PROJECT DEVELOPING PHASE

SPRINT 4

Date	**19 NOV 2022**
TEAM ID	**PNT2022TMID30625**
Project Name	**Signs with smart connectivity for better road safety**
Maximum mark	**20 marks**

TEAM LEAD:

M.CURIE

TEAM MEMBERS:

S.DEVAKI

S.JEEVITHA

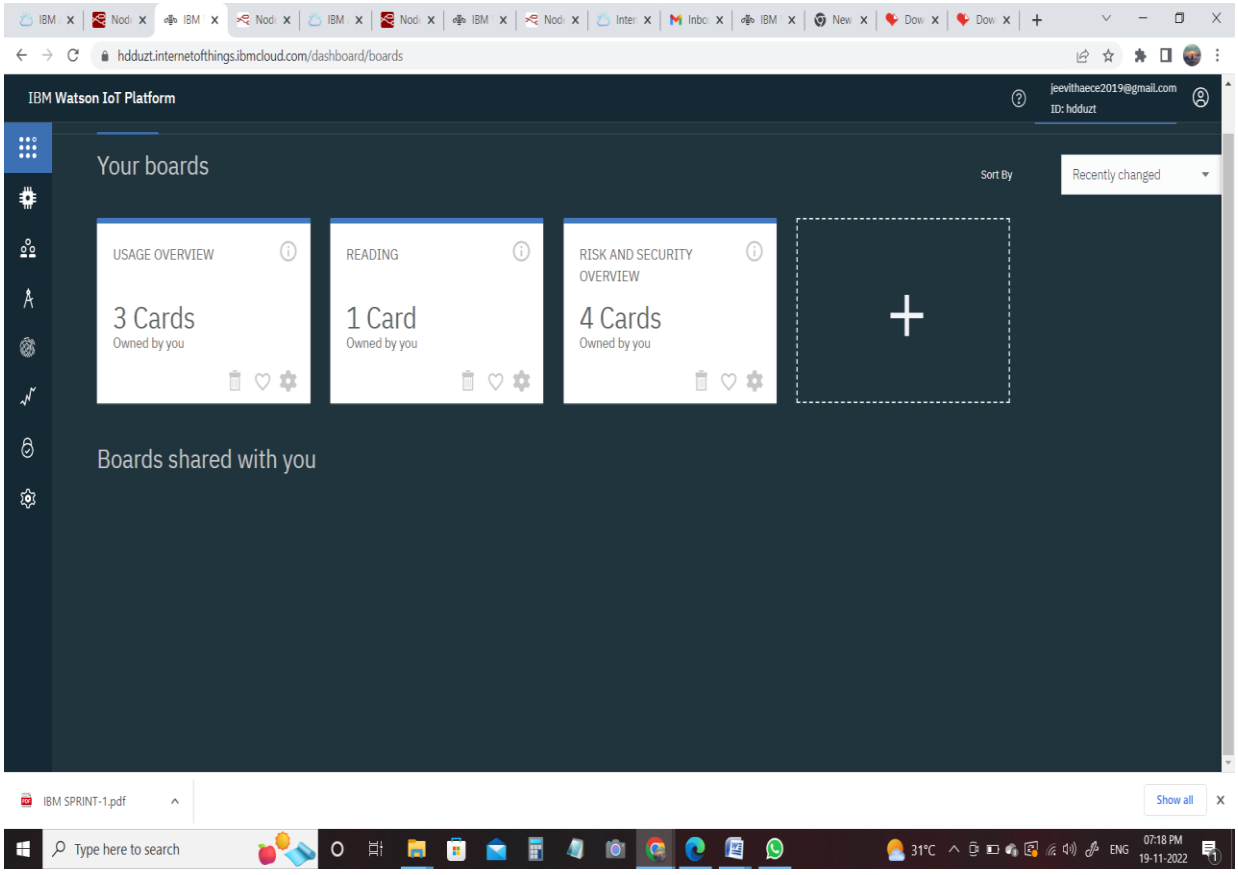
J.GERIJA SHREE

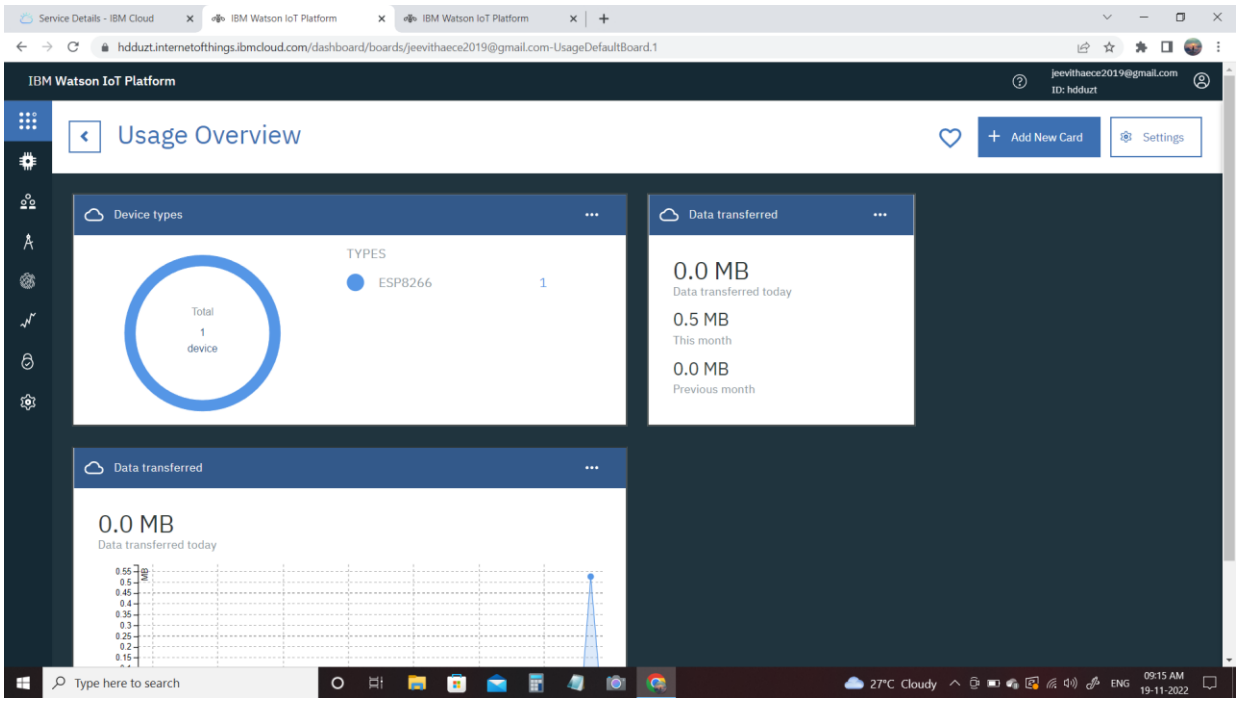
Code for print the parameters of gas level and traffic density in road traffic:

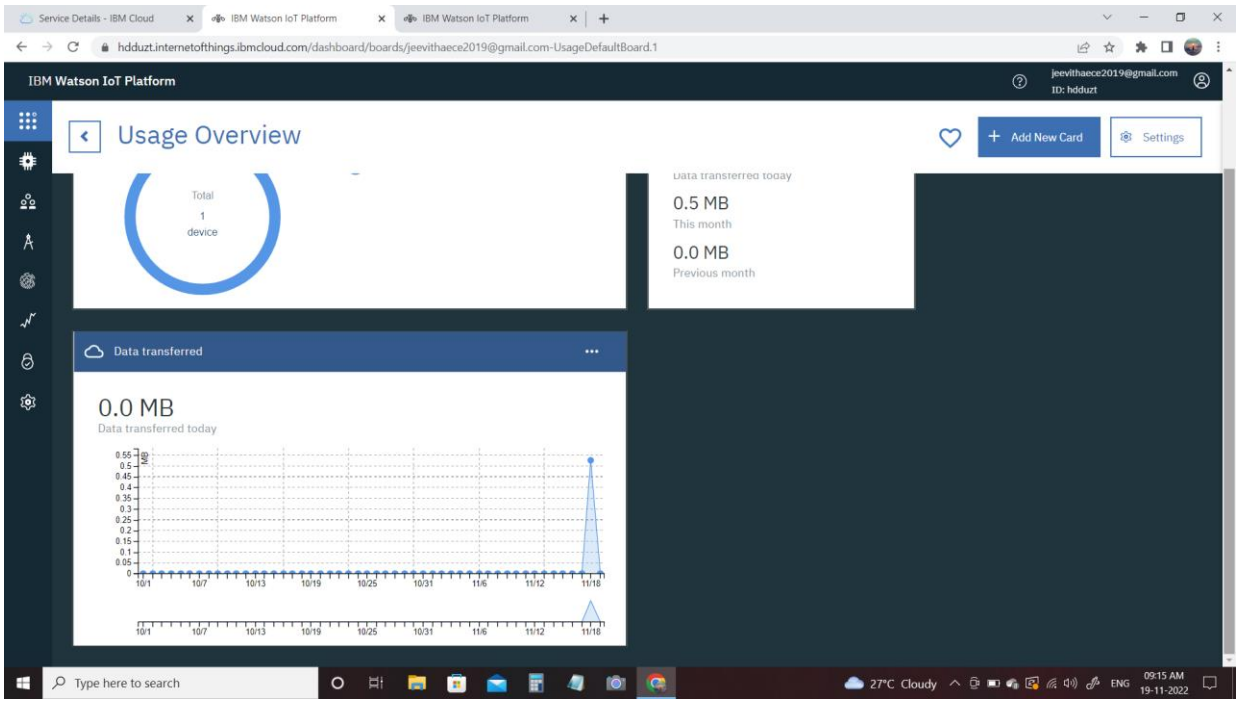
```
#include <ESP8266WiFi.h>
#include <WiFiClient.h>
#include <PubSubClient.h>
#include "DHT.h"

const char* ssid = "project1";
const char* password = "22222222";

#define DHTPIN 12
#define DHTTYPE DHT22
DHT dht(DHTPIN, DHTTYPE);

#define ID "jpg7s5"
#define DEVICE_TYPE "ESP8266"
#define DEVICE_ID "PRO"
#define TOKEN "JEEVITHAECE"
```

