



## SPRINT 4

TEAM ID	PNT2022TMID39683
Project Name	IoT Based smart crop Protection system for agriculture
Maximum mark	20 marks

### TEAM LEAD:

S. MONIKA

### TEAM MEMBERS:

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N. AKSHAYA

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### CODE:

```
#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 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");
        }

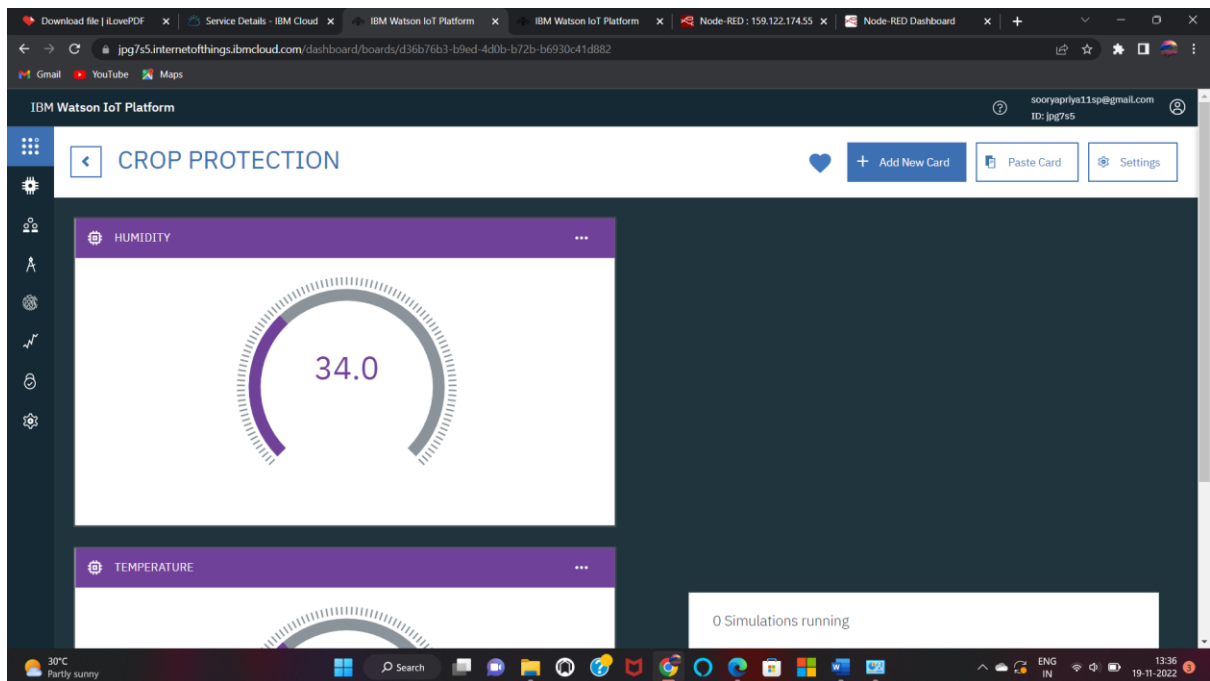
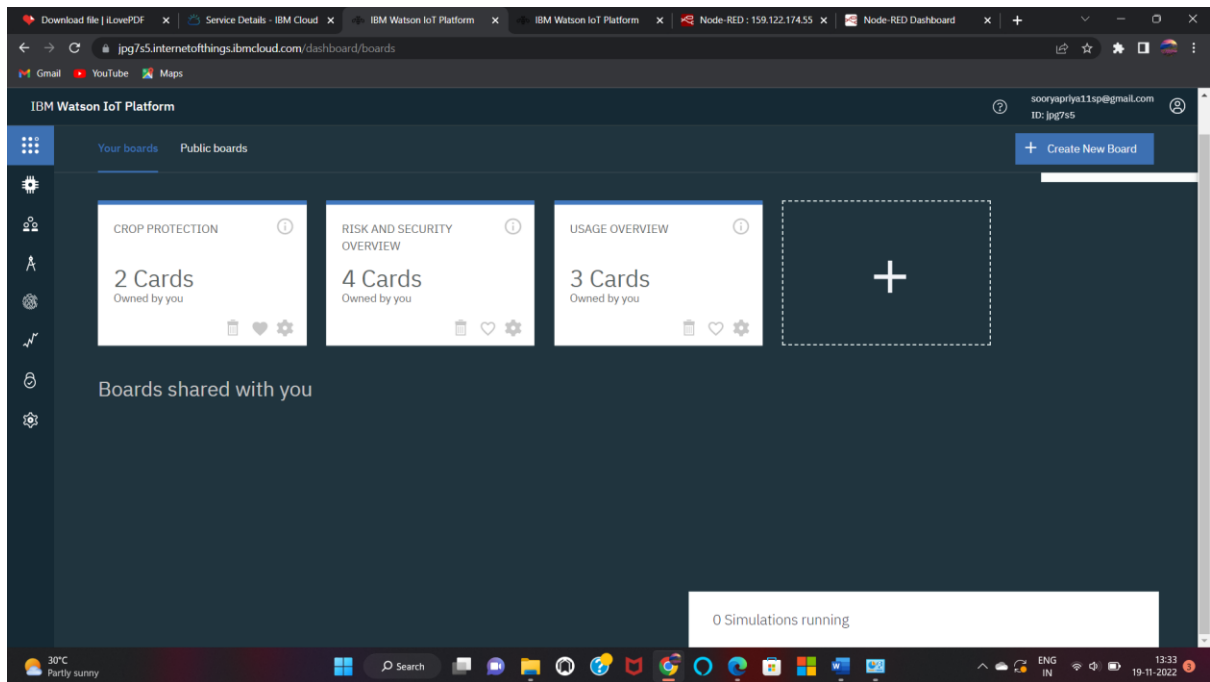
String payload2 = "{\"d\":{\"Name\":\"\" DEVICE_ID \"\"";
    payload2 += ", \"Level\":";
    payload2 += level;
    payload2 += "\"}";
    Serial.print("Sending payload: ");
    Serial.println(payload2);
    Serial.println('\n');

    if (client.publish(publish_Topic2, (char*) payload1.c_str())) {
        Serial.println("Published successfully");
    } else {
        Serial.println("Failed");
    }

}

}

```



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# CROP PROTECTION

+ Add New Card Paste Card Settings

TEMPERATURE

35.0

0 Simulations running

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