

Exercise 4 - Mouse Over Highlighter

Objective:

Create a JavaScript program that will change the background color of paragraphs when the mouse hovers over them. You will be provided with the HTML file, and your task is to write the JavaScript code to handle the mouseover and mouseout events.

HTML File:

You will be given an HTML file with the following structure:

- Multiple paragraph elements with a class of `"highlightable"` that users will hover over.

JavaScript Instructions:

1. **Select the Paragraph Elements:** Select all the paragraph elements with the class `"highlightable"` from the HTML.
2. **Add Mouse Over Event Listener:** Attach a mouseover event listener to each selected paragraph.
3. **Add Mouse Out Event Listener:** Attach a mouseout event listener to revert the changes made during the mouseover event.
4. **Change Background Color:** Inside the event listener's callback functions:
 - For the mouseover event, add a class (e.g., `"highlighted"`) that changes the background color.
 - For the mouseout event, remove the class to revert the background color.
5. **Test Your Code:** Load the HTML file in your browser and hover over the paragraphs. Verify that the background color changes when hovering and reverts when the mouse leaves the element.

Constraints:

- Do not modify the HTML or the CSS.

- You must use the `addEventListener` method to attach both the mouseover and mouseout event listeners.

Tips:

- You may want to use the `classList.add` and `classList.remove` methods to manipulate the classes.
- Consider using `forEach` to iterate over all the selected elements.