 'humidity': 68}
Temperature Alert
Humidity Alert
Published data Successfully: %s {'temperature': 69, 'humidity': 75}
Temperature Alert
Humidity Alert

```

## WATSON OUTPUT:

IBM Watson IoT Platform

7v14xw.internetofthings.ibmcloud.com/dashboard/devices/browse

710019106044@smartinternz.com  
ID: 7v14xw

Browse Action Device Types Interfaces

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

Event	Value	Format	Last Received
status	{"temperature":-12,"humidity":20}	json	a few seconds ago
status	{"temperature":89,"humidity":59}	json	a few seconds ago
status	{"temperature":90,"humidity":94}	json	a few seconds ago
status	{"temperature":91,"humidity":26}	json	a few seconds ago
status	{"temperature":-11,"humidity":74}	json	a few seconds ago

0 Simulations running