PROJECT DEVELOPMENT PHASE

SPRINT-2

Team ID : PNT2022TMID10955

ALGORITHM:

- Import Packages
- Create ‘myConfig’ location
- Implement the wiotp.sdk.device.DeviceClient
- Run a while Loop
- Get temperature and humidity sensor readings
- Display data

CODE:

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "hj5fmy",
        "typeId": "NodeMCU",
        "deviceId":"12345"
    },
    "auth": {
        "token": "12345678"
    }
}

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(-25,135)
```

```
    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()
```

SENSOR CODE:

```
#include <dht.h>

#define dht_apin A0                 // Analog Pin 0 is connected to DHT sensor
#define mqt_apin A1                 // Analog Pin 1 is connected to MQT 135 sensor
dht DHT;
int sensorValue;

void setup(){

  Serial.begin(9600);               //Serial port to communicate with Python code
Serial1.begin(9600);                //Serial port to communicate with Wearable
device through Bluetooth (HC-05)

  delay(500);                                   //Delay to let system boot
}

void loop(){

    DHT.read11(dht_apin);                       // read analog input pin 0(DHT11)
    sensorValue = analogRead(mqt_apin);         // read analog input pin 1(MQ135)

    //Send Humidity status to Python Code

    Serial.print("Current humidity = ");
    Serial.print(DHT.humidity);
    Serial.print("%  ");

    //Send Temperature status to Python Code

    Serial.print("temperature = ");
    Serial.print(DHT.temperature);
    Serial.println("C  ");

    //Send AirQuality sensor value to Python code

    Serial.print("AirQua=");
    Serial.print(sensorValue, DEC);
    Serial.println(" PPM");
```

```
    //Send signals to the Wearable

    Serial1.println("H T A");
    Serial1.println(DHT.humidity);
    Serial1.println(DHT.temperature);
    Serial1.println(sensorValue, DEC);

    delay(100);                                    // wait 100 milliseconds for next reading
}
```