

Project Development Phase

Sprint – 1

Date	31 October 2022
Team ID	PNT2022TMID11775
Project Name	Industry-specific intelligent fire management system

WOKWI WEB URL:

<https://wokwi.com/projects/348524342631465554>

SNAPSHOTS OF SIMULATION:

The screenshot displays the Wokwi web interface for a project titled "Industry specific intelligent fire management system". The code editor on the left shows the following C++ code:

```
1 // procses include library
2 #include "DHTesp.h"
3
4 #define DHTPIN 15
5 const int pinLED = 23;
6
7 DHTesp dht;
8 void setup() {
9
10   pinMode(pinLED, OUTPUT);
11   Serial.begin(115200);
12   Serial.println("EDSPERT - Acquisition sensor DHT22 via ESP32");
13
14   dht.setup(DHTPIN, DHTesp::DHT22);
15 }
16 void loop() {
17
18   TempAndHumidity data = dht.getTempAndHumidity();
19
20   float temp = 24.8;
21   float hum = 36.4;
22
23   if (temp > 50){
24     Serial.println("FIRE");
25     digitalWrite(pinLED, HIGH);
26     delay(1000);
27
28     digitalWrite(pinLED, LOW);
29     delay(500);
30   }
31   else{
32     digitalWrite(pinLED, LOW);
33     Serial.println("SAFE");
34   }
35 }
```

The simulation window on the right shows a visual representation of the ESP32 microcontroller and the DHT22 sensor connected by wires. Below the simulation, the output of the code is displayed:

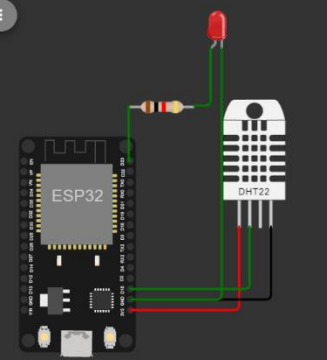
```
---
SAFE
Temperature: 24.80°C
Moisture: 36.4%
NORMAL
Sprinkler Status : Not Working
---
```

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esp32-dht22.ino diagram.json libraries.txt Library Manager

```
14 dht.setup(DHTPIN, DHTesp::DHT22);
15 }
16 void loop() {
17   TempAndHumidity data = dht.getTempAndHumidity();
18   float temp = 24.8;
19   float hum = 36.4;
20   if (temp > 50){
21     Serial.println("FIRE");
22     digitalWrite(pinLED, HIGH);
23     delay(1000);
24     digitalWrite(pinLED, LOW);
25     delay(500);
26   }
27   else{
28     digitalWrite(pinLED, LOW);
29     Serial.println("SAFE");
30   }
31   Serial.println("Temperature: " + String(temp, 2) + "°C");
32   Serial.println("Moisture: " + String(hum, 1) + "%");
33   Serial.println("NORMAL");
34   Serial.println("Sprinkler Status : Not Working");
35   Serial.println("----");
36   delay(500);
37 }
```

Simulation



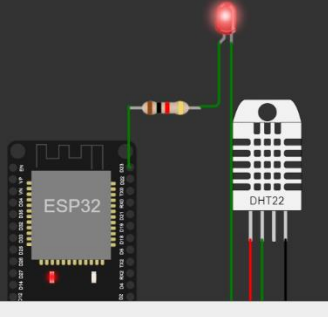
SAFE
Temperature: 24.80°C
Moisture: 36.4%
NORMAL
Sprinkler Status : Not Working

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esp32-dht22.ino diagram.json libraries.txt Library Manager

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6
7 DHTesp dht;
8 void setup() {
9   pinMode(pinLED, OUTPUT);
10   Serial.begin(115200);
11   Serial.println("EDSPERT - Acquisition sensor DHT22 via ESP32");
12
13   dht.setup(DHTPIN, DHTesp::DHT22);
14 }
15 void loop() {
16   TempAndHumidity data = dht.getTempAndHumidity();
17   float temp = 67.01;
18   float hum = 21.06;
19   if (temp > 50){
20     Serial.println("FIRE");
21     digitalWrite(pinLED, HIGH);
22     delay(1000);
23     digitalWrite(pinLED, LOW);
24     delay(500);
25   }
26   else{
27     digitalWrite(pinLED, LOW);
28     Serial.println("SAFE");
29   }
30 }
```

Simulation



00:04.500 98%

FIRE
Temperature: 67.01°C
Moisture: 21.1%
ALERT
Sprinkler Status : Working

FIRE

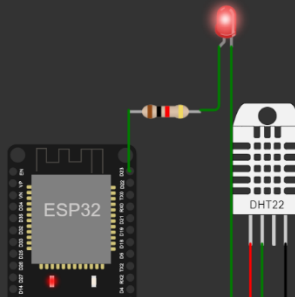
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esp32-dht22.ino diagram.json libraries.txt Library Manager

```
15 }
16 void loop() {
17
18   TempAndHumidity data = dht.getTempAndHumidity();
19
20   float temp = 67.01;
21
22   float hum = 21.06;
23
24   if (temp > 50){
25     Serial.println("FIRE");
26     digitalWrite(pinLED, HIGH);
27     delay(1000);
28
29     digitalWrite(pinLED, LOW);
30     delay(500);
31   }
32   else{
33     digitalWrite(pinLED, LOW);
34     Serial.println("SAFE");
35   }
36   Serial.println("Temperature: " + String(temp, 2) + "°C");
37   Serial.println("Moisture: " + String(hum, 1) + "%");
38   Serial.println("ALERT");
39   Serial.println("Sprinkler Status : Working");
40   Serial.println("----");
41
42   delay(500);
43 }
```

Simulation

00:28.459 100%



FIRE
Temperature: 67.01°C
Moisture: 21.1%
ALERT
Sprinkler Status : Working

FIRE

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esp32-dht22.ino diagram.json libraries.txt Library Manager

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Simulation

