HTML semantics cheat sheet

Document

`<title>`
Second most important piece of content.
Shown in the browser tab & search results.
Should be unique for *every* page on the site.

`<link href="…" rel="stylesheet">`
For linking CSS and other resources like feeds.
`href` is the path the file.
`rel` has different values for other resources.

`<header>`
When inside `<body>` it's the website masthead.
When inside `<article>` it's the most important information.

`<footer>`
When inside `<body>` it's the website footer.
When inside `<article>` it's the least important information.

`<main>`
Primary content of the page.

`<nav>`
Defines a group a navigation links.

`<article>`
A piece of content that's independent.
Could be removed from this website and still make sense.

`<section>`
A group in a series of related content pieces.

`<aside>`
Secondary content not required to understand the main content.

CSS link tag

```
<link href="css/main.css"
rel="stylesheet">
```

Navigation inside header

```
<header>
  <nav>
    <ul>
      <li><a
href="#">Stegosaurus</a></li>
      <li><a
href="#">Triceratops</a></li>
      <li><a
href="#">Ankylosaurus</a></li>
    </ul>
  </nav>
</header>
```

Main content groups

```
<body>
  <header>
    <nav>…</nav>
  </header>

  <main>
    <h1>Dinos-R-Us</h1>
  </main>

  <footer>
    <p>© 2063 Dinos-R-Us</p>
  </footer>
</body>
```

Lists

`<ul>`
An unordered list—the order of items isn't important.
Can only have `<li>` elements as direct children.

`<ol>`
An ordered list—the order of the items is important.
Could be alphabetical, numerical, best to worst, etc.
Can only have `<li>` elements as direct children.

`<li>`
A single list item.
Must be inside a `<ul>`, `<ol>` or `<menu>`.
Can have most other elements inside it.

`<dl>`
A description list—a grouping of terms and definitions.
Words & definitions, titles & summaries, data points, etc.
Can only have `<dt>` and `<dd>` elements as direct children.

`<dt>`
Description title, the term of the item.
Must come before the `<dd>`.

`<dd>`
Description definition, the data, or text of the item.
Can be multiple `<dd>` tags underneath one `<dt>`.

Unordered list

```
<ul>
  <li>Tyrannosaurus</li>
  <li>Spinosaurus</li>
  <li>Velociraptor</li>
</ul>
```

Ordered list

```
<ol>
  <li>Mercury</li>
  <li>Venus</li>
  <li>Earth</li>
  <li>Mars</li>
</ol>
```

Description list

```
<dl>
  <dt>Length</dt>
  <dd>2.3 m</dd>
  <dt>Weight</dt>
  <dd>4 tonnes</dd>
</dl>
```

`<menu>`
For semantically marking up a web application's toolbar of buttons.
The `<menu>` tag also uses `<li>` tags inside —one for each toolbar button.
You may still have to remove the bullets.

Menu toolbar list

```
<menu>
  <li><button>Like</button></li>
  <li><button>Share</button></li>
  <li><button>Comment</button>
</li>
</menu>
```

Text

`<a href="…">`
For making hyperlinks.
`href` is the path to where the link should go.

`<h1>`
The *most* important piece of content on the page.
On the homepage this should be the company's name.
On inside pages this should be the page title.

`<h2>` , `<h3>` , `<h4>` , `<h5>` , `<h6>`
Content headings, each a sub-heading of the one above.
The `<h2>` is a sub-heading of `<h1>` , `<h3>` a sub-heading of `<h2>` , etc.

`<hgroup>`
Allows you to group multiple headings together and have them semantically treated as a single heading.
It's primary purpose is for subheadings.

`<p>`
A generic paragraph of text.

`<blockquote>`
A large, stand alone quote from another source.

`<cite>`
A citation for another source, often used with quotations.
A person's name, a URL, a book, a movie title, etc.

`<q>`
A small quotation embedded within other content.

`<em>`
A string of emphasized, slightly more important text.
Screen readers will change their voice for this text.

`<strong>`
A string of highly emphasized, much more important text.
Screen readers will change their voice for this text.

`<ins datetime="…">`
Content that was inserted after the document was published.
`datetime` defines when it was added.

`<del datetime="…">`
Content that was deleted after the document was published.
`datetime` defines when it was removed.

`<abbr title="…">`
An acronym or abbreviation, like "HTML", "CSS", etc.
`title` contains the expanded version, like "Hypertext Markup Language".

`<dfn>`
A definition of a term on the page.
Should only be used once of the term.

`<mark>`
Used to highlight a piece of text for reference.
The keywords in a search results page, the current navigation item.

`<i>`
Defines technical term, a ship name, a book title, a thought, sarcasm, another language.

`<b>`
Defines a keyword, like product name in a review, a lead sentence in a paragraph.

`<s>`

Content that's no longer relevant to the document.
Consider if the `<del>` element is better suited first.

`<u>`
Labels the text as having a non-textual annotation.
A misspelled word, a Chinese proper name, etc.

`<small>`
Represents side comments and fine print.

`<address>`
Contact information, email, tel, postal address, etc.

