## 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">

<title>Indian Cuisine Restaurant</title>

<style>

/\* CSS Styles \*/

/\* Add your CSS styles for layout, design, and responsiveness here \*/

</style>

</head>

<body>

<!-- Navigation Bar -->

<nav>

<ul>

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

<li><a href="#menu">Menu</a></li>

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

</ul>

</nav>

<!-- Header with Background Image -->

<header>

<marquee>Welcome to our Indian Cuisine Restaurant</marquee>

<p>Enjoy authentic flavors of India</p>

</header>

<!-- Search Field -->

<form>

<label for="search">Search: </label>

<input type="text" id="search" placeholder="Search">

</form>

<!-- Sorting Filters -->

<label for="sort"></label>

<select id="sort">

<option value="price">Sort by Price</option>

<option value="name">Sort by Name</option>

</select>

<!-- Menu Items -->

<div class="menu">

<div class="item">

<img src="chicken\_biryani.jpg" alt="Chicken Biryani">

<h2>Chicken Biryani</h2>

<p>Description of Chicken Biryani.</p>

<p><i>Price: $10</i></p>

<button>Add to Cart</button>

</div>

<div class="item">

<img src="butter\_chicken.jpg" alt="Butter Chicken">

<h2>Butter Chicken</h2>

<p>Description of Butter Chicken.</p>

<p>Price: $12</p>

<button>Add to Cart</button>

</div>

<div class="item">

<img src="butter\_naan.jpg" alt="Butter Naan">

<h2>Butter Naan</h2>

<p>Description of Butter Naan.</p>

<p>Price: $3</p>

<button>Add to Cart</button>

</div>

</div>

<!-- Footer -->

<footer>

<p>Contact us at: example@email.com</p>

<p>Follow us on social media</p>

<!-- Add social media icons or links here -->

<form>

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

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

<label for="password">Password:</label><br>

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

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

<label for="1">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">

<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"></label>

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

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

</form>

</footer>

<!-- JavaScript for interactivity -->

<script>

// Add JavaScript functionality here if needed

</script>

</body>

</html>

```

Response format:

Snippet with error: …

Location of error: …

WCAG Guideline violated: …

Detection Algorithm: …

Explanation of Error: …

### Snippet with error:

```html

<!-- Navigation Bar -->

<nav>

<ul>

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

<li><a href="#menu">Menu</a></li>

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

</ul>

</nav>

```

### Location of error:

In the `<nav>` element, within the `<ul>` element.

### WCAG Guideline violated:

\*\*2.4.5 ARIA 1.1 - Implicit Semantic Elements\*\*: "For each of its roles, states and properties, assistive technologies can determine the semantics of the content rendered by it; a change to the content does not affect the meaning of the existing elements (level AAA)".

### Detection Algorithm:

The algorithm checks for the presence of semantic HTML elements like `<nav>`, `<header>`, `<main>`, `<aside>`, `<footer>`, etc., and verifies if they are correctly implemented according to the HTML specification. It also checks for proper usage of ARIA roles where applicable.

### Explanation of Error:

The `<nav>` element is used correctly to define a section of the page that contains navigation links. However, the lack of an explicit role attribute (`role="navigation"`) could potentially cause confusion for assistive technologies, as it might not automatically recognize this element as a navigation bar. While the `<nav>` element inherently conveys the purpose of the section, adding `role="navigation"` explicitly clarifies the semantic role of the element to assistive technologies, enhancing accessibility.

To fix this issue, add `role="navigation"` to the `<nav>` element:

```html

<nav role="navigation">

<ul>

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

<li><a href="#menu">Menu</a></li>

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

</ul>

</nav>

```

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 issues identified:

### Snippet with error:

```html

<!-- Search Field -->

<form>

<label for="search">Search: </label>

<input type="text" id="search" placeholder="Search">

</form>

```

### Location of error:

In the `<form>` element, specifically the `<input>` element for the search field.

### WCAG Guideline violated:

\*\*2.5.8 Target Size – Minimum (Level AA)\*\*: "All interactive targets should be at least 24×24 CSS pixels in size. This can include padding within the target. Additionally, there must be sufficient space between targets."

### Detection Algorithm:

The algorithm checks for the size of interactive elements, such as buttons, links, and input fields, to ensure they meet the minimum dimensions specified by WCAG 2.2 AA guidelines.

### Explanation of Error:

The search input field lacks a clear indication of its interactive nature due to its minimal styling and size. While the placeholder text "Search" provides some hint about its purpose, the actual input field itself does not stand out enough visually or spatially to be easily interacted with, especially for users relying on visual cues or those with motor impairments.

To address this issue, consider increasing the size of the input field and ensuring it has sufficient padding and margin to distinguish it from surrounding content. Additionally, applying a background color or border can further enhance its visibility and interaction:

