## Context: You are an accessibility expert reviewing HTML for accessibility issues. Analyze the following code in the context of WCAG (Web Content Accessibility Guidelines) 2.2, listing any issues that may violate these guidelines. You will only be analyzing the HTML, ignoring any included or missing styles and scripts.

Code:

```<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Your Gaming Website</title>

<style>

body {

margin: 0;

padding: 0;

font-family: Arial, sans-serif;

}

header {

background: #333;

color: #fff;

padding: 10px;

text-align: center;

}

nav {

background: #444;

color: #fff;

padding: 10px;

text-align: center;

}

nav a {

color: #fff;

text-decoration: none;

padding: 10px;

margin: 0 10px;

}

section {

padding: 20px;

}

footer {

background: #333;

color: #fff;

text-align: center;

padding: 10px;

position: fixed;

bottom: 0;

width: 100%;

}

.hero-section {

position: relative;

background: url('background.jpg') center/cover no-repeat;

color: #fff;

text-align: center;

padding: 100px 20px;

}

.hero-overlay {

position: absolute;

top: 0;

left: 0;

width: 100%;

height: 100%;

background: rgba(0, 0, 0, 0.5); /\* Adjust the transparency as needed \*/

}

.hero-text {

position: relative;

z-index: 1;

}

.video-section {

text-align: center;

}

.game-description {

max-width: 800px;

margin: 0 auto;

text-align: justify;

}

.button {

display: inline-block;

padding: 10px 20px;

background: #007BFF;

color: #fff;

text-decoration: none;

border-radius: 5px;

}

.input-field {

padding: 10px;

margin: 10px 0;

width: 100%;

}

/\* Adjusted style for the submit button for better contrast \*/

.button.submit {

background: #28a745; /\* Green color \*/

}

</style>

</head>

<body>

<header>

<h1>Your Gaming Website</h1>

</header>

<nav>

<a href="#home">Home</a>

<a href="#games">Games</a>

<a href="#about">About</a>

<a href="#contact">Contact</a>

</nav>

<section class="hero-section">

<div class="hero-overlay"></div>

<div class="hero-text">

<h3>Welcome to the Gaming World!</h3>

<p>Discover the latest and greatest games.</p>

<a href="#games" class="button">Explore Games</a>

</div>

</section>

<section id="games" class="video-section">

<h3>Featured Games</h3>

<iframe width="560" height="315" src="https://www.youtube.com/embed/your-game-video-id" frameborder="0"

allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture"

allowfullscreen></iframe>

</section>

<section id="about" class="game-description">

<h2>About Us</h2>

<p>Your gaming website is dedicated to bringing you the latest news, reviews, and updates from the gaming

world. Explore our collection of games and stay informed.</p>

</section>

<section id="contact">

<h2>Contact Us</h2>

<form>

<label for="username">Username:</label><br>

<input type="text" id="username" name="username"><br>

<input type="password" id="pwd" name="pwd">

<input type="radio" id="1" name="fav\_number" value="1">

<label for="1"></label><br>

<input type="radio" id="2" name="fav\_number" value="2">

<label for="2">2</label><br>

<input type="radio" id="3" name="fav\_number" value="3">

<label for="3">3</label>

<input type="checkbox" id="vehicle1" name="vehicle1" value="Bike">

<label for="vehicle1"> I have a bike</label><br>

<input type="checkbox" id="vehicle2" name="vehicle2" value="Car">

<label for="vehicle2"> I have a car</label><br>

<input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">

<label for="vehicle3"> I have a boat</label>

<label for="myfile">Select a file:</label>

<input type="file" id="myfile" name="myfile">

<!-- Apply the modified style to the submit button -->

<input type="submit" value="Submit" class="button submit">

</form>

</section>

<footer onmouseout="Popup()">

&copy; 2023 Your Gaming Website. All rights reserved.

</footer>

</body>

</html>

```

Response format:

Snippet with error: …

Location of error: …

WCAG Guideline violated: …

Detection Algorithm: …

Explanation of Error: …

### Snippet with error:

```html

<footer onmouseout="Popup()">&copy; 2023 Your Gaming Website. All rights reserved.</footer>

```

### Location of error:

HTML `<footer>` element

### WCAG Guideline violated:

#### WCAG Guideline 2.2.1 - Audio-only and Video-only (Prerecorded)

#### WCAG Guideline 2.2.2 - Captions (Prerecorded)

#### WCAG Guideline 2.2.3 - Audio Description or Transcription (Prerecorded)

### Detection Algorithm:

Automated tools can detect the presence of JavaScript event handlers like `onmouseout` but cannot assess if they trigger accessible functionality such as captions or audio descriptions.

### Explanation of Error:

The `onmouseout` attribute in the `<footer>` element triggers a JavaScript function named `Popup()`. Without seeing the implementation of this function, it's assumed that it might perform actions that could affect accessibility, such as displaying pop-up elements without proper focus management or without providing alternative text for screen readers. Additionally, the inclusion of multimedia content (e.g., videos within the site) without explicit captions or audio descriptions violates several WCAG guidelines aimed at ensuring that multimedia content is accessible to users who are deaf or hard of hearing, and those who rely on screen readers.

To address these issues, ensure that:

- The `Popup()` function does not negatively impact accessibility. If it displays new content, ensure that it is accessible, including proper focus management and alternative text where applicable.

- Multimedia content includes captions and audio descriptions where necessary. This can be achieved by adding `aria-describedby` attributes to video elements pointing to transcript IDs and ensuring that transcripts are available for download or embedded within the page.

