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> &
- 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

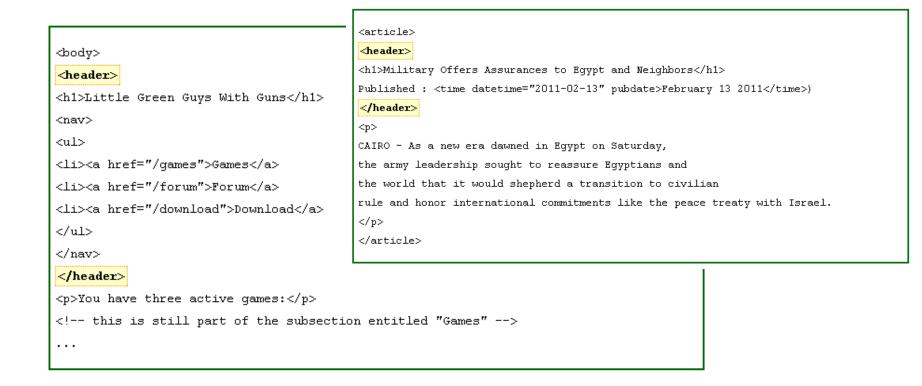
```
<nav>

<a href="/">Home</a>
<a href="/events">Current Events</a>
<a href="/contact">Contact us</a>

</nav>
```

Headers & Footers

<Header>: tag specifies a header for a document or section, the title and datestamp of a blog entry or news 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">Bloq 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>
<time pubdate datetime="2009-10-09T14:28-08:00"></time>
</header>
If there's a microphone anywhere near you, assume it's hot and
sending whatever you're saying to the world. Seriously.
...
<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>

    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.

</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>
</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



Drawing – Canvas

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

- Lines
- Arcs
- Text
- Gradients
- Patterns.

Also provides image and pixel manipulation.

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

```
<script>
  var myCanvas = document.getElementById("myCanvas");
  var drawingContext = myCanvas.getContext("2d");

canvasContext.fillRect(100, 100, 100, 100);
</script>
```