

Web Development

BSc in Applied Computing

Produced
by

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Semantic HTML

The Need for Semantic Elements

- Give content on the page meaning and structure
- Semantics portray the value of content on a page, and are not just its style

- Semantic markup can be interpreted by tools for the visually impaired
- Search Engines can use semantic markup to better categorise and classify content

- Semantic markup can make site maintenance easier as new developers can quickly grasp the site structure
- Updating / Restyling may be streamlined by using semantic elements

Standard Semantic Elements

- Semantic HTML is HTML in which:

- • Text is wrapped in elements that reflect the content. For example: —
- A paragraph is contained in a `<p>` element.
- A sequential list is contained in an `` element.
- A large block of text quoted from another source is contained in a `<blockquote>` element.
- HTML elements are not used for a purpose other than their semantic purpose. For example:
 - `<h1>` contains headings; it is not for making text bigger.
 - `<blockquote>` contains a long quote; it is not for indenting text.
 - An empty paragraph element (`<p></p>`) is not used to skip lines.
- Text contains no stylistic information directly. For example:
 - No use of format tags such as `` or `<center>` .
 - No reference to colors or location in classes or IDs.

HTML5 Semantic Elements

<header>

<nav>

<section>

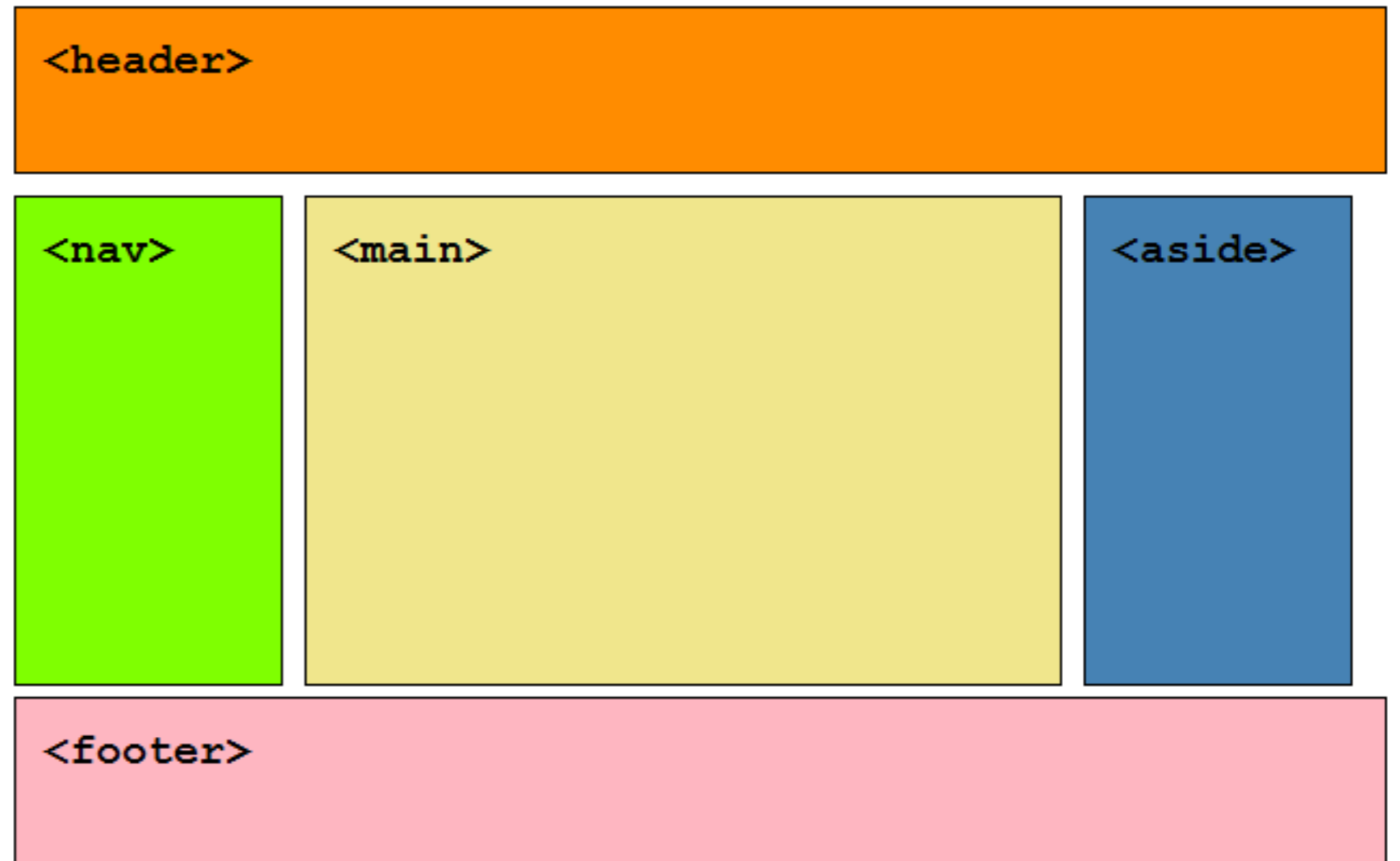
<article>

<aside>

<figcaption>

<figure>

<footer>



<nav>

```
<nav>
  <h1>Navigation</h1>
  <ul>
    <li><a href="articles.html">Index of all articles</a></li>
    <li><a href="today.html">Things sheeple need to wake up for today</a></li>
    <li><a href="successes.html">Sheeple we have managed to wake</a></li>
  </ul>
</nav>
```

"The nav element represents a section of a page that links to other pages or to parts within the page: a section with navigation links."

<article>

```
<article itemscope itemtype="http://schema.org/BlogPosting">
  <header>
    <h1 itemprop="headline">The Very First Rule of Life</h1>
    <p><time itemprop="datePublished" datetime="2009-10-09">3 days ago</time></p>
