Lesson 3

HTML 2

Web Design

February 27, 2014

