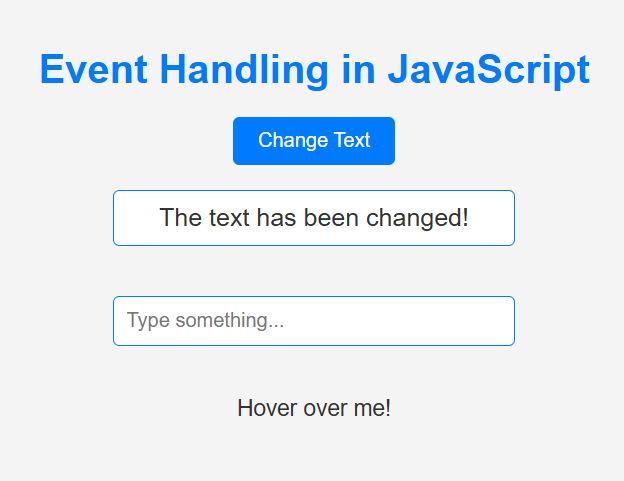
**Problem Statement**

Create an HTML webpage that demonstrates event handling using JavaScript. The webpage should allow users to change text dynamically through button clicks, show input text in real-time, and respond to hover events.

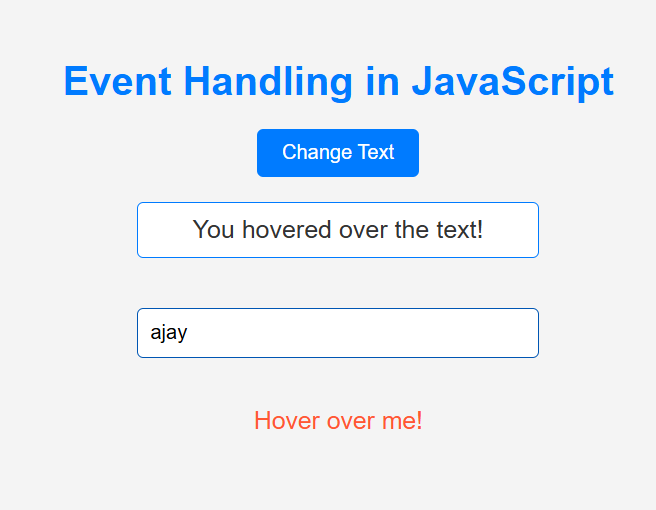
**Steps Taken**

1. **HTML Structure**:
   * Created a basic HTML structure with a title and a header.
   * Added a button for changing text, a paragraph to display output, and an input field for user text.
   * Included a paragraph for hover effects.
2. **Styling with CSS**:
   * Applied styles to make the page visually appealing, including layout, colors, and transitions for interactive elements like buttons and text.
3. **JavaScript Setup**:
   * Used the <script> tag to include JavaScript at the bottom of the body for better performance (DOM elements are loaded before the script runs).
4. **DOM Element References**:
   * Used document.getElementById() to obtain references to the button, output paragraph, text input, and hover text.
5. **Button Click Event Handling**:
   * Added an event listener for the button using addEventListener('click', ...) that changes the text of the output paragraph when clicked.
6. **Input Field Event Handling**:
   * Added an event listener for the input field using addEventListener('input', ...) to update the output paragraph in real time based on user input.
7. **Hover Event Handling**:
   * Added mouseover and mouseout event listeners to the hover text to change the output paragraph text when the user hovers over and leaves the text.

**Output:**

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