    <link itemprop="url" href="?comments=0">
  </header>
  <p>If there's a microphone anywhere near you, assume it's hot and
    sending whatever you're saying to the world. Seriously.</p>
  <p>...</p>
  <footer>
    <a itemprop="discussionUrl" href="?comments=1">Show comments...</a>
  </footer>
</article>
```

"The article element represents a complete, or self-contained, composition in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication. This could be a forum post, a magazine or newspaper article, a blog entry, a user-submitted comment, an interactive widget or gadget, or any other independent item of content."

<section>

"The section element represents a generic section of a document or application. A section, in this context, is a thematic grouping of content. The theme of each section should be identified, typically by including a heading (h1-h6 element) as a child of the section element."

```
<article>
  <header>
    <h2>Apples</h2>
    <p>Tasty, delicious fruit!</p>
  </header>
  <p>The apple is the pomaceous fruit of the apple tree.</p>
  <section>
    <h3>Red Delicious</h3>
    <p>These bright red apples are the most common found in many
      supermarkets.</p>
  </section>
  <section>
    <h3>Granny Smith</h3>
    <p>These juicy, green apples make a great filling for apple
      pies.</p>
  </section>
</article>
```


<aside>

"The aside element represents a section of a page that consists of content that is tangentially related to the content around the aside element, and which could be considered separate from that content. Such sections are often represented as sidebars in printed typography."

```
<aside>
  <h1>Switzerland</h1>
  <p>Switzerland, a land-locked country in the middle of
    geographic Europe, has not joined the geopolitical
    European Union, though it is a signatory to a number
    of European treaties.</p>
</aside>
```

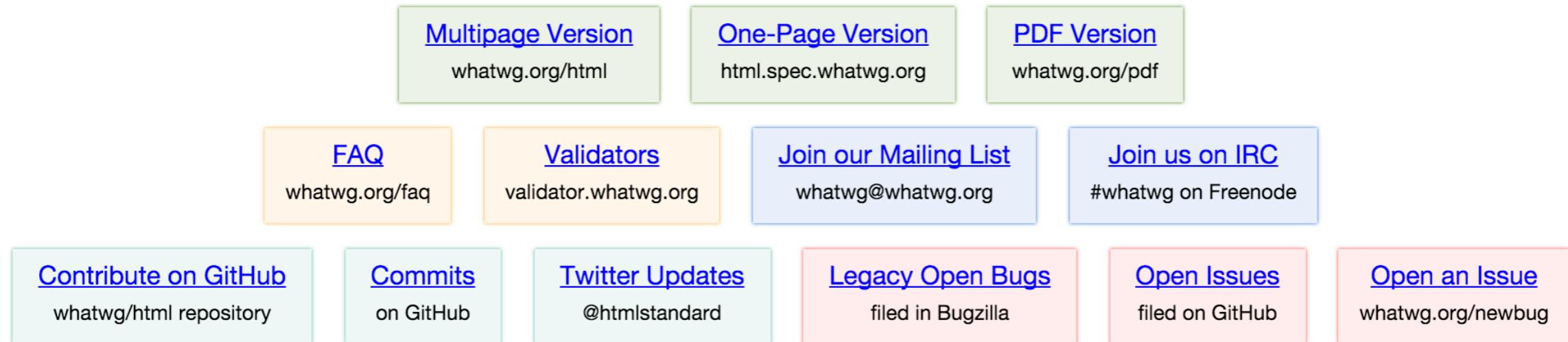
<header> & <footer>

"The header element represents introductory content for its nearest ancestor sectioning content or sectioning root element. A header typically contains a group of introductory or navigational aids."

