Rough Documentation of Button for Web Application

Overview

The Toggle M2 web application is a simple interface that allows users to toggle the state of a device (M2) through an external API (Thingspeak). The application displays a button to control the device state and provides real-time feedback on the current state or any errors that may occur during the process.

HTML Structure

The HTML document contains the basic structure of the web page, including the head and body sections. It includes a button to toggle M2, a paragraph to display the current status or errors, and a script section for JavaScript code.

CSS Styling

The CSS styles are defined in the head section of the HTML document. The styling is minimal and focused on centering the content on the page. The toggle button and status text have specific styles to enhance the visual presentation.

JavaScript Functionality

toggleM2 Function

The `toggleM2` function is responsible for fetching the current state of M2 from Thingspeak and updating the button and status text accordingly. It handles different scenarios, such as M2 being ON, OFF, or encountering an error during the process.

executeAPI Function

The `executeAPI` function is a generic function to make API requests. It is used to send commands to Thingspeak to update the state of M2. After a successful API request, it triggers the `toggleM2` function to update the button state.

**Initialization and Update **

The web page is initialized by calling `toggleM2` on page load. This ensures that the initial state is displayed correctly. Additionally, the status is updated every second using `setInterval(toggleM2, 1000)`, providing real-time feedback to the user.

External APIs

The application uses the Thingspeak API to retrieve the current state of M2 and update it by sending commands.

Usage

- Open the web page in a browser.
- The initial state is displayed as "Loading...".
- The application fetches the current state from Thingspeak every second.
- The toggle button allows users to switch the state of M2 between ON and OFF.
- The status text provides feedback on the current state or any errors encountered during the process.

Error Handling

The application handles network errors and invalid responses from the Thingspeak API. In case of an error, it displays an "Error" message on the button and updates the status text accordingly.

Conclusion

The Toggle M2 web application provides a simple and intuitive interface for users to interact with and monitor the state of the M2 device through the Thingspeak API. The real-time feedback enhances user experience, and the error handling ensures reliability in different scenarios.

Output: