Project Development Phase

Sprint 2

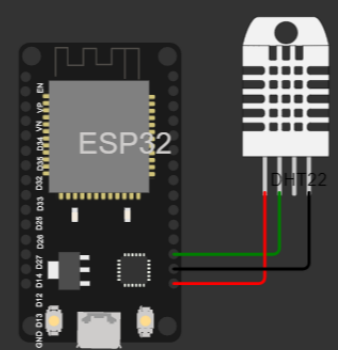| Date	29 October 2022
Team ID	PNT2022TMID35665
Project Name	Industry-Specific Intelligent Fire Management System

LINK: https://wokwi.com/projects/322410731508073042

OUTPUT:

WOKWI OUTPUT

IBM WATSON OUTPUT

		Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	Device Class	Firmware Version
>	☐	iot_device_1	● Connected	iot_device	Device	Nov 8, 2022 9:58 PM		sakthidasan2001@gmail.com		
>	☐	iot_device_2	● Connected	iot_device	Device	Nov 8, 2022 9:53 PM		sakthidasan2001@gmail.com		
>	☐	iot_device_3	● Connected	iot_device	Device	Nov 8, 2022 10:03 PM		sakthidasan2001@gmail.com		
∨	■	wokwi_us	● Connected	iot_device	Device	Nov 2, 2022 10:21 AM		sakthidasan2001@gmail.com	→	...

Browse   Action   Device Types   Interfaces   **Add Device ⊕**

Identity   Device Information   Recent Events   State   Logs   ✕

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
Data	{"Data":{"temperature":36.4,"humidity":46.5}}	json	a few seconds ago
Data	{"Data":{"temperature":36.4,"humidity":46.5}}	json	19 minutes ago
Data	{"Data":{"temperature":36.4,"humidity":46.5}}	json	19 minutes ago
Data	{"Data":{"temperature":36.4,"humidity":46.5}}	json	19 minutes ago
Data	{"Data":{"temperature":36.4,"humidity":46.5}}	json	19 minutes ago

