CS1115/CS5002

Web Development 1

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Running example

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8" />
    <title>Party Party - Cocktails - Mojitos</title>
    <link rel="stylesheet" href="styles.css" />
</head>
<body>

<header>
    <h1>Party-Party-Party</h1>
    <p>The site for all your party needs</p>
</header>

<nav>
    <ul>
        <li>Cocktails
            <ul>
                <li><a href="cubalibre.html" lang="es">Cuba Libre</a></li>
                <li><a href="" lang="es">Mojitos</a></li>
                <li><a href="screwdriver.html">Screwdriver</a></li>
                <li><a href="zombie.html">Zombie</a></li>
            </ul>
        </li>
        <li>Finger Food
            <ul>
                <li><a href="guacamole.html" lang="es">Guacamole</a></li>
                <li><a href="pizzafritata.html" lang="it">Pizza Fritata</a></li>
                <li><a href="samosas.html" lang="pa">Samosas</a></li>
            </ul>
        </li>
        <li>Party Games
            <ul>
                <li><a href="spinthebottle.html">Spin-the-Bottle</a></li>
                <li><a href="twister.html">Twister</a></li>
            </ul>
        </li>
    </ul>
</nav>

<main>

<h1>Mojitos</h1>

<p>
    To bring the spirit of the Caribbean to your party, why not serve
    <i class="cocktail" lang="es">Mojitos</i>? Sweet but cool, they're
    sure to get you in touch with your Latin side.
</p>

<figure>
    <img src="mojito.jpg" title="A mojito"
        alt="A mojito is packed with mint leaves and served in a long glass." />
    <figcaption>
        <a href="https://www.flickr.com/photos/preppybyday/5084101811/">Mojito</a>
        <span class="attribution">
            by <a href="https://www.flickr.com/photos/preppybyday/">The Culinary Geek</a>
            (licenced under <a href="https://creativecommons.org/licenses/by/2.0/">CC BY 2
        </span>
    </figcaption>
</figure>

<section id="ingredients">

<h1>Ingredients</h1>

<ul>
    <li>2 oz. <em>white</em> rum</li>
    <li>8 <em>fresh</em> mint leaves</li>
    <li>4 tsp. sugar</li>
    <li>ice</li>
```

HTML5 elements

- There are about 110 elements in HTML5
- For *Web Development 1*, you should learn:
  - html, head, meta, title, link, body
  - h1–h6, p, ul, ol, li
  - section, article, header, footer, nav, aside, div
  - em, strong, i, b, small, span
  - a
  - img, picture, figure, figcaption, video, audio
  - table, caption, tr, th, td
- For *Web Development 2*, you will learn some more
- Be warned:
  - Many elements in HTML4 and earlier are not in HTML5, e.g. font, center, big
  - Several elements in HTML4 and earlier have new meanings in HTML5, e.g. i, b, small

Elements for page structure

header
  A group of introductory elements
nav
  A group of page or site navigation links (a navigation menu)
main
  The main content of the page (only one per page; never nested within the other elements on this slide)
aside
  A group of content that is tangentially related to the page or surrounding context (e.g. an advertising sidebar)
footer
  Information about the page or section or article (author, copyright, etc.)

```
        <li>&frac12; lime</li>
        <li>7 oz. club soda</li>
      </ul>

    </section>

    <section id="instructions">
      <h1>Instructions</h1>
      <p>
        For the best <i class="cocktail" lang="es">Mojitos</i> this side
        of Waterford,
      </p>
      <ol>
        <li>Gently <b>crush</b> the mint leaves in a cool tall glass;</li>
        <li><b>squeeze</b> the lime over the leaves;</li>
        <li><b>sprinkle</b> the sugar into the mix;</li>
        <li><b>fill</b> with ice;</li>
        <li><b>toss in</b> the rum;</li>
        <li><b>trickle in</b> in the club soda; and finally</li>
        <li><b>stir</b> lightly.</li>
      </ol>

