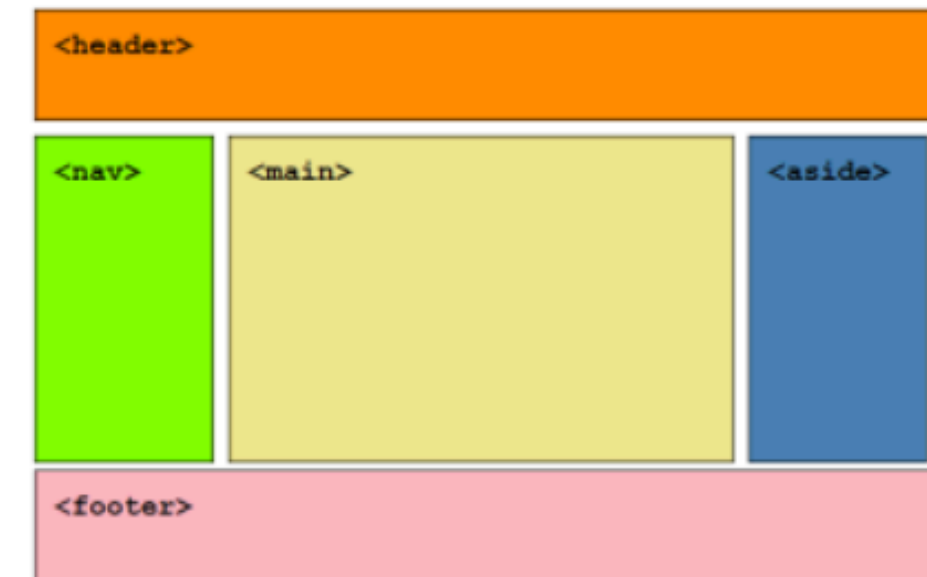# Semantic HTML

Semantic
HTML

header · main · nav · aside ·
article · footer · section ·
figure

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 by streamlined by using semantic elements

Standard Semantic Elements

- Semantic HTML *is*:

  - 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 <ol> element.

  - A large block of text quoted from another source is contained in a <blockquote> element

- Semantic HTML *is not*:

  - <h1> used for making text bigger.

  - <blockquote> just for a long quote (not for offsetting text)

  - An empty paragraph element (<p></p>) use to insert blanks

- Text should contain no stylistic information directly:

  - No use of format tags such as <font> or <center> .

  - No reference to colors or location in classes or IDs.

Why Semantic HTML?

