CODING AND TESTING

SPRINT-3

DATE	13-11-2022
TEAM ID	PNT2022TMID49260
PROJECT NAME	Hazardous area monitoring for industrial power plants powered by IoT

ALGORITHM:

1. Start
2. Import 3 modules
3. Create the IBM IoT platform device
4. Give device id
5. Connect the device
6. Introducing my command call back function
7. Get a random temperature and humidity values
8. Loop infinitely
9. Print the random temperature and humidity values on console
10. Publish the values to IBM Watson IoT platform
11. Stop

PYTHON CODE:

```
#connecting the python to IBM watson IoT platform
import wiotp.sdk.device
import time
import random
myconfig = {
    "identity":{
        "orgId":"zvvqaf",
        "typeId":"IoT_devices",
        "deviceId":"12345"
        },
    "auth":{
        "token":"qagOTm?(qV+deBQ*j*"
        }
    }
def myCommandCallback(cmd):
    print("Message received from IBM IoT platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    if(m=="lighton"):
        print("*****////LIGHTS ARE ON////*****")
    elif(m=="lightoff"):
        print("*****/////LIGHTS ARE OFF////*****")
    else:
        print("****////WRONG 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
    time.sleep(2)
client.disconnect()
```

Test case template

Test Case ID:03	**Test designed by: M.Abinaya**
Test priority: medium	**Test Executed by:M.Rubeena banu**
Module name: Node-RED app	**Test execution date:13-11-2022**
Description: Test the node-flows for creating the web application	

Preconditions:

User has Device in IBM Watson IoT platform, Node-RED app

Test case name	Action	Test data	Expected result	Actual result
App URL	Go to http://169.51.205.194:31832		User should be able to navigate to the node-RED login page	User is navigated to the node-RED login page successfully
Sign up	Provide valid username and password	Username: Rubeena Password: *****	User should be able to login	User is logged in successfully
Node-Flow	Place the node-red and dashboard nodes on workbench and deploy it for displaying the humidity and temperature values	Send the Random values	User should be able to view the temperature and humidity values	Temperature and humidity values are displayed successfully
HTTP request	Place the nodes on workbench and deploy it for http request	Configure the nodes	User should be able to generate the own and new http	User generated the own and new http successfully
Web application	Copy and paste the URL http://169.51.205.194:31832/ui		User should be able to view the temperature and humidity readings on web application	User can successfully view the temperature and humidity values on web application