"The footer element represents a footer for its nearest ancestor sectioning content or sectioning root element. A footer typically contains information about its section such as who wrote it, links to related documents, copyright data, and the like.."

```
<header>
  <p>Welcome to...</p>
  <h1>Voidwars!</h1>
</header>

<footer>
  <a href="..">Back to index...</a>
</footer>
```



- Readable and concise
- Simple guidance on structuring content

4.3 Sections

- 4.3.1 The **body** element
- 4.3.2 The **article** element
- 4.3.3 The **section** element
- 4.3.4 The **nav** element
- 4.3.5 The **aside** element
- 4.3.6 The **h1**, **h2**, **h3**, **h4**, **h5**, and **h6** elements
- 4.3.7 The **hgroup** element
- 4.3.8 The **header** element
- 4.3.9 The **footer** element
- 4.3.10 The **address** element
- 4.3.11 Headings and sections
 - 4.3.11.1 Creating an outline
 - 4.3.11.2 Sample outlines
 - 4.3.11.3 Exposing outlines to users
- 4.3.12 Usage summary
 - 4.3.12.1 Article or section?

<https://html.spec.whatwg.org/#article-or-section>

4.3.12.1 Article or section?

This section is non-normative.

A **section** forms part of something else. An **article** is its own thing. But how does one know which is which? Mostly the real answer is "it depends on author intent".

For example, one could imagine a book with a "Granny Smith" chapter that just said "These juicy, green apples make a great filling for apple pies."; that would be a **section** because there'd be lots of other chapters on (maybe) other kinds of apples.

On the other hand, one could imagine a tweet or reddit comment or tumblr post or newspaper classified ad that just said "Granny Smith. These juicy, green apples make a great filling for apple pies."; it would then be **articles** because that was the whole thing.

A comment on an article is not part of the **article** on which it is commenting, therefore it is its own **article**.

NEW SEMANTIC ELEMENTS IN HTML5

HTML5 is not just about making existing markup shorter (although it does a fair amount of that). It also defines new semantic elements.

<section> The `section` element represents a generic document or application section. A section, in this context, is a thematic grouping of content, typically with a heading. Examples of sections would be chapters, the tabbed pages in a tabbed dialog box, or the numbered sections of a thesis. A Web site's home page could be split into sections for an introduction, news items, contact information.

<nav> The `nav` element represents a section of a page that links to other pages or to parts within the page. Navigation sections that consist of major navigation blocks are appropriate for the `nav` element. In particular, headers and footers to have a short list of links to common pages of a site, such as the terms of service, the home page, and a copyright page. The `footer` element alone is sufficient for such cases, without a `nav` element.

<article> The `article` element represents a component of a page that consists of a self-contained composition, a document, page, application, or site and that is intended to be independently distributable or reusable, for example, in syndication. This could be a forum post, a magazine or newspaper article, a Web log entry, a user comment, an interactive widget or gadget, or any other independent item of content.

<aside> The `aside` element represents a section of a page that consists of content that is tangentially related to the content around the `aside` element, and which could be considered separate from that content. Such sections are often represented as sidebars in printed typography. The element can be used for typographical elements like pull quotes or sidebars, for advertising, for groups of `nav` elements, and for other content that is considered separate from the main content of the page.

<hgroup> The `hgroup` element represents the heading of a section. The element is used to group a set of `h1`–`h6` elements when the heading has multiple levels, such as subheadings, alternative titles, or taglines.

<header> The `header` element represents a group of introductory or navigational aids. A `header` element is intended to usually contain the section's heading (an `h1`–`h6` element or an `hgroup` element), but this is not required. The `header` element can also be used to wrap a section's table of contents, a search form, or any relevant logos.