- Lighter Code

- Accessibility

- Search engine optimization

- Repurposing

- Developer comprehension

https://www.adobe.com/devnet/archive/html5/articles/semantic-markup.html

HTML5 Semantic Elements

<header>

<nav>

<section>

<article>

<aside>

<figcaption>

<figure>

<footer>

<nav>

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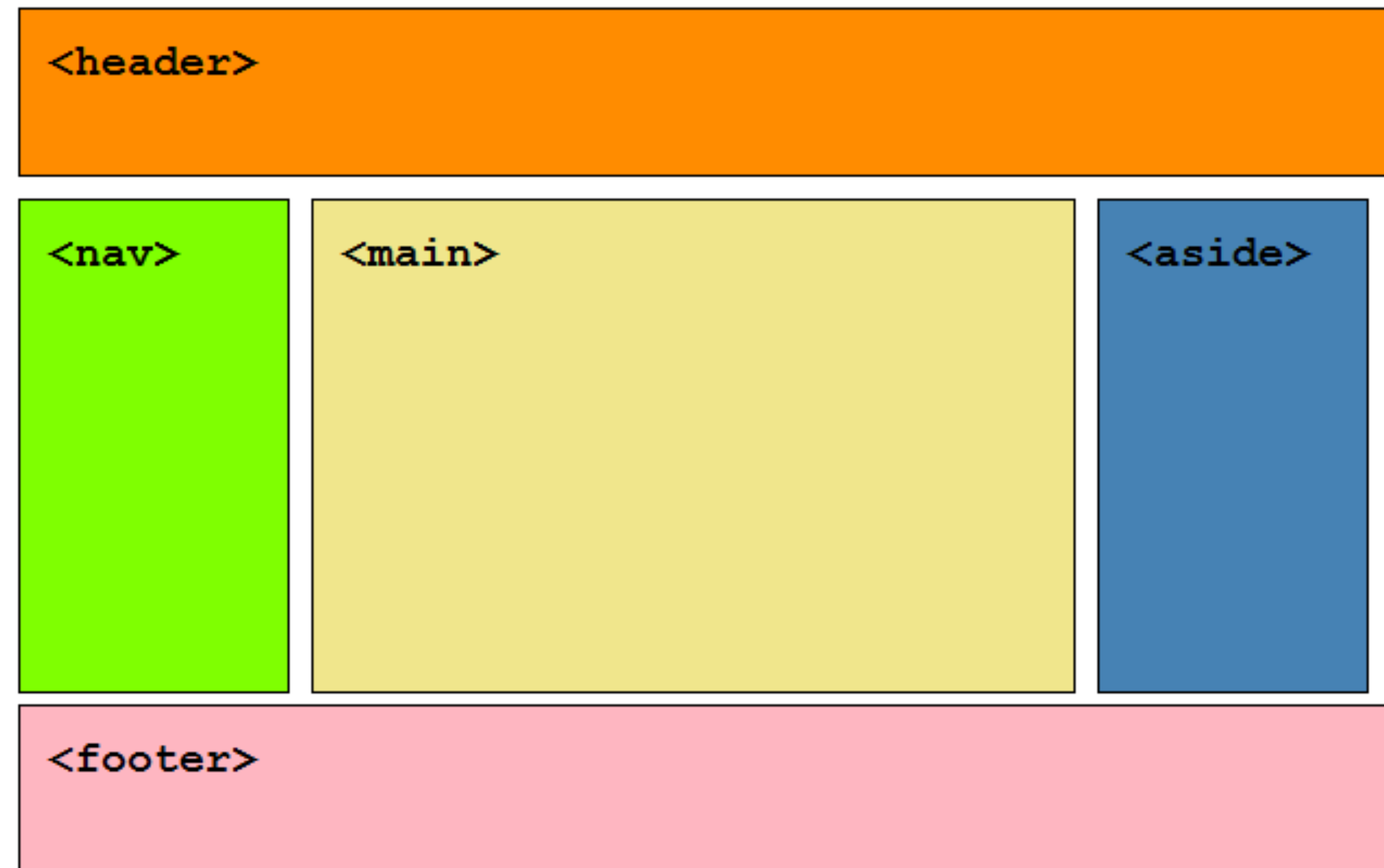
"The nav element represents a section of a page that links to other pages or to parts within the page: a section with navigation links."

<article>

```html
<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."

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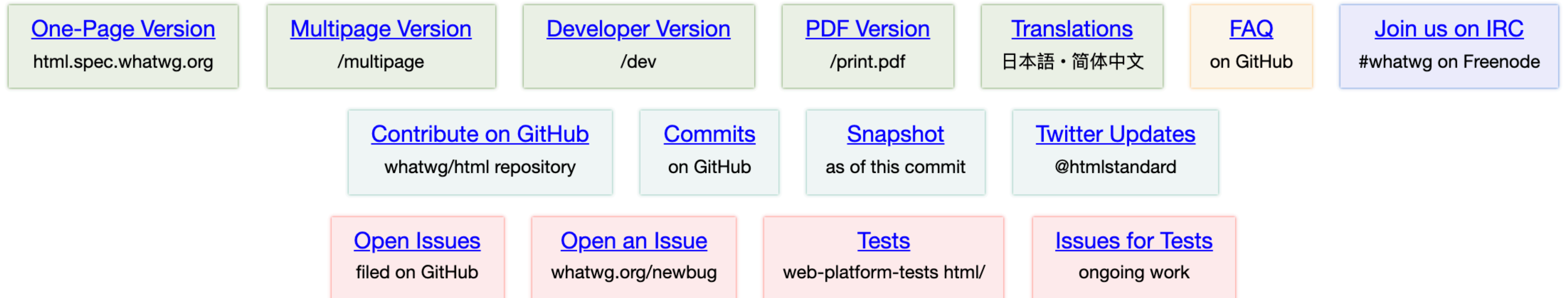
```
<header>
 <p>Welcome to...</p>
 <h1>Voidwars!</h1>
</header>