Blockquotes

```
<blockquote>
  <p>Dinosaurs may be extinct from
the face of the planet, but they
are alive and well in our
imaginations.</p>
  <footer>— <cite>Steve
Miller</cite></footer>
</blockquote>
```

Addresses

```
<address>
  Jet Propulsion Laboratory
  <br>4800 Oak Grove Drive
  <br>Pasadena, California
  <br>91109
</address>
```

Text edits

```
<p>Launchpad 39A owned by <del
datetime="2014-04-14">NASA</del>
<ins datetime="2014-04-
14">SpaceX</ins></p>
```

Heading groups

```
<hgroup>
  <h1>Star Wars</h1>
  <h2>The Empire Strikes Back</h2>
</hgroup>
```

Abbreviations

```
<abbr title="Star Trek: The Wrath
of Khan">ST:TWOK</abbr>
```

Other languages

```
<i lang="fr">Bonjour</i>
```

Images & media

`<img src="…" alt="…">`
  Embeds an image that's important to the content.
  `src` is a path to the image file.
  `alt` describes the image if it cannot be seen.

`<picture>`
  Responsive image insertion—allows developers to provide different images for different contexts.

`<source>`
  Must be inside `<picture>`, `<video>` or `<audio>` to define the different versions of content.
  For example, in video it gives paths to the MP4 and WEBM formats.

`<figure>`
  Embeds annotated images, illustrations, photos, code, etc.
  Could be moved out of place and would still make sense.

`<video poster="…" autoplay loop muted controls>`
  For embedding movies into a website.
  `poster` is the path to an image that's displayed before the video plays.
  `autoplay` will hint the video to start automatically.
  `loop` triggers whether the video should repeat or not.
  `muted` can be added to not play sound by default.
  `controls` shows or hides the browser's player buttons.

`<track>`
  Used to pair captions, chapters, etc. with `<video>` elements.

`<figcaption>`
  For adding a caption/annotation to the `<figure>`.
  Must be inside a `<figure>` element—cannot stand alone.

`<audio autoplay loop muted controls>`
  For embedding sounds into a website.
  `autoplay` will hint the audio to start automatically.
  `loop` triggers whether the audio should repeat or not.
  `muted` can be added to not play sound by default.
  `controls` shows or hides the browser's player buttons.

Basic images

```
<img src="images/dino.jpg" alt="An
beautiful, long-necked
Brontosaurus">
```

Figures & captions

  Use only if there's a caption.

```
<figure>
  <img src="images/dino-small.jpg"
alt="">
  <figcaption>So many dinosaurs I
can't even count!</figcaption>
</figure>
```

Responsive images

  See Responsive & retina images for details (/topics/responsive-retina-images/).

```
<picture>
  <source media="(min-width:
60em)" srcset="images/dino-
wide.jpg">
  <source media="(min-width:
```

```
<source media= (min width:
38em)" srcset="images/dino-
rectangle.jpg">
  <img src="images/dino-small.jpg"
alt="All the dinosaurs!">
</picture>
```

Data & code

```
<sub>
```
Defines text as being subscript.

```
<time datetime="…">
```
Marks some text as a time or date.
`datetime` defines the machine readable version.

```
<progress value="…" min="…"
max="…">
```
Represents the current position in a series of steps.
`value` is the current position.
`min` is the minimum position.
`max` is the maximum position.

```
<kbd>
```
Something a user should type into their computer.

```
<sup>
```
Defines text as being superscript.

```
<data value="…">
```
Marks elements as being a numerical piece of information.
`value` provides the machine readable version.

```
<code>
```
Defines a piece of text as a code sample.

```
<samp>
```
Something a user should see output from a computer.

```
<var>
```
Represents a variable in math or programming.

```
<meter value="…" min="…" max="…">
```
Represents a single number in a range of numbers.
`value` is the current number.
`min` is the minimum number.
`max` is the maximum number.

```
<pre>
```
A piece of text that has a specific formatting, where tabs, whitespaces, etc. should be maintained.

Time

```
Apollo 11 landed on the moon <time
datetime="1969-07-20T20:18">July
20, 1969</time>
```

Data

```
Argentinosaurus weighted
approximately <data value="90">90
tonnes</data>
```

Maths

```
E = mc<sup>2</sup>
```

Meaningless tags

`<div>`
  Inherits meaning from its children.
  Divides content into logical groups, when no other tag is better suited.
  Has restrictions on what elements it can be inside.

`<span>`
  Inherits meaning from its children.

Be careful

`<br>`
  Creates a line break that's significant to the content.
  Useful in poems and addresses where the division of lines is important.
  Do not use to create space in a design—use margins and padding.

`<wbr>`
  Presents an opportunity for the browser to add a line-break if necessary.
  Groups strings of text, when no other tag is better suited.

`<hr>`
  Represents a thematic break in the content.
  For example, a scene change or topic change.
  Do not use to create a horizontal line—use CSS borders.

`<button>`
  Represents a interactive, clickable button.
  Should be used in forms and with JavaScript.
  Do not use to link to another page—use the `<a>` tag.

