

# HTML5 – adding semantics to webpages

- HTML / XHTML were simple page-oriented structures
  - Headings, paragraphs, lists, tables, images etc
- Gradually generic structures take over as use of the Web explodes
  - `<div>` & `<span>`
- HTML5 recognises major new structures that are useful for
  - **search engines**; Google or Yahoo! can weight content in footer elements lower, or extra weight to content in the header.
  - **usability** for people with disabilities, screen readers etc

# Structure of HTML5 Web page

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Title of the document</title>
```

```
</head>
```

```
<body>
```

```
    This is a really simple HTML5 page
```

```
</body>
```

```
</html>
```

# Navigation support

`<nav>`: Represents a major navigation block. It groups links to other pages or to parts of the current page whose role is simply navigation

```
<nav>
<ul>
<li><a href="/">Home</a></li>
<li><a href="/events">Current Events</a></li>
<li><a href="/contact">Contact us</a></li>
</ul>
</nav>
```

# Headers & Footers

**<Header>**: tag specifies a header for a document or section, the title and datestamp of a blog entry or news article

```
<body>
<header>
<h1>Little Green Guys With Guns</h1>
<nav>
<ul>
<li><a href="/games">Games</a>
<li><a href="/forum">Forum</a>
<li><a href="/download">Download</a>
</ul>
</nav>
</header>
<p>You have three active games:</p>
<!-- this is still part of the subsection entitled "Games" -->
...
```

```
<article>
<header>
<h1>Military Offers Assurances to Egypt and Neighbors</h1>
Published : <time datetime="2011-02-13" pubdate>February 13 2011</time>
</header>
<p>
CAIRO - As a new era dawned in Egypt on Saturday,
the army leadership sought to reassure Egyptians and
the world that it would shepherd a transition to civilian
rule and honor international commitments like the peace treaty with Israel.
</p>
</article>
```

# Header & Footer

**<footer>**: Material that comes at the base of the page or article, e.g. copyright and contact information.

```
<ARTICLE>
<H1>My Favorite Trains</H1>
<P>I love my trains. My favorite train of all time is a Kof.</P>
<P>It is fun to see them pull some coal cars because they look so
dwarfed in comparison.</P>
<FOOTER> <!-- footer for article -->
<P>Published <TIME PUBDATE DATETIME="2009-09-15T14:54-07:00"></TIME></P>
</FOOTER>
</ARTICLE>
```

```
<FOOTER> <!-- site wide footer -->
<NAV>
<P><A HREF="/credits.html">Credits</A>-
<A HREF="/tos.html">Terms of Service</A> -
<A HREF="/index.html">Blog Index</A></P>
</NAV>
<P>Copyright © 2009 Gordon Freeman</P>
</FOOTER>
```

```
</BODY>
```

# Articles

`<article>`: Articles and blog entries are common, an alternative to `<div class="article">`

used for distributable content in e.g. RSS feeds

An article may contain a header and footer and a title.

```
<body>
<h1>My blog</h1>
<article>

<header>
<h1>The Very First Rule of Life</h1>
<p><time pubdate datetime="2009-10-09T14:28:08:00"></time></p>
</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 href="?comments=1">Show comments...</a>
</footer>

</article>
</body>
```

# Asides (not as important)

`<aside>`: The "aside" element is a section that somehow related to main content, but it can be separate from that content

```
<article>
```

```
<p>
```

```
As of writing, the only web browser completely support date time input is Opera.
```

```
In HTML5, it is the job of web browser to ensure user can only enter a valid date time into the input textbox.
```

```
</p>
```

```
<aside>
```

```
Picking a date from Calendar is not the only way to input a date value even though it's HTML5 specifications does not mention anything about displaying a calendar for date inp
```

```
</aside>
```

```
</article>
```

# Media - audio & video

- Until now, there has not been a standard for playing media files.
- Today, most audio & video is played by a plug-in (e.g. Adobe Flash).
- HTML5 provides new elements for media
  - But only understands a limited set of formats

```
<video src="movie.webm"></video>
```

```
<audio src="music.mp3"></audio>
```



# Overall Structure of Web page



- > <header>
- > <nav>
- > <article>
- > <section>
- > <aside>
- > <footer>

## Other Tags

- > <canvas>
- > <hgroup>
- > <address>
- > <figure>
- > <meter>
- > <progress>
- > <time>

# Drawing – Canvas

Provides a surface for programs to draw on using a standard API  
Avoids the need to download pre-generated images from the network.

- Lines
- Arcs
- Text
- Gradients
- Patterns.

```
<canvas id="myCanvas">  
</canvas>
```

Also provides image and pixel manipulation.

```
<script>  
  var myCanvas = document.getElementById("myCanvas");  
  var drawingContext = myCanvas.getContext("2d");  
  
  canvasContext.fillRect(100, 100, 100, 100);  
</script>
```

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