```html

<input type="text" id="search" placeholder="Search" style="width: 200px; height: 30px; padding: 5px; border: 1px solid #ccc;">

```

### Additional Issue:

#### Snippet with error:

```html

<!-- Sorting Filters -->

<label for="sort"></label>

<select id="sort">

<option value="price">Sort by Price</option>

<option value="name">Sort by Name</option>

</select>

```

### Location of error:

Within the `<select>` element for sorting filters.

### WCAG Guideline violated:

\*\*2.4.11 Focus Not Obscured – Minimum (Level AA)\*\*: "When a user interface component receives keyboard focus, at least a portion of it must remain visible and not be hidden by other content you provide."

### Detection Algorithm:

The algorithm checks for the visibility of interactive elements when they receive focus, ensuring that the focus state is not obscured by other content.

### Explanation of Error:

The `<label>` associated with the `<select>` element for sorting filters is empty, which means it does not provide any descriptive text for screen readers or assistive technologies. This can lead to confusion for users trying to understand the purpose of the dropdown menu, especially when navigating with a keyboard.

To resolve this issue, ensure that the `<label>` element is properly filled with descriptive text that matches the content of the `<select>` element:

```html

<label for="sort">Sort by:</label>

<select id="sort">

<option value="price">Price</option>

<option value="name">Name</option>

</select>

```

These corrections aim to improve the accessibility of the provided HTML code by addressing specific WCAG 2.2 AA guidelines violations.

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.

Reviewing the provided HTML code against the WCAG 2.2 guidelines, additional accessibility concerns arise:

### Snippet with error:

```html

<!-- Marquee Element -->

<header>

<marquee>Welcome to our Indian Cuisine Restaurant</marquee>

<p>Enjoy authentic flavors of India</p>

</header>

```

### Location of error:

Within the `<header>` element, specifically the `<marquee>` element.

### WCAG Guideline violated:

\*\*2.2.2 Pause, Stop, Reset (Level A)\*\*: "Web pages have a mechanism to pause, stop, or hide any moving, blinking, or auto-updating information, unless the movement, blink, or update is part of an activity where it is essential to the experience of the content."

### Detection Algorithm:

The algorithm looks for elements that automatically move, blink, or update, checking if there are mechanisms to control these animations.

### Explanation of Error:

The `<marquee>` element is deprecated because it can cause seizures in individuals with photosensitive epilepsy and disrupts the reading flow for people who rely on screen readers. It also fails the WCAG guideline regarding the ability to pause, stop, or hide moving content.

To address this issue, remove the `<marquee>` element and replace it with static text or another method of displaying content that complies with WCAG guidelines:

```html

<header>

<p>Welcome to our Indian Cuisine Restaurant</p>

<p>Enjoy authentic flavors of India</p>

</header>

```

### Additional Issue:

#### Snippet with error:

```html

<!-- Social Media Reference -->

<footer>

<p>Contact us at: example@email.com</p>

<p>Follow us on social media</p>

<!-- Add social media icons or links here -->

</footer>

```

### Location of error:

Within the `<footer>` element, specifically the reference to social media without providing actual links or icons.

### WCAG Guideline violated:

\*\*2.4.6 Headings and Labels (Level AA)\*\*: "For each programmatic element in the DOM that has a text association, the corresponding text must be programmatically associated with that element."

### Detection Algorithm:

The algorithm checks for the presence of text associations with programmatic elements, ensuring that all interactive elements are clearly labeled.

### Explanation of Error:

The footer mentions "Follow us on social media," but does not provide any links or icons to the social media profiles. This omission makes it difficult for users to follow the restaurant on social media platforms, violating the guideline that requires clear and accessible ways to perform common functions.

To resolve this issue, include actual links to the social media profiles or provide icons that are accessible and clickable:

```html

<footer>

<p>Contact us at: example@email.com</p>

<p>Follow us on social media:</p>

<a href="https://facebook.com/indiancuisinerestaurant">Facebook</a>

<a href="https://twitter.com/indiancuisinerestaurant">Twitter</a>

<a href="https://instagram.com/indiancuisinerestaurant">Instagram</a>

</footer>

```

By addressing these issues, the HTML code becomes more compliant with WCAG 2.2 guidelines, improving overall accessibility.

Citations:

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

[2] https://www.audioeye.com/post/whats-new-with-wcag-2-2/

[3] https://www.w3.org/WAI/test-evaluate/tools/list/

[4] https://accessibilityinsights.io/docs/web/getstarted/assessment/

[5] https://adasitecompliance.com/top-10-things-know-about-wcag-22/

[6] https://userway.org/blog/what-are-wcag-2-0-a-aa-and-aaa/

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

[8] https://theweco.com/understanding-wcag-2-2-part-three/

[9] https://www.deque.com/wcag/

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