**Phase 4**

**Development part 2**

**Smart Water Fountain**

In this part you will continue building your project.

Continue building the project by developing the water fountain status platform. Use web development technologies (e.g., HTML, CSS, JavaScript) to create a platform that displays real-time water fountain status.

Design the platform to receive and display real-time water fountain data, including water flow rate and malfunction alerts.

**Html Code : index.html**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link rel="stylesheet" href="nn.css">

    <title>Water Fountain Status</title>

    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">

  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>

</head>

<body>

    <header>

        <h1 align="center">Water Fountain Status</h1>

        <nav class="navbar navbar-expand-sm navbar-dark bg-dark">

            <div class="container-fluid">

              <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#mynavbar">

                <span class="navbar-toggler-icon"></span>

              </button>

              <div class="collapse navbar-collapse" id="mynavbar">

                <ul class="navbar-nav me-auto">

                  <li class="nav-item">

                    <a class="nav-link" href="javascript:void(0)">About us</a>

                  </li>

                  <li class="nav-item">

                    <a class="nav-link" href="javascript:void(0)">Contact</a>

                  </li>

                </ul>

                <form class="d-flex">

                  <input class="form-control me-2" type="text" placeholder="Search">

                  <button class="btn btn-primary" type="button">Search</button>

                </form>

    </header>

    <div class="status-container">

        <section class="status">

            <h2>Current Status</h2>

            <p>Flow Rate: <span id="flow-rate">0.00 GPM</span></p>

            <p>Status: <span id="status">Normal</span></p>

        </section>

    </div>

    <aside>

        <h2>Additional Information</h2>

        <p>This water fountain is located in the central plaza and serves as a source of refreshment for visitors.</p>

    </aside>

    <section id="about">

        <h2>About Us</h2>

        <p>Welcome to the water fountain Platform, where we provide real-time data and visualizations to help you monitor water fountain conditions. Our mission is to promote sustainability and environmental awareness.</p>

    </section>

    <section id="contact">

        <h2>Contact Us</h2>

        <p>If you have any questions or feedback, please feel free to contact us at <a href="mailto:contact@example.com">contact@example.com</a>.</p>

    </section>

    <section id="disclaimer">

        <h2>Disclaimer</h2>

        <p>Information provided on this platform is for informational purposes only. Please consult with experts for critical decisions related to the environment.</p>

    </section>

    <div class="feedback-container">

        <section id="feedback">

            <h2>Provide Feedback</h2>

            <form>

                <label for="feedback-text">Your Feedback:</label>

                <textarea id="feedback-text" name="feedback-text" rows="4" cols="50"></textarea>

                <button type="submit">Submit</button>

            </form>

        </section>

    </div>

    <footer>

        <p>&copy; 2023 Smart Water Fountain</p>

    </footer>

    <script src="nn.js"></script>

</body>

</html>

1. **<!DOCTYPE html>:** This declaration specifies that the document follows HTML5 standards.
2. **<html lang="en">:** The root element of the HTML document, and it indicates that the document is in English.
3. **<head>:** This section contains metadata about the document, including character encoding, viewport settings, external stylesheet references, and a title for the page.
4. **<link rel="stylesheet" href="nn.css">:** This line links an external CSS file named "nn.css" to style the web page.
5. **<title>Water Fountain Status</title>:** Sets the title of the web page, which appears in the browser's title bar or tab.
6. **<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" rel="stylesheet">:** This line includes a link to the Bootstrap CSS framework to utilize Bootstrap styles for your web page. It enhances the styling and provides responsive design features.
7. **<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js"></script>:** This script includes Bootstrap's JavaScript bundle, which is used for certain Bootstrap components and features. Bootstrap is a popular front-end framework for web development.
8. **<header>:** This section represents the header of the web page. It includes the title, "Water Fountain Status," and a navigation menu. The navigation menu is styled using Bootstrap's navbar component.
9. **<h1 align="center">Water Fountain Status</h1>:** This is the main heading of the page, centered within the header.
10. **<nav class="navbar navbar-expand-sm navbar-dark bg-dark">:** This is a Bootstrap navbar that provides a responsive navigation bar with a dark background.
11. Inside the navigation bar, there's a button for toggling the navigation links, a <div> for the navigation links, and a search form with an input field and a search button.
12. **<div class="status-container">:** This <div> represents the container for the water fountain status information and additional content.
13. **<section class="status">:** This section displays the current water fountain status, including the flow rate and status (e.g., "Normal").
14. **<aside>:** This section provides additional information about the water fountain's location and purpose.
15. **Sections with IDs:** There are several sections with IDs, such as "about," "contact," and "disclaimer," which are typically used for organizing and structuring content on the page. They contain information about the platform, contact details, and a disclaimer.
16. **<div class="feedback-container">:** This <div> represents the container for user feedback.
17. **<section id="feedback">:** This section contains a form that allows users to provide feedback. The form includes a label, a text area for entering feedback, and a "Submit" button.
18. **<footer>:** The footer section contains copyright information, indicating that the content is copyrighted by "Smart Water Fountain" in the year 2023.
19. **<script src="nn.js"></script>:** This line includes an external JavaScript file named "nn.js." The JavaScript file is used to add functionality to the web page, such as handling user interactions or updating the water fountain status dynamically.