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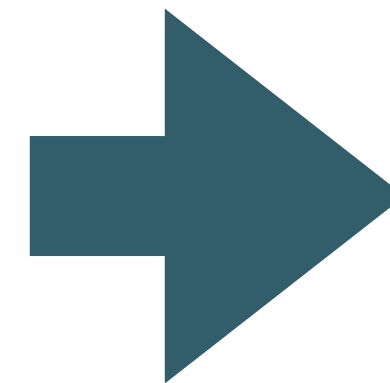
HTML

Living Standard — Last Updated 26 February 2020

One-Page Version	Multipage Version	Developer Version	PDF Version	Translations	FAQ	Join us on IRC
html.spec.whatwg.org	/multipage	/dev	/print.pdf	日本語・简体中文	on GitHub	#whatwg on Freenode

Contribute on GitHub	Commits	Snapshot	Twitter Updates
whatwg/html repository	on GitHub	as of this commit	@htmlstandard

Open Issues	Open an Issue	Tests	Issues for Tests
filed on GitHub	whatwg.org/newbug	web-platform-tests html/	ongoing work

- 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?

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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 `article`s 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 wi[...] section with navigation links. Not all groups of links on a page need to be in a nav ele[...] that consist of major navigation blocks are appropriate for the nav element. In particula[...] footers to have a short list of links to common pages of a site, such as the terms of service, the ho[...] 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 compositio[...] document, page, application, or site and that is intended to be independently distributable or reusa[...] 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 relate[...] content around the aside element, and which could be considered separate from that content. Such [...] are often represented as sidebars in printed typography. The element can be used for typographical[...] like pull quotes or sidebars, for advertising, for groups of nav elements, and for other content that [...] 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–[...] 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
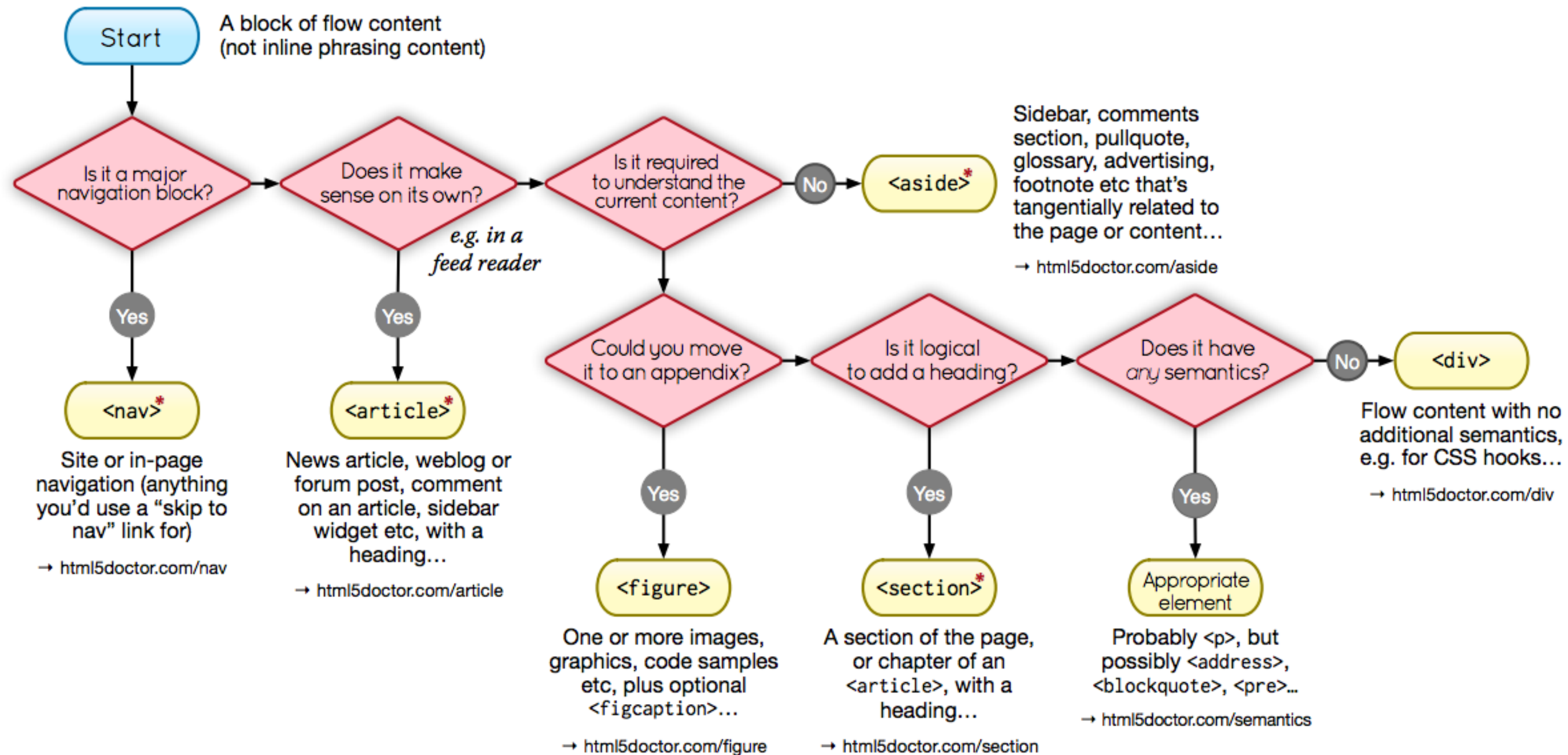
`<time>`   The time element represents either a time on a 24 hour clock, or a precise date in the proleptic Gregorian calendar, optionally with a time and a time-zone offset.

