

# IOT-PHASE 4

## TEMPERATURE AND HUMIDITY MONITORING



### INTRODUCTION:

Temperature and humidity observation through an IoT-enabled web platform, realized with HTML and CSS, is a powerful means of remotely monitoring and visualizing environmental data. By integrating IoT sensors, we can collect real-time temperature and humidity readings and then present this data through a web interface. HTML allows us to

structure the content, while CSS provides styling, creating a user-friendly and visually appealing platform. Users can access this web-based system from anywhere, gaining insights, setting alerts, and making data-driven decisions in sectors like agriculture, industrial control, and building management. This combination of IoT, HTML, and CSS empowers efficient environmental monitoring and management through an easily accessible online platform.

## TECHNOLOGIES USED:

The following technologies used in this project are web based platforms OF

HTML , CSS

## WEB PLATFORM:

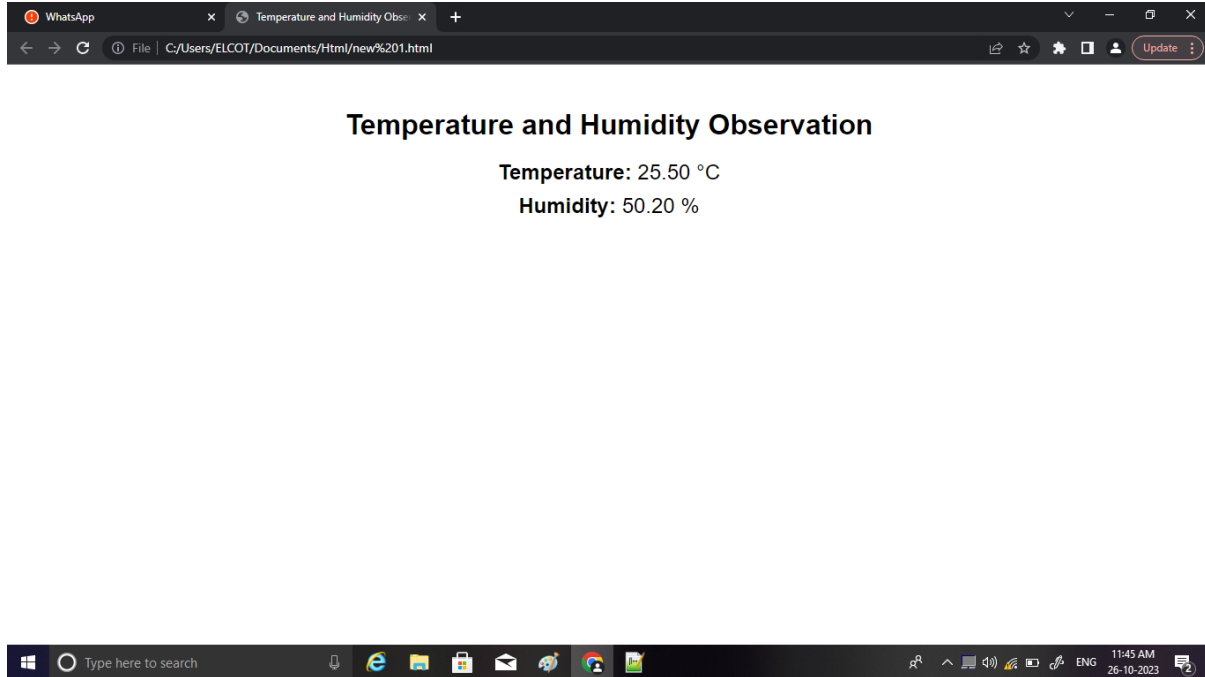
Because HTML and CSS are primarily used for structuring and styling web pages, respectively, it is not possible to create a complete temperature and monitoring system using just these two languages. Additional technologies, such as JavaScript for functionality and data communication, as well as a backend server to handle data from sensors, are required to create a temperature and humidity monitoring system. However, I can provide you with a simple HTML and CSS template for a water monitoring system's user interface. Here's a demo of the following project with source code.

## Source code:

```
C:\Users\ELCOT\Documents\Html\temp.html - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
new 1.html temp.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>Temperature and Humidity Observation</title>
5 <style>
6     body {
7         font-family: Arial, sans-serif;
8     }
9     .container {
10        text-align: center;
11        margin-top: 50px;
12    }
13    .data {
14        font-size: 24px;
15        margin-bottom: 10px;
16    }
17 </style>
18 </head>
19 <body>
20 <div class="container">
21 <h1>Temperature and Humidity Observation</h1>
22 <div class="data">
23 <strong>Temperature:</strong> <span id="temperature">--</span> °C
24 </div>
25 <div class="data">
26 <strong>Humidity:</strong> <span id="humidity">--</span> %
27 </div>
28 </div>
29 </body>
30 </html>
Hyper Text Markup Language file length: 1,598 lines: 48 Ln: 33 Col: 72 Pos: 982 Windows (CR LF) UTF-8 INS
Type here to search 11:52 AM 26-10-2023
```

```
C:\Users\ELCOT\Documents\Html\temp.html - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
new 1.html temp.html
24 </div>
25 <div class="data">
26 <strong>Humidity:</strong> <span id="humidity">--</span> %
27 </div>
28 </div>
29 <script>
30 // You would need JavaScript to update the values in real-time.
31 // Here's a simplified example using setInterval:
32 function updateData() {
33     // Replace these values with your IoT data retrieval logic.
34     const temperatureValue = 25.5; // Change this with the actual temperature value.
35     const humidityValue = 50.2; // Change this with the actual humidity value.
36
37     document.getElementById("temperature").textContent = temperatureValue.toFixed(2);
38     document.getElementById("humidity").textContent = humidityValue.toFixed(2);
39 }
40
41 // Update the data every 5 seconds (for example).
42 setInterval(updateData, 5000);
43
44 // Call updateData() once immediately to show initial values.
45 updateData();
46 </script>
47 </body>
48 </html>
Hyper Text Markup Language file length: 1,598 lines: 48 Ln: 33 Col: 72 Pos: 982 Windows (CR LF) UTF-8 INS
Type here to search 11:52 AM 26-10-2023
```

## Output:



## Conclusion:

Temperature and humidity observation based on IoT represents a transformative approach to environmental monitoring. By leveraging IoT devices and sensors, we can collect, transmit, and analyse real-time data, enabling informed decision-making in various fields, from agriculture to industrial processes. The seamless integration of sensors, data platforms, and web interfaces provides efficient data management and visualization, offering users the ability to respond proactively to changing conditions. This technology not only enhances productivity and resource management but also contributes to sustainability efforts by optimizing resource usage.