5 Simulations running

IBM WATSON DASHBOARD OUTPUT
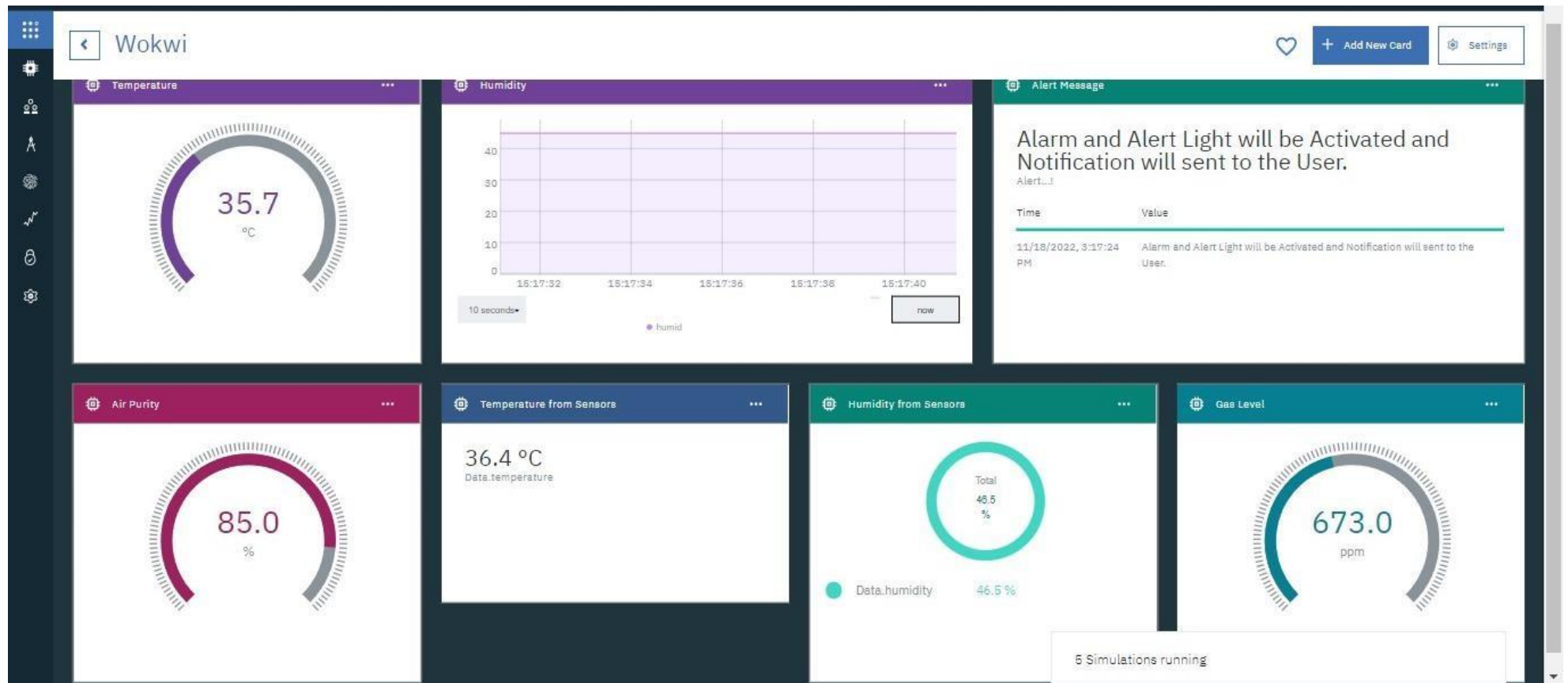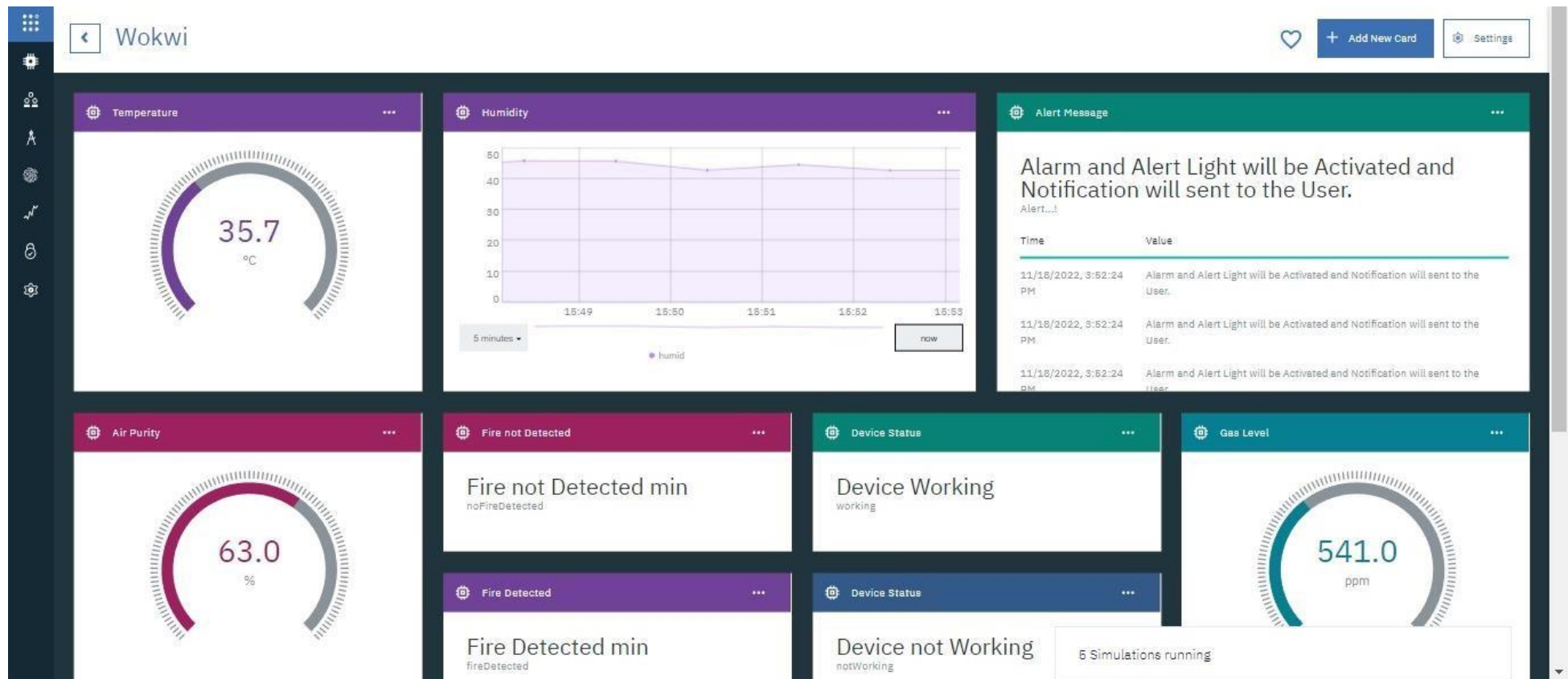
CODE:

```
#include <time.h>
#include <WiFi.h>
#include <PubSubClient.h>

#define ORG "88653s"
#define DEVICE_TYPE "iot_device"
#define DEVICE_ID "wokwi_us"
#define TOKEN ")l(u!YYO)NmKr9sk(k"
```

```cpp
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
char publishTopic[] = "iot-2/evt/data/fmt/json";
char authMethod[] = "use-token-auth";
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;

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

float temperature = 0;
int gas = 0;
int flame = 0;
String flame_status = "";


String Gas_status = "";
String exhaust_fan_status = "";
String sprinkler_status = "";



void setup() {
Serial.begin(99900);
wifiConnect();
mqttConnect();
}
void loop() {
srand(time(0));
                //initial variables and random generated data

        temperature = random(-20,125);
gas = random(0,1000);
int flamereading = random(200,1024);
flame = map(flamereading,200,1024,0,2);
```

```
    //set a flame status
    switch (flame) {
    case 0: flame_status = "No Fire";
    break;
    case 1: flame_status = "Fire is
Detected";
    break;
    }

    //send the sprinkler status

    if(flame==1){
        sprinkler_status = "Working";
    }
else{
sprinkler_status = "Not Working";
    }

    //toggle the fan according to gas reading

    if(gas > 100){