http://diveinto.html5doctor.com

DIVE INTO HTML5

BY

MARK PILGRIM

WITH CONTRIBUTIONS FROM THE COMMUNITY (?)

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

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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
▼<div class="nH" style="width: 780px;">
  ▼<div class="nH" style="position: relative;">
    ▶<div class="nH w-asV aiw">…</div>
    ▼<div class="nH bkL">
      ▼<div class="no">
        ▶<div class="nH oy8Mbf nn aeN" style="width: 187px; height: 553px;">…
        </div>
        ▼<div class="nH bkK nn" style="width: 537px;">
          ▼<div class="nH">
            ▼<div class="nH">
              ▼<div class="nH ar4 z">
                ▼<div>
                  ▶<div id=":4" class="aeH">…</div>
                  ▼<div class="AO">
                    ▼<div id=":3" class="Tm aeJ" style="height: 538px;">
                      ▼<div id=":1" class="aeF" style="min-height: 288px;">
                        ▼<div class="nH">
                          ▼<div class="BltHke nH oy8Mbf" role="main" jslog="82433;
                          u014N:xr6bB; 31:WzYyOTAsMSw1MF0." style>
                            ▶<div class="nH a0V">…</div>
                              <div class="afn"></div>
                            ▼<div class="ae4 UI Zs" jsaction="Ic0gz:.CLIENT;oSin0b:
                            .CLIENT" gh="tl">
                              ▶<div class="Cp">…</div>
                              ▼<div class="Cp">
                                ▼<div>
                                  ▼<table cellpadding="0" id=":1t" class="F cf zt"
                                  role="grid" aria-readonly="true">
                                    ▶<colgroup>…</colgroup>
                                    ▼<tbody>
```

html5 Doctor

HTML5 Element Flowchart
Sectioning content elements and friends

By @riddle & @boblet
www.html5doctor.com

Start — A block of flow content (not inline phrasing content)

Is it a major navigation block?
- Yes → **<nav>***
  Site or in-page navigation (anything you'd use a "skip to nav" link for)
  → html5doctor.com/nav

Does it make sense on its own? *e.g. in a feed reader*
- Yes → **<article>***
  News article, weblog or forum post, comment on an article, sidebar widget etc, with a heading…
  → html5doctor.com/article

Is it required to understand the current content?
- No → **<aside>***
