

Website Navigation

HTML Structure of Menu Systems

Note: “navigation” = “menu”

History

- In Tim Berners-Lee original design, the concept of "website navigation" didn't exist – there were only hyperlinks to other documents, embedded in the text or in a **list** of citations (1991-1995)
- The concept of "website" didn't exist – everything was just individual HTML documents *hyperlinked* to each other using anchor tags.
- If the author published multiple HTML documents, they could create an "index" webpage (index.html) which **listed** the author's web pages.
 - Web server software was coded to automatically load an index.html page if it existed.

Web "sites"

- Creative people saw the benefit of grouping webpages together and giving them a unified design (common look and feel)
 - Especially when .com (commercial) domains became available (1996-1998)
- "Navigation" was simply an arbitrary **list** of webpages that belonged together and (usually) shared a common "header", "footer", "navigation"
- As the "C-Clamp" design became prevalent (originally using HTML tables), the navigation list was typically found in the sidebar.

Navigation evolves

- Use of HTML tables and then CSS floats to layout entire webpages evolved more creative (and novel) presentation of navigation lists
 - Horizontal navigation "bar"
 - Image maps (clickable images with "hotspots") to act as website navigation
- Introduction and spread of JavaScript (early 2000s) and advanced CSS lead to more creative developments
 - Pull-down, pop-up, fly-out menus
 - Mega menus
 - Persistent menus

Importance of Good Navigation

- Two jobs of website navigation:
 1. Where am I now?
 2. Where can I go?
- Bad navigation is one of the top reasons for a high “bounce rate” (how fast a website visitor leaves a website)
 - Lots of research – big topic in the field of HCI (Human-Computer Interaction)
- Users are familiar (comfortable) with established patterns, but new and interesting (novel) approaches can draw visitors
 - Long scrolly pages are now okay
 - Smooth scroll (a JavaScript plug-in)

Navigation code

Still based on the concept of a **list**

`<!-- the nav element is new in HTML5; helps content aggregators (like Google) index content -->`

```
<nav>
  <ul>
    <li>
      <a href="index.html">Home</a>
    </li>
    <li>
      <a href="products.html">Products</a>
    </li>
    <li>
      <a href="services.html">Services</a>
    </li>
    <li>
      <a href="about.html">About Us</a>
    </li>
    <li>
      <a href="contact.html">Contact Us</a>
    </li>
  </ul>
</nav>
```

Advanced Navigation code

Sub-menus

Notice: The secondary UL goes *inside* a LI
(not between them!)

```
<nav>
  <ul>
    <li>
      <a href="index.html">Home</a>
    </li>
    <li>
      <a href="products.html">Products</a>
      <ul>
        <li>
          <a href="product1.html">Product 1</a>
        </li>
        <li>
          <a href="product2.html">Product 2</a>
        </li>
        <li>
          <a href="product3.html">Product 3</a>
        </li>
        <li>
          <a href="product4.html">Product 4</a>
        </li>
      </ul>
    </li>
    <li>
      <a href="services.html">Services</a>
    </li>
    <li>
      <a href="about.html">About Us</a>
    </li>
    <li>
      <a href="contact.html">Contact Us</a>
    </li>
  </ul>
</nav>
```

“Jump Lists” a.k.a. in-page navigation

Note: hyperlinks can be used *within* a single webpage

```
<nav>
  Contents of this Webpage...
  <ul>
    <li>
      <a href="#history">History of the Company</a>
    </li>
    <li>
      <a href="#products">Our Products</a>
    </li>
    <li>
      <a href="#meettheteam">Meet the Team</a>
    </li>
  </ul>
</nav>
```

```
<!-- later in the same html document -->
<div id="history">Lorem ipsum...

<div id="products">Lorem ipsum...

<div id="meettheteam">Lorem ipsum...
```