**CSS (nn.css)**

/\* Global styles \*/

body {

    font-family: Arial, sans-serif;

    background-color: #f0f0f0;

    margin: 0;

    padding: 0;

}

/\* Header styles \*/

header {

    background-color: #007BFF;

    color: #fff;

    text-align: center;

    padding: 10px 0;

}

header h1 {

    margin: 0;

}

/\* Navigation styles \*/

.navbar {

    background-color: #343a40; /\* Bootstrap dark background color \*/

}

.navbar-toggler-icon {

    background-color: #fff;

}

.nav-link {

    color: #fff;

}

/\* Status container styles \*/

.status-container {

    background-color: #fff;

    border-radius: 10px;

    padding: 20px;

    margin: 20px;

    box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);

}

/\* Status section styles \*/

.status {

    text-align: center;

}

.status h2 {

    font-size: 20px;

    margin: 0;

}

.status p {

    font-size: 18px;

}

.status span {

    font-weight: bold;

    color: #007BFF;

}

/\* Aside styles \*/

aside {

    background-color: #f9f9f9;

    border-radius: 5px;

    padding: 20px;

    margin: 20px;

    box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);

}

aside h2 {

    font-size: 18px;

}

/\* Section styles (About, Contact, Disclaimer) \*/

section {

    background-color: #fff;

    border-radius: 10px;

    padding: 20px;

    margin: 20px;

    box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);

}

section h2 {

    font-size: 20px;

}

section p {

    font-size: 18px;

}

/\* Feedback container styles \*/

.feedback-container {

    background-color: #fff;

    border-radius: 10px;

    padding: 20px;

    margin: 20px;

    box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);

}

/\* Feedback section styles \*/

#feedback h2 {

    font-size: 20px;

    margin: 0;

}

form {

    margin-top: 20px;

}

label {

    display: block;

    margin-bottom: 5px;

}

textarea {

    width: 100%;

    padding: 10px;

    border: 1px solid #ccc;

    border-radius: 5px;

    font-size: 16px;

}

button {

    background-color: #007BFF;

    color: #fff;

    padding: 10px 20px;

    border: none;

    border-radius: 5px;

    font-size: 16px;

    cursor: pointer;

}

button:hover {

    background-color: #0056b3;

}

/\* Footer styles \*/

footer {

    background-color: #007BFF;

    color: #fff;

    padding: 20px 0;

    text-align: center;

}

footer p {

    font-size: 16px;

}

/\* Bootstrap container adjustment \*/

.container-fluid {

    padding: 0;

}

**Java script: (nn.js)**

// Function to update the water fountain status with mock data

function updateStatus() {

    const flowRateElement = document.getElementById('flow-rate');

    const statusElement = document.getElementById('status');

    // Generate a random flow rate (between 0 and 5) with 2 decimal places

    const flowRate = (Math.random() \* 5).toFixed(2);

    // 20% chance of a malfunction

    const isMalfunction = Math.random() < 0.2;

    // Update the "Flow Rate" and "Status" elements

    flowRateElement.textContent = `${flowRate} GPM`;

    statusElement.textContent = isMalfunction ? 'Malfunction' : 'Normal';

}

// Update the status every 5 seconds (adjust the interval as needed)

setInterval(updateStatus, 5000);

// Initial status update

updateStatus();

**Result :**