  Sidebar, comments section, pullquote, glossary, advertising, footnote etc that's tangentially related to the page or content…
  → html5doctor.com/aside

Could you move it to an appendix?
- Yes → **<figure>**
  One or more images, graphics, code samples etc, plus optional <figcaption>…
  → html5doctor.com/figure

Is it logical to add a heading?
- Yes → **<section>***
  A section of the page, or chapter of an <article>, with a heading…
  → html5doctor.com/section

Does it have *any* semantics?
- Yes → **Appropriate element**
  Probably <p>, but possibly <address>, <blockquote>, <pre>…
  → html5doctor.com/semantics
- No → **<div>**
  Flow content with no additional semantics, e.g. for CSS hooks…
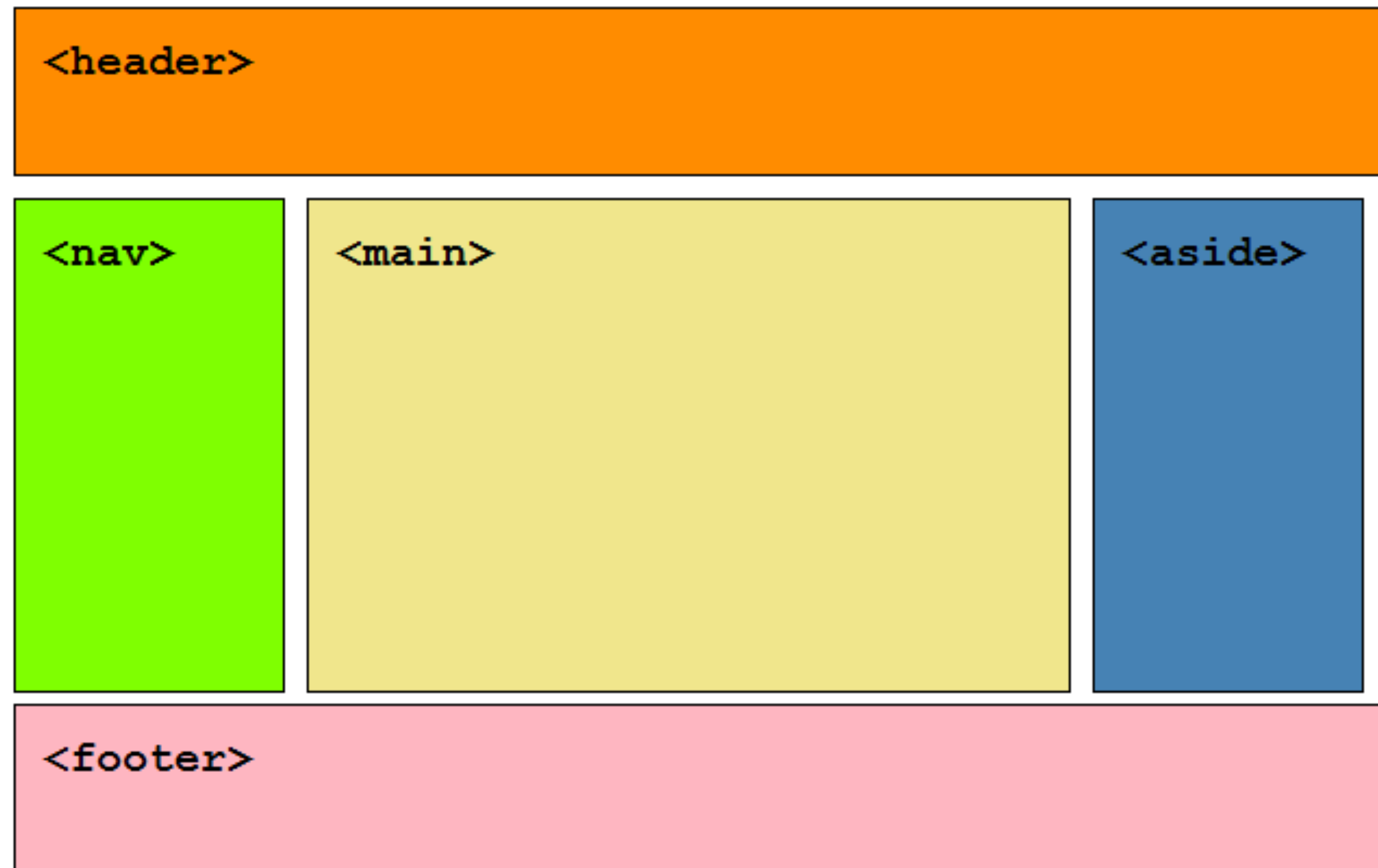 → html5doctor.com/div

***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

2011-07-22 v1.5
For more information:
www.html5doctor.com/semantics

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Different Structures and Ordering


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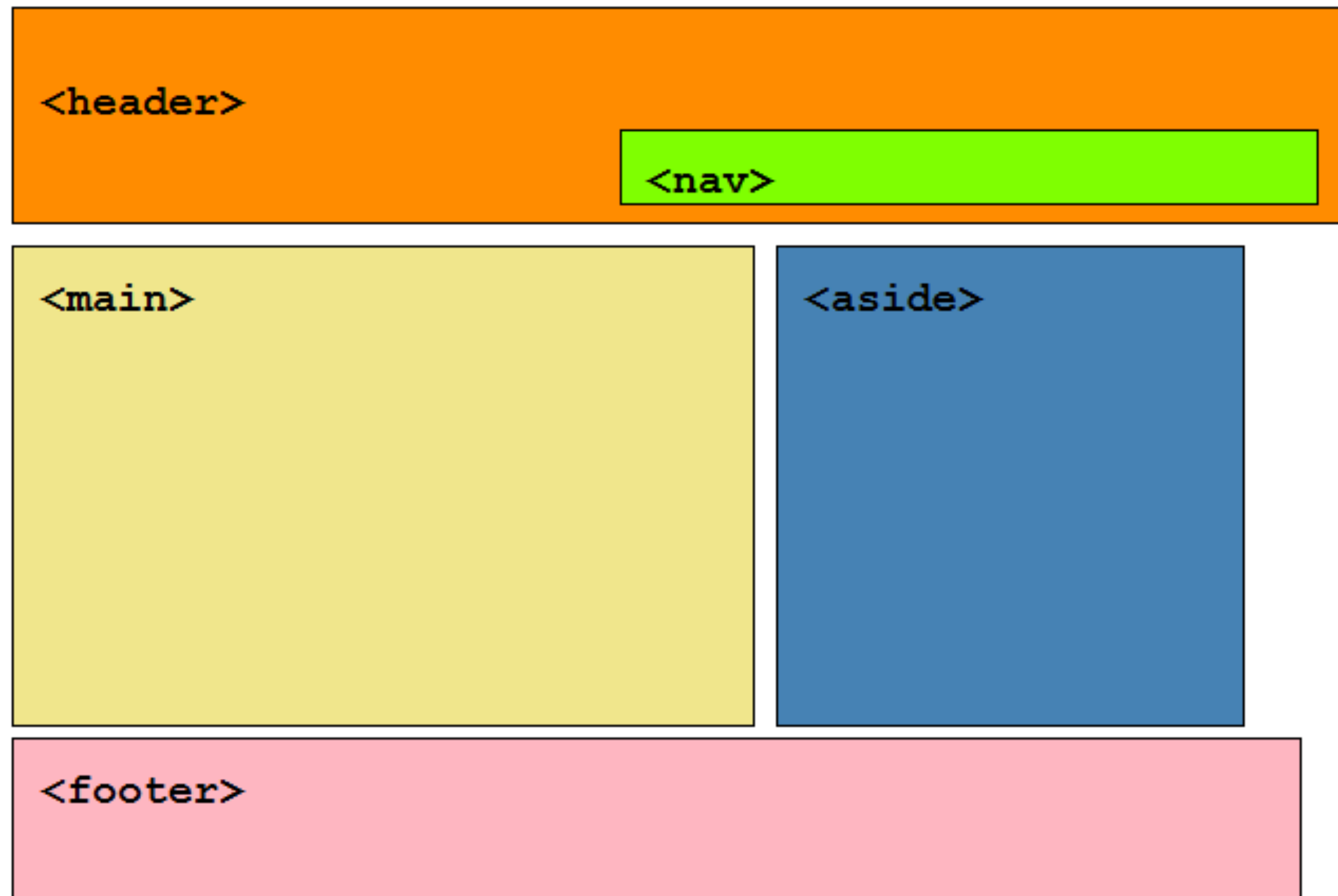
<header></header>
<nav></nav>
<main><main>
<aside></aside>
<footer></footer>

<footer>

<main>

<nav>

<footer></footer>
<main><main>
<nav></nav>

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