<footer> The `footer` element represents a footer for its nearest ancestor sectioning content or sectioning root element. A footer typically contains information about its section such as who wrote it, links to related documents, copyright data, and the like. Footers don't necessarily have to appear at the end of a section, though they

<http://diveinto.html5doctor.com>

DIVE INTO HTML5

BY

MARK PILGRIM

WITH CONTRIBUTIONS FROM THE COMMUNITY (?)

<http://diveinto.html5doctor.com/semantics.html#new-elements>

<time> The `time` element represents either a time on a 24 hour clock, or a precise date in the proleptic Gregorian calendar, optionally with a time and a time-zone offset.

Semantic and Div'itis

- Div'itis : the process of using too many nested/unnecessary divs to mark up a page.
- Excessive use of DIVs makes page difficult to interpret, both by a human and machine reader

```
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"
</head>
<body>

<div id="container">

<div id="topbar">
<div id="header">
  
</div> <!-- end header -->

<div id="menu">
  <ul id="navigation">
    <li> <a class="navlink" href="/home.html"> home </a> </li>
  </ul>
</div> <!-- end menu -->
</div> <!-- end topbar -->

<div id="content">

<div id="news">

<div class="headline"> News item 1 </div>
<div class="newsstory"> story here </div>

<div class="headline"> News item 2 </div>
<div class="newsstory"> story here </div>

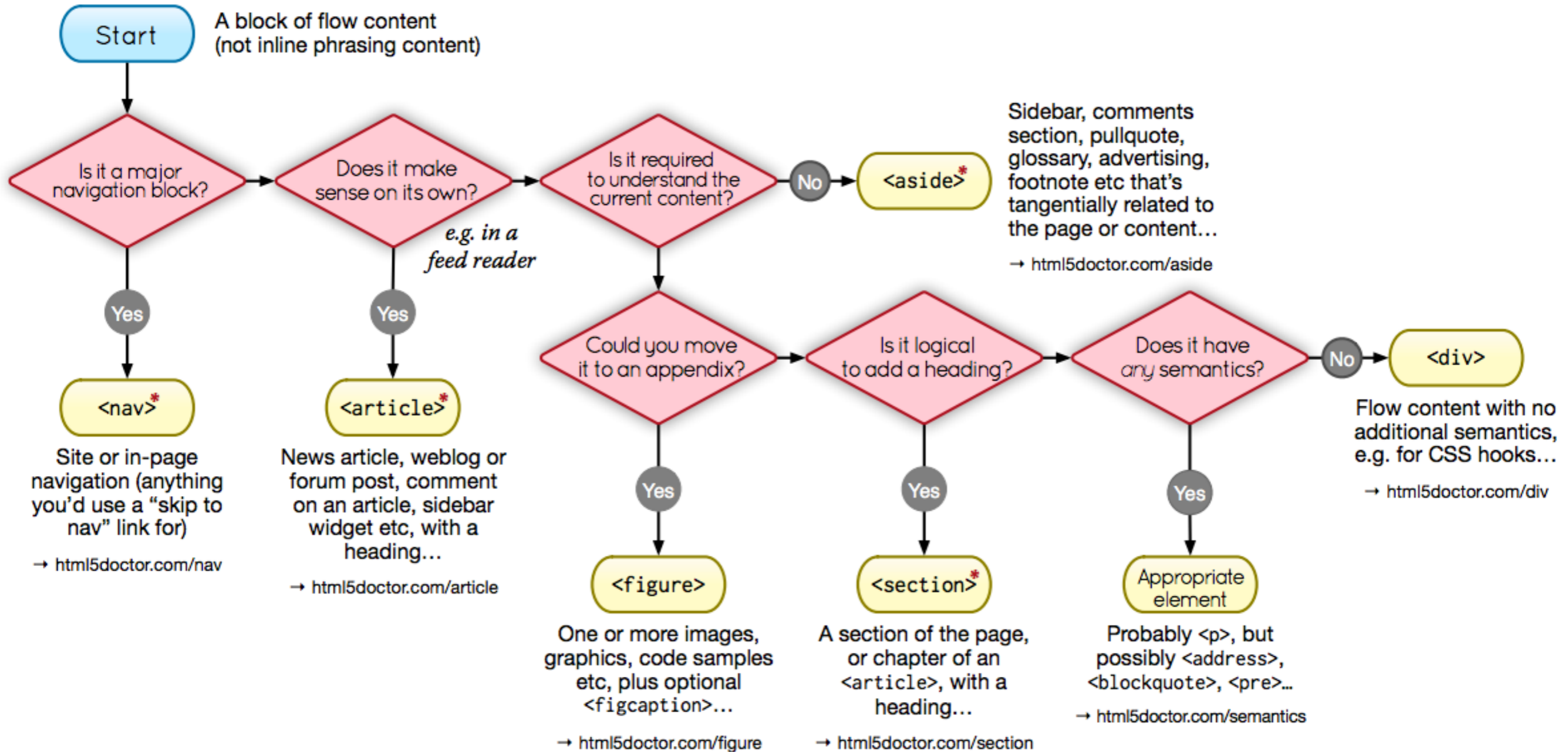
</div> <!-- end news div -->

</div> <!-- end content div -->

<div id="footer">
  <div class="smalltext"> copyright &copy; 2005 some guy </div>
</div>

</div> <!-- end container div-->

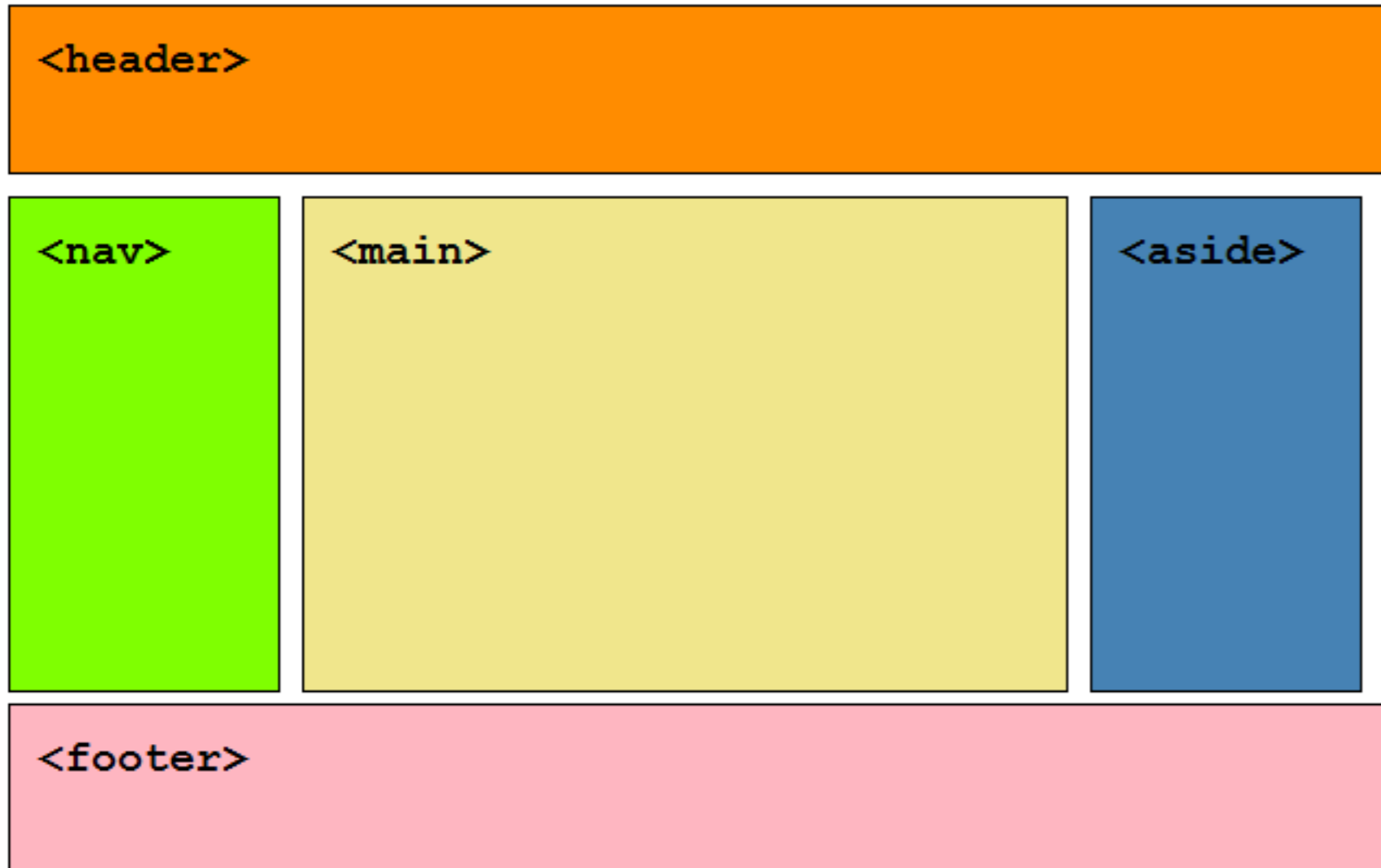
</body>
</html>
```