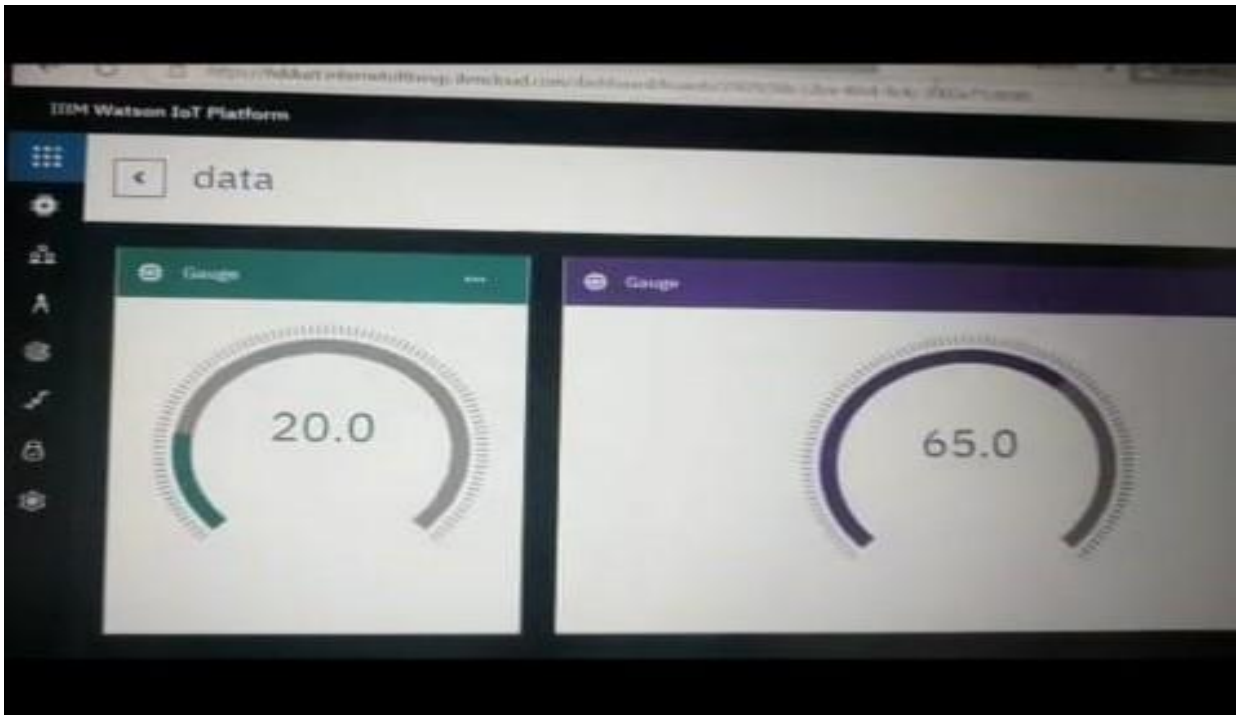
```
char server[] = ID ".messaging.internetofthings.ibmcloud.com";
char publish_Topic1[] = "iot-2/evt/Data1/fmt/json";
char publish_Topic2[] = "iot-2/evt/Data2/fmt/json";
char publish_Topic3[] = "iot-2/evt/Data3/fmt/json";
char authMethod[] = "use-token-auth";
char token[] = TOKEN;
char clientId[] = "d:" ID ":" DEVICE_TYPE ":" DEVICE_ID;//////a-6758fk-
gbpgmf1xf8///SyKj8fKYlys)9wQ9at

WiFiClient wifiClient;
PubSubClient client(server, 1883, NULL, wifiClient);

void setup() {
    Serial.begin(115200);
    dht.begin();
    Serial.println();
    WiFi.begin(ssid, password);
    while (WiFi.status() != WL_CONNECTED) {
      delay(500);
      Serial.print(".");
    }
    Serial.println("");
    Serial.println(WiFi.localIP());

    if (!client.connected()) {
        Serial.print("Reconnecting client to ");
        Serial.println(server);
        while (!client.connect(clientId, authMethod, token)) {
            Serial.print(".");
            delay(500);
        }
        Serial.println("Connected TO IBM IoT cloud!");
    }
}

long previous_message = 0;
void loop() {
    client.loop();
    long current = millis();
    if (current - previous_message > 3000) {
        previous_message = current;
         float hum = 34;
         float temp = 35;
         float level = 1;
         if (isnan(hum) || isnan(temp)  ){
    Serial.println(F("Failed to read from DHT sensor!"));
    return;
  }

  Serial.print("Temperature: ");
  Serial.print(temp);
  Serial.print("°C");
  Serial.print(" Humidity: ");
```

```
  Serial.print(hum);
  Serial.print("%");

        String payload = "{\"d\":{\"Name\":\"" DEVICE_ID "\"";
              payload += ",\"Temperature\":";
              payload += temp;
              payload += "}}";

        Serial.print("Sending payload: ");
        Serial.println(payload);

        if (client.publish(publish_Topic1, (char*) payload.c_str())) {
            Serial.println("Published successfully");
        } else {
            Serial.println("Failed");
        }
        String payload1 = "{\"d\":{\"Name\":\"" DEVICE_ID "\"";
              payload1 += ",\"Humidity\":";
              payload1 += hum;
              payload1 += "}}";
              Serial.print("Sending payload: ");
              Serial.println(payload1);
              Serial.println('\n');

         if (client.publish(publish_Topic2, (char*) payload1.c_str())) {
            Serial.println("Published successfully");
        } else {
            Serial.println("Failed");
        }
String payload2 = "{\"d\":{\"Name\":\"" DEVICE_ID "\"";
              payload2 += ",\"Level\":";
              payload2 += level;
              payload2 += "}}";
              Serial.print("Sending payload: ");
              Serial.println(payload2);
              Serial.println('\n');

         if (client.publish(publish_Topic3, (char*) payload2.c_str())) {
            Serial.println("Published successfully");
        } else {
            Serial.println("Failed");
        }


    }
}
```