        Gas_status = "Gas Leakage is Detected";
        exhaust_fan_status = "Working";
    }
else{
        Gas_status = "No Gas Leakage is Detected";
        exhaust_fan_status = "Not Working";
    }
```

```cpp
//json format for IBM Watson

String payload = "{";
payload+="\"gas\":";
payload+=gas;
payload+=",";
payload+="\"temperature\":";
payload+=(int)temperature;
payload+=",";
payload+="\"flame\":";
payload+=flamereading;
payload+=",";
payload+="\"fire_status\":\""+flame_status+"\",";
payload+="\"sprinkler_status\":\""+sprinkler_status+"\",";
payload+="\"Gas_status\":\""+Gas_status+"\",";
payload+="\"exhaust_fan_status\":\""+exhaust_fan_status+"\"}";

if(client.publish(publishTopic, (char*) payload.c_str()))
{
    Serial.println("Publish OK");
}
else{
    Serial.println("Publish failed");
}
```

```
    delay(1000);


  if (!client.loop())
  {
    mqttConnect();
  }
}


void wifiConnect()
{
  Serial.print("Connecting to ");
  Serial.print("Wifi");
  WiFi.begin("Wokwi-GUEST", "", 6);
  while (WiFi.status() != WL_CONNECTED)
  {
    delay(500);
    Serial.print(".");
  }
  Serial.print("WiFi connected, IP address: ");
  Serial.println(WiFi.localIP());

}
```

```
void mqttConnect()
{
  if (!client.connected())
  {
    Serial.print("Reconnecting MQTT client to ");
    Serial.println(server);
    while (!client.connect(clientId, authMethod, token))
    {
      Serial.print(".");
      delay(500);
    }

    Serial.println();
  }
}
```

