PROJECT DEVELOPMENT PHASE

SPRINT-2

Team ID	PNT2022TMID15984
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IOT
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Code:

```
#IBM Watson IOT Platform #pip install wiotp-sdk import
wiotp.sdk.device import time
import random
organization = "22h49t"
deviceType = "NodeMCU"
deviceId = "12345"
authMethod = "token"
authToken = "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(-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()
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");
```