    </section>

    <p id="warning">
      <strong>Enjoy alcohol sensibly.</strong>
    </p>

  </main>

  <aside>

    <h1>Did you know&hellip;?</h1>

    <p>
      <i class="cocktail" lang="es">Mojito</i> is pronounced
      <i>Moh-HEE-toh</i>.
    </p>

    <p>
      <i class="cocktail" lang="es">Mojitos</i> should be served in a
      Collins glass.
    </p>

    <p>
      <i class="cocktail" lang="es">Mojitos</i> were a favourite with author
      <a href="http://en.wikipedia.org/wiki/Ernest_Hemingway">Ernest Hemingway</a>.
      It is said that he enjoyed them at their birthplace,
      <i lang="es">La Bodeguita del Medio</i> in Havana, Cuba.
    </p>

  </aside>

  <footer>
    <p>
      <small>
        &copy; Derek Bridge. All rights reserved.
      </small>
    </p>
  </footer>

</body>

</html>
```

The div element

- In earlier versions of HTML, we grouped the elements of a document using div
- It otherwise has no meaning
- In HTML5 web sites, div is a last resort—when nothing else is suitable—and should be much rarer!

Headings, again

- We saw that <h1> was for major headings
  - But it's not just for the main heading on your page, e.g. in the <header>
  - It's also for the main heading within each <section>, <article>, etc.
- <h2>, <h3>, <h4>, <h5> and <h6>:
  - Can be used for lower-rank headings
  - But I prefer to avoid using them altogether

Sections and articles

- An HTML5 section is a thematic grouping—usually part of a larger whole
- An HTML5 article is also a thematic grouping—but this time one that is self-contained
- Rule-of-thumb: if you can imagine copying the content and reusing it elsewhere—on another page—or distributing it for others to use on their sites, then use article
- sections & articles often contain h1s or even headers & footers
- You can nest sections & articles within other sections & articles

Class exercise: section or article?

- The chapters of a story
- A school news letter contains a write-up of a recent school theatrical production, an announcement of a student achievement award, and publicity for a fund-raising fête
- A corporate web site contains a page of press releases—stories that the company has written about itself
- A scientist writes a web page that describes an experiment: introduction, method, results, conclusions
- A tutorial on a web page comprises a sequence of lessons
- Blog posts on a blog
- Each advertisement on a page of classified ads
- Each post in an Internet forum
- A home page contains a welcome blurb, a set of links to other pages, and some contact information
- An estate agent has a web page that describes a house. The page contains a description of each room in the house

Question: What happens if you make the wrong choice?

HTML5: big and small

- The `big` tag has gone
- The `small` tag has been redefined
  - ○ it is now marks up **small print**: short spans of text that present disclaimers, caveats, legal restrictions, copyrights or attribution, e.g.

```
<footer>
  <p>
    <small>
      &copy; Derek Bridge. All rights reserved.
    </small>
  </p>
</footer>
```

The span element

- Like `<div>`, the `<span>` element has no meaning
- It is used as a last resort—to mark up a run of text when nothing else is suitable

---

HTML5: Text-level elements

- Use em to emphasize a span of text for *contrast*
- Use strong to draw special attention to an important span of text
- Use i when you need to distinguish a title, a name, a technical term or a phrase in a foreign language from surrounding text
- Use b to distinguish keywords or key phrases from surrounding text

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Class exercise: em, strong, i or b?

- That's not a badger! It's a shaving brush.
- Save your work to disk frequently.
- If it's not your own work, you will score zero.
- Well, Introduction to Programming is my favourite module.
- CS1117 teaches you how to write programs and how to test them.
- Litost is a Czech word that is virtually untranslateable but means something like a state of agony and torment created by the sudden sight of one's own misery.

Does it matter?

- Choosing the 'wrong' tags often has no visible consequences
- But choosing the 'right' tags has advantages:
  - can make it easier to write good CSS
  - can make it easier to write good JavaScript
  - can make it easier for screen readers and other assistive technologies to present the pages to users who have disabilities
  - can make it easier for search engines to index your pages correctly