* Sectioning content element

These four elements (and their headings) are used by HTML5's outlining algorithm to make the document's outline
 → html5doctor.com/outline

Different Structures and Ordering



```
<header></header>  
<nav></nav>  
<main><main>  
<aside></aside>  
<footer></footer>
```

`<footer>`

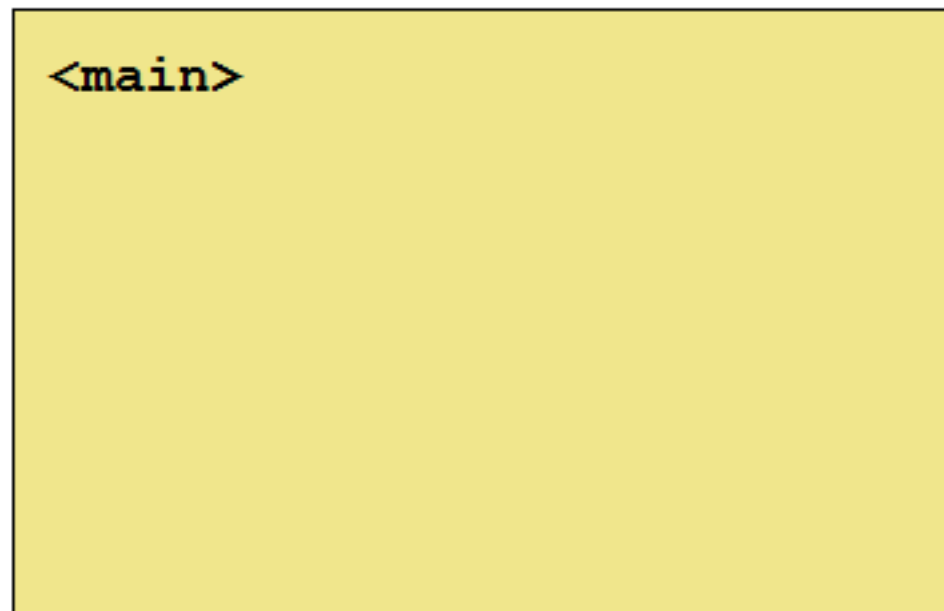
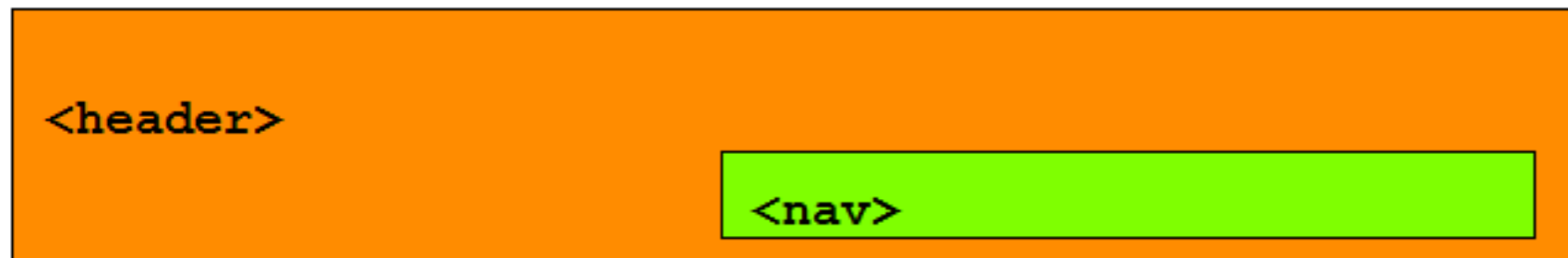
`<main>`

`<nav>`

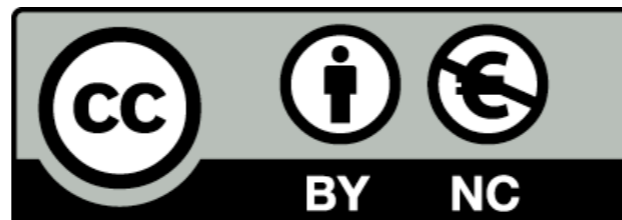
`<footer></footer>`

`<main><main>`

`<nav></nav>`



```
<header>
<nav></nav>
</header>
<main><main>
<aside></aside>
<footer></footer>
```



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