**Report: Source Code Inspection of a Website**

For this task, I inspected the HTML source code of the website [**https://www.wikipedia.org/**](https://www.wikipedia.org/) and analyzed its metadata, headings, multimedia, and security-related features.

**1. Metadata**

**Observed <meta> Tags:**

* <meta charset="UTF-8">: Specifies the character encoding for the document (UTF-8). Ensures proper rendering of special characters.
* <meta name="viewport" content="width=device-width, initial-scale=1.0">: Optimizes the page for mobile devices by setting the viewport width to match the device width.
* <meta name="description" content="Wikipedia is a free online encyclopedia, created and edited by volunteers around the world.">: Provides a short description of the page, used by search engines for better indexing.
* <meta name="theme-color" content="#ffffff">: Sets the browser’s theme color to white, enhancing the appearance in mobile browsers.
* <meta property="og:title" content="Wikipedia">: Open Graph meta tag used for social sharing, specifying the title of the page when shared.

**Explanation:** Meta tags provide essential metadata about the webpage for search engines, browsers, and social media platforms, improving usability and SEO.

**2. Headings and Semantic Elements**

**Headings:**

* <h1>: The main heading, “Welcome to Wikipedia.”
* <h2>: Used for subheadings like “The Free Encyclopedia.”
* <h3>: Found in sub-sections for language-specific content.

**Semantic Elements:**

* <header>: Contains the main navigation and logo, providing structure to the top of the page.
* <footer>: Includes additional links, copyright information, and disclaimers.
* <section>: Groups related content, such as language links and featured content.
* <nav>: Used for the primary navigation menu.
* <article>: Groups self-contained information, such as featured articles or announcements.

**Explanation:** Semantic elements enhance the readability and accessibility of the page, making it easier for assistive technologies and search engines to understand the content structure.

**3. Multimedia Elements**

* <img>: Multiple images used for language logos and illustrations.
  + Example: <img src="path\_to\_image" alt="Wikipedia logo"> ensures accessibility with the alt attribute.
* <iframe>: Embeds external content.
  + Example: YouTube videos or maps embedded on certain Wikipedia pages.
* Multimedia content is minimal on the homepage, but other pages feature <audio> and <video> for educational purposes.

**Explanation:** These elements enhance user experience by adding visual and interactive content. The use of alt attributes in images ensures accessibility.

**4. Security-Relevant Tags**

**Content Security Policy (CSP):**

* Found in the HTTP response headers: Content-Security-Policy: default-src 'self'; img-src \*; media-src 'self'; script-src 'self' 'unsafe-inline';.
  + Restricts the sources of content that can be loaded by the page, preventing malicious scripts and clickjacking attacks.

**Sandboxed <iframe>:**

* <iframe sandbox>: Provides an additional layer of security for embedded content by restricting its capabilities (e.g., disabling scripts, forms, or navigation).

**Explanation:** These security measures help mitigate risks such as cross-site scripting (XSS) and malicious iframe attacks.

**5. Cross-Origin Resource Sharing (CORS)**

* CORS headers like Access-Control-Allow-Origin: \* are implemented to specify which origins can access resources from the server.
* Observed in external script requests (e.g., JavaScript files from Wikimedia servers).

**Explanation:** CORS prevents unauthorized access to resources, ensuring that only trusted domains can interact with the server.

**6. Subresource Integrity (SRI)**

* Example: <script src="https://path\_to\_script.js" integrity="sha384-abc123" crossorigin="anonymous"></script>.
* Ensures that external scripts or stylesheets haven’t been tampered with by verifying their integrity using a cryptographic hash.

**Explanation:** SRI protects against compromised third-party resources by ensuring the loaded files match the expected hash.

**Summary of Findings**

* **Metadata:** Comprehensive metadata ensures accessibility, SEO, and proper rendering.
* **Headings and Semantic Elements:** Structured and accessible, aiding navigation for users and search engines.
* **Multimedia Elements:** Minimal but accessible with proper attributes.
* **Security Features:**
  + **CSP** and sandboxed iframes enhance page security.
  + **CORS** controls access to resources.
  + **SRI** ensures the integrity of external scripts.