

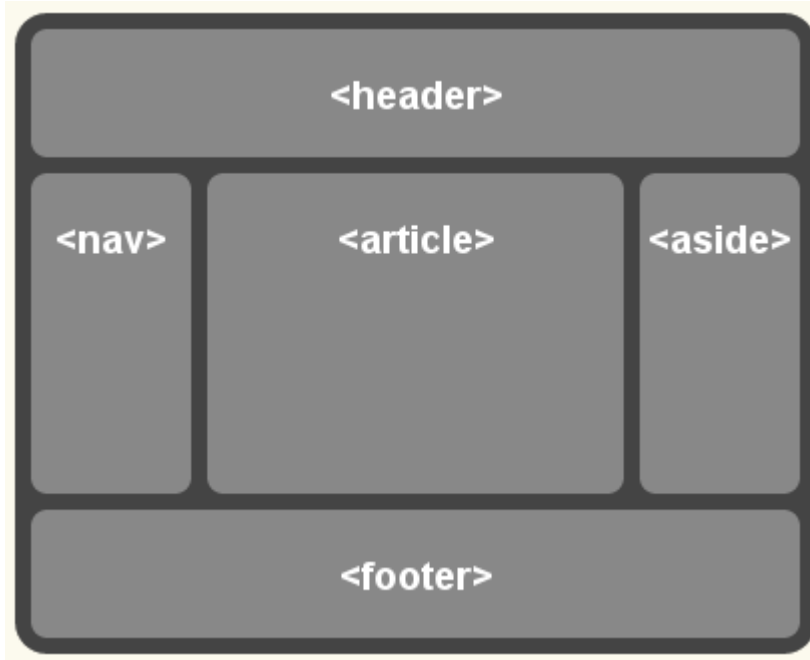
Modern website design for sighted and visually impaired users

HTML and CSS changes from 2011

In 2011 HTML was relaunched with five semantic elements: `<header>`, `<nav>`, `<article>`, `<aside>` and `<footer>`

Part of the thinking was that, as computer screens had moved from being almost square 10 years earlier to elongated rectangles, putting the `<nav>` and `<aside>` elements on either side of the `<article>` element would reduce line length in the `<article>` element.

The semantic elements



<header> element

- The <header> element contains a title and may contain:
 - A change language link
 - A login link
- Instructions for a visually impaired user can be given in the HTML with font size set to 1pt.
- CSS mask-* properties can be used on the links to give visual clues, such as a flag for a language change, for sighted users.

CSS flex and grid containers

Following the introduction of the `<main>` element to enable screenreaders to find the main content of the page, CSS containers were introduced in 2018 to enable child elements within a `<main>` element to be organised on the screen.

Flex containers only 'flex' horizontally whereas 'grid' containers may also flex vertically and can be used to create columns visible to a sighted user on a web page.

CSS properties for <main> and its child elements

Declare that <main> will be a flex container and then specify the order in which its child elements will appear to a sighted user:

```
main {display: flex;}
```

```
main>article {order: 2; width: 58%;}
```

```
main>nav {order: 1; width: 19%;}
```

```
main>aside {order: 3; width: 19%;}
```

<article> element and child elements

- The <article> element comes first in the HTML and may contain various child elements for the benefit of visually impaired users, for example,
- <i lang="fr"> to indicate that the words in the element are French so that the screenreader will change language or offer to spell out the words
- <time datetime="2024-08-31T18:00+01">August 31, 2024 at 7pm</time> to provide a machine readable date and time

<article> element and CSS attributes

- The alt="" attribute which should contain a description of an image (not a title or caption)
- The voice-*="" attributes which allow you to designate the type of voice to be used to by a screenreader; for example,

```
blockquote.oldfemale {voice-family: old female; preserve;}
```

specifies an older adult female voice to be used in all child elements.

WAI-ARIA attributes

- Were accepted by WC3 in 2014.
- Most elements have a single WAI-ARIA attribute but note:
- `role="img"` along with a completed `alt=""` attribute for most images but `role="presentation"` for a purely decorative image
- `aria-labelledby=""` allows you to associate elements with a heading or title by specifying the `id=""` of the heading or title.

<nav> element

- Normally follows the <article> element and contains the main menu for the website
- The menu can be 'prettified' for sighted users with CSS:

```
li.nav {font: bold 120% cursive;}
```

```
li.aside {font: bold 100% sans-serif;}
```

<aside> element

- Normally comes last within the <main> element but may come second if, for example, it contains a list of recent additions to the website:

```
<aside role="complementary">
```

```
<h3 id="recent">Recent additions</h3>
```

```
<ul role="list">
```

```
<li class="aside"><a href="memories/1952_Cricket.html" type="text/html"
role="link">1952 Cricket Team</a> <span> -- NEW</span></li>
```

```
...
```

<footer> element

- The <footer> element comes after the end of the <main> element and normally holds information about the website unrelated to the content of the website, such as contact details and links to social media.
- It may contain a menu of such items but not normally of any of the content of the website which is in the menus in the <nav> element.



That's all, folks

Check out the Heath Old Boys Association website documentation

<https://heatholdboys.org.uk/>

for more information.