LOGIN PAGE OUTPUT:

RESET PAGE OUTPUT:

LOGIN CODE:

```
<!DOCTYPE html>
<html>
<head>
        <title>Login</title>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
        <link href="style.css" rel="stylesheet" type="text/css">
        <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
 <link href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet"> <script
src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
</head>
<body>
        <div class="container-fluid">
                <div class="row ">
                        <!-- IMAGE CONTAINER BEGIN -->
                        <div class="col-lg-6 col-md-6 d-none d-md-block infinity-image-container"></div>
                        <!-- IMAGE CONTAINER END -->

                        <!-- FORM CONTAINER BEGIN -->
                        <div class="col-lg-6 col-md-6 infinity-form-container">
                                <!-- <h4 class = "test" style="color:#fa6903;">FIRE MANAGEMENT</h4> -->
                                <div class="col-lg-9 col-md-12 col-sm-9 col-xs-12 infinity-form">
                                        <!-- Company Logo -->
                                        <div class="text-center mb-3 mt-5">
                                                <h4 class = "test" style="color:#fa6903;">FIRE MANAGEMENT</h4>
                                        </div>
                                        <div class="text-center mb-4">
                        <h4>Login into your account</h4>
                    </div>
                    <!-- Form -->
```

```html
<form class="px-3">
        <!-- Input Box -->
        <div class="form-input">
                <span><i class="fa fa-envelope-o"></i></span>
                  <input type="email" name="" placeholder="Email Address"
        tabindex="10"required> </div>
        <div class="form-input">
                <span><i class="fa fa-lock"></i></span>
                <input type="password" name="" placeholder="Password" required>
        </div>
        <div class="row mb-3">
        <!-- Remember Checkbox -->
  <div class="col-auto d-flex align-items-center">
    <div class="custom-control custom-checkbox">
      <input type="checkbox" class="custom-control-input" id="cb1">
      <label class="custom-control-label text-black" for="cb1" style = >Remember
      me</label> </div>
    </div>
        </div>
        <!-- Login Button -->
  <div class="mb-3">
                        <button type="submit" class="btn btn-block">Login</button>
                </div>
                <div class="text-right ">
  <a href="reset.html" class="forget-link">Forgot password?</a>
  </div>
                </form>
          </div>
        </div>
     <!-- FORM CONTAINER END -->
    </div>
</div>
```

```
</body>
</html>




RESET CODE:

<!DOCTYPE html>
<html>
<head>
        <title>Reset</title>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
        <link href="style.css" rel="stylesheet" type="text/css">
        <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
<link href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/font-awesome.min.css" rel="stylesheet"> <script
src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
</head>
<body>
        <div class="container-fluid">
                <div class="row">
                        <!-- IMAGE CONTAINER BEGIN -->
                        <div class="col-lg-6 col-md-6 d-none d-md-block infinity-image-container"></div>
                        <!-- IMAGE CONTAINER END -->


                        <!-- FORM CONTAINER BEGIN -->
                        <div class="col-lg-6 col-md-6 infinity-form-container">
                                <div class="col-lg-8 col-md-12 col-sm-8 col-xs-12 infinity-form">
                                        <div class="text-center mb-3 mt-5">
                                                <img src="ps.webp" width="150px">
                                        </div>
```

```html
<div class="reset-form d-block">
    <form class="reset-password-form px-3">
        <h4 class="mb-3" style="color:#fa6903">Reset Your password</h4>
        <p class="mb-3 text-black">
            Please enter your email address and we will send you a password
            reset link. </p>
        <div class="form-input">
            <span><i class="fa fa-envelope"></i></span>
            <input type="email" name="" placeholder="Email Address" tabindex="10"required>
        </div>
        <div class="mb-3">
            <button type="submit" class="btn" >Send Reset Link</button>
        </div>
    </form>
</div>


<div class="reset-confirmation d-none px-3">
    <div class="mb-4">
        <h4 class="mb-3">Link was sent</h4>
        <h6 class="text-white">Please, check your inbox for a password reset
        link.</h6> </div>

        <a href="login.html">
            <button type="submit" class="btn">Login
            Now</button> </a>
        <div>
    </div>
</div>
<!-- FORM CONTAINER END -->
</div>
</div>
```

```html
<script type="text/javascript">
        function
        PasswordReset() {
$('form.reset-password-form').on('submit', function(e)
                                                    {
e.preventDefault();   $('.reset-form')
        .removeClass('d-block')
        .addClass('d-none');
            $('.reset-confirmation').addClass('d-block');
                });
        }
window.addEventListener('load', function() {
    PasswordReset();
        });
    </script>


    </body>
    </html>
```

STYLE CODE:

```css
    .container-fluid{
background-        color:
black; }
    .infinity-image-container{
        background: url('fire.jpg')
    center no-repeat; background- size:
    cover;
        height: 100vh;
    }
```

```css
.infinity-form-container{
background: #fce7c9;
display: flex;          flex-
direction: column;   align-
items: center;
    justify-content:
center; }
.infinity-form{
        display: flex;
        flex-
direction: column;
        justify-
content: center;
        min- height:
100vh; }

.infinity-form h4 {
        font- weight: bold;
        color: #ffbe6a;
        font-weight:
bol;
}

.infinity-form  .form-
input    {    position:
relative; }

.infinity-form .form-input
input { width: 100%;
        margin- bottom:
20px;          height:
```

```css
40px; border: none;
      border-radius: 5px;
      outline: none;
background: white;
   padding-left: 45px;
}
.infinity-form .form-input span {
position:     absolute;     top:
      8px; padding-left: 20px;
color:
#777;
}


.infinity-form .form-input input:focus, .infinity-
form
.form-input
input:valid  {  border:
2px solid #fbae4e; }


.infinity-form
input[type="checkbox"]:not(:checked)           +
label:before{ background: transparent; border:2px
solid #ffbe6a; font- weight: bol; width: 15px;
   height:
15px; }


.infinity-form .custom-checkbox .custom-control-input:checked ~ .custom-control-
label::before { background-color: #feb449 !important; border:0px;
}


.infinity-form
button[type="submit"] {
```

```css
    margin-top: 10px;   border:
none; cursor: pointer;
        border-radius:
20px; background: linear-gradient(45deg,
    #f88702,#f88702); /*Button Color*/color:
#ffFF;         font-weight: bol;         font-weight:
    bold; transition: 0.5s;
}

.infinity-form button[type="submit"]:hover {
background: linear-gradient(45deg, #FEB449, #feb449);
    /*Buttoncolor when hover*/
}

.forget-link , .login-link , .register-
link { color: #ffbe6a; font-weight:
bold;
}

.forget-link:hover , .login-link:hover , .register-
link:hover { color: #feb449; text-decoration:
none;
}
```