Links

Links that go nowhere

The `href` always needs a value— `#` means nowhere.

```
<a href="#">Nowhere</a>
```

Links on the same page

Add an `id=""` to the element to jump to, refer to that inside the `href`

```
<a href="#herbivores">See the herbivores</a>

<h2 id="herbivores">Herbivores</h2>
```

Links to other websites

Always start with `https://` or less ideally `http://`

```
<a
href="https://www.wikipedia.org/">Wikipedia</a>

<!-- Adding `rel="external"` for outward-bound
sites is good -->
<a href="https://www.wikipedia.org/"
rel="external">Wikipedia</a>
```

Links to phone numbers

Start with `tel:`, use international format

```
<a href="tel:+18005552368">Call Me!</a>
```

Also send a text message with `sms:`

```
<a
href="sms:+18005552368&body=Who%20ya%20gonna%20call">Call
Me!</a>

<!-- or without a default number -->
<a href="sms:&body=Who%20ya%20gonna%20call">Call Me!</a>
```

Date/time formats

Apply to the `datetime=""` attribute of the `<time>`, `<del>` & `<ins>` elements.

Year
 Format: `YYYY`
 Example: `1963`

Year, month
 Format: `YYYY-MM`
 Example: `1963-11`
 Nov. 1963

Year, month, day
 Format: `YYYY-MM-DD`
 Example: `1963-11-23`
 Nov. 23, 1963

Year, week
 Format: `YYYY-Wdd`
 Example: `1963-W47`
 1936, the week of Nov. 18–24

Hour, minute
 Format: `HH:MM`
 Example: `17:16`
 5:16 PM

Hour, minute, second
 Format: `HH:MM:SS`
 Example: `17:16:20`
 5:16:20 PM

Hour, minute, second, millisecond
 Format: `HH:MM:SS.sss`
 Example: `17:16:20.258`
 5:16:20.258 PM

UTC timezone
 Format: `Z`
 Example: `Z`
 UTC timezone

Timezone offsets
 Format: `±HH:MM`
 Example: `-05:00`
 Eastern Standard Time, Daylight Savings

Year, month, day, hour, minute
 Format: `YYYY-MM-DDTHH:MM`
 Example: `1963-11-23T17:16`
 Nov. 23, 1963 at 5:16 PM

Year, month, day, hour, minute, second
 Format: `YYYY-MM-DDTHH:MM:SS`
 Example: `1963-11-23T17:16:20`
 Nov. 23, 1963 at 5:16:20 PM

Year, month, day, hour, minute, second, millisecond
 Format: `YYYY-MM-DDTHH:MM:SS.sss`
 Example: `1963-11-23T17:16:20.258`
 Nov. 23, 1963 at 5:16:20.258 PM

Year, month, day, hour, minute, UTC
 Format: `YYYY-MM-DDTHH:MMZ`
 Example: `1963-11-23T17:16Z`
 Nov. 23, 1963 at 5:16 PM UTC

Year, month, day, hour, minute, timezone
 Format: `YYYY-MM-DDTHH:MM±HH:MM`
 Example: `1963-11-23T12:16-05:00`
 Nov. 23, 1963 at 12:16 AM EST

Year, month, day, hour, minute, second, timezone
 Format: `YYYY-MM-DDTHH:MM:SS±HH:MM`
 Example: `1963-11-23T12:16:20-05:00`
 Nov. 23, 1963 at 12:16:20 AM EST

Year, month, day, hour, minute, second, millisecond, timezone
 Format: `YYYY-MM-DDTHH:MM:SS.sss±HH:MM`
 Example: `1963-11-23T12:16:20.258-05:00`
 Nov. 23, 1963 at 12:16:20.258 AM EST

Period of days
 Format: `PddD`
 Example: `P686D`
 686 days

Period of days, hours
 Format: `PddDThhH`
 Example: `P686DT23H`
 686 days, 23 hours

Period of days, hours, minutes
Format: `PddDThhHmmM`
Example: `P686DT23H18M`
686 days, 23 hours, 18 minutes

Period of days, hours, minutes, seconds
Format: `PddDThhHmmMssS`
Example: `P686DT23H18M14S`
686 days, 23 hours, 18 minutes, 14 seconds

Period of days, hours, minutes, seconds, milliseconds
Format: `PddDThhHmmMss.sssS`
Example: `P686DT23H18M14.400S`
686 days, 23 hours, 18 minutes, 14 seconds, 400 milliseconds

Period of hours
Format: `PThhH`
Example: `PT23H`
23 hours

Period of minutes
Format: `PTmmM`
Example: `PT18M`
18 minutes

Period of minutes, seconds
Format: `PTmmMssS`
Example: `PT18M14S`
18 minutes, 14 seconds

Exact date example

```
<time datetime="1963-11-
23T12:16:20Z">Premiere of the most
important TV show of all time!
</time>
```

Simple time period

```
<time
datetime="P365DT6H8M">Earth's
orbital period</time>
```

Range of time periods

```
Opossum gestation period: <time
datetime="P12D">twelve</time> to
<time
datetime="P13D">thirteen</time>
days.
```