hdduzt.internetofthings.ibmcloud.com/dashboard/boards
IBM Watson IoT Platform
jeevithaece2019@gmail.com
ID: hdduzt
Your boards
Sort By
Recently changed
USAGE OVERVIEW
3 Cards
Owned by you
READING
1 Card
Owned by you
RISK AND SECURITY OVERVIEW
4 Cards
Owned by you
Boards shared with you
IBM SPRINT-1.pdf
Show all
Type here to search
31°C
ENG
07:18 PM
19-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
hdduzt.internetofthings.ibmcloud.com/dashboard/boards/jeevithaece2019@gmail.com-UsageDefaultBoard.1
IBM Watson IoT Platform
jeevithaece2019@gmail.com
ID: hdduzt
Usage Overview
Add New Card
Settings
Device types
TYPES
ESP8266 1
Total
1
device
Data transferred
0.0 MB
Data transferred today
0.5 MB
This month
0.0 MB
Previous month
Data transferred
0.0 MB
Data transferred today
MB
Type here to search
27°C Cloudy
ENG
09:15 AM
19-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
hdduzt.internetofthings.ibmcloud.com/dashboard/boards/jeevithaece2019@gmail.com-UsageDefaultBoard.1
IBM Watson IoT Platform
jeevithaece2019@gmail.com
ID: hdduzt
Usage Overview
Add New Card
Settings
Total
1
device
Data transferred today
0.5 MB
This month
0.0 MB
Previous month
Data transferred
0.0 MB
Data transferred today
MB
10/1
10/7
10/13
10/19
10/25
10/31
11/6
11/12
11/18
Type here to search
27°C Cloudy
ENG
09:15 AM
19-11-2022


IBM Watson IoT Platform
data
Gauge
20.0
Gauge
65.0