Citations:

## Are there any more issues? List all that you find.

Based on the provided code and the WCAG 2.2 AA guidelines, here are additional accessibility issues identified:

### Snippet with error:

```html

<nav>

<a href="#home">Home</a>

<a href="#games">Games</a>

<a href="#about">About</a>

<a href="#contact">Contact</a>

</nav>

```

### Location of error:

HTML `<nav>` element

### WCAG Guideline violated:

#### WCAG Guideline 2.5.8 - Target Size (Minimum)

### Detection Algorithm:

Manual review of the code is required to determine if interactive elements meet the minimum size requirement.

### Explanation of Error:

The links within the navigation bar (`<nav>`) do not specify a minimum size. According to WCAG 2.2 AA guideline 2.5.8, all interactive targets should be at least 24x24 CSS pixels in size, including padding within the target and sufficient space between targets. Without explicit styling or dimensions defined for these links, there's a risk they may not meet this requirement, potentially causing difficulty for users with motor impairments or visual impairments relying on touch screens.

### Additional Issue:

### Snippet with error:

```html

<section id="contact">

<form>

<label for="username">Username:</label><br>

<input type="text" id="username" name="username"><br>

...

</form>

</section>

```

### Location of error:

HTML `<section>` element containing a `<form>`

### WCAG Guideline violated:

#### WCAG Guideline 3.3.8 - Accessible Authentication (Minimum)

### Detection Algorithm:

Review of form elements and authentication mechanisms.

### Explanation of Error:

The contact form lacks features to support users who have difficulty remembering information or spelling correctly, which are considered cognitive tests under WCAG 2.2 AA guideline 3.3.8. Specifically, there's no provision for auto-fill or selection of previously entered information, which could hinder users' ability to fill out the form efficiently. This issue affects accessibility for users with memory impairments or those who prefer not to re-enter information manually.

### Solution:

Implement auto-fill or selection options for previously entered information in the form. This can be achieved by using HTML5 attributes like `autocomplete="on"` for input fields, which prompts the browser to suggest previously entered values based on the input's `name` attribute.

Citations:

[1] https://adabook.medium.com/wcag-2-2-aa-guide-checklist-for-2021-web-accessibility-66c6fdaea034

[2] https://www.levelaccess.com/blog/wcag-2-2-aa-summary-and-checklist-for-website-owners/

[3] https://www.wuhcag.com/wcag-checklist/

[4] https://www.w3.org/TR/WCAG22/

[5] https://www.digitala11y.com/wcag-checklist/

[6] https://webaim.org/standards/wcag/checklist

[7] https://wcag.com/blog/wcag-2-2-aa-summary-and-checklist-for-website-owners/

[8] https://adasitecompliance.com/wcag-2-2-checklist/

[9] https://www.boia.org/wcag-2.2aa-checklist

[10] https://media.dequeuniversity.com/en/docs/web-accessibility-checklist-wcag-2.2.pdf

## Are there any more issues? List all that you find.

Upon further analysis of the provided code against the WCAG 2.2 AA guidelines, additional accessibility concerns emerge:

### Snippet with error:

```html

<a href="#games" class="button">Explore Games</a>

```

### Location of error:

HTML anchor (`<a>`) element within the `.hero-section`

### WCAG Guideline violated:

#### WCAG Guideline 2.5.9 - Location (Maximum)

### Detection Algorithm:

Manual review of the code to identify potential issues with the location of interactive elements.

### Explanation of Error:

The "Explore Games" button is placed within a hero section that uses a semi-transparent overlay (`hero-overlay`). While visually appealing, this design choice can pose accessibility challenges for keyboard users and screen reader users. The overlay might not be perceivable as part of the clickable area, especially if the overlay's background color is too close to the text color, leading to poor contrast and making it difficult for users to understand the boundaries of the interactive element.

### Additional Issue:

### Snippet with error:

```html

<input type="submit" value="Submit" class="button submit">

```

### Location of error:

HTML `<input>` element within the contact form

### WCAG Guideline violated:

#### WCAG Guideline 2.5.7 - Keyboard (No Keyboard Interaction Required)

### Detection Algorithm:

Review of form submission mechanism and its reliance on mouse interactions.

### Explanation of Error:

The "Submit" button within the contact form relies solely on mouse interaction to submit the form. This approach fails to accommodate users who navigate primarily with keyboards or assistive technologies, as they lack a way to initiate form submission through keyboard shortcuts or focus management. To address this, ensuring that forms are navigable via the keyboard and that the Enter key can be used to submit the form is crucial.

### Solution:

Ensure that the form is fully navigable via the keyboard and that pressing the Enter key submits the form. This can be achieved by setting the `type` attribute of the submit button to `"submit"` and ensuring that all interactive elements within the form are focusable and operable via the keyboard.

These issues highlight the importance of considering accessibility not just in terms of visible content but also in the overall usability and interactivity of a website. Addressing these concerns involves careful planning and testing to ensure that all users, regardless of their abilities, can effectively engage with the website.

Citations:

[1] https://www.w3.org/TR/WCAG22/

[2] https://www.accessibility.works/blog/wcag-2-2-guide/

[3] https://www.w3.org/WAI/standards-guidelines/wcag/new-in-22/

[4] https://abilitynet.org.uk/news-blogs/wcag-22-what-you-need-know

[5] https://devblogs.microsoft.com/engineering-at-microsoft/accessibility-insights-now-supports-wcag-2-2-aa/

[6] https://www.audioeye.com/compliance/wcag/

[7] https://tetralogical.com/blog/2023/10/05/whats-new-wcag-2.2/

[8] https://www.deque.com/blog/wcag-2-2-is-at-the-proposed-recommendation-stage/

[9] https://adasitecompliance.com/wcag-2-2-decoding-latest-web-accessibility-guidelines/

[10] https://www.boia.org/blog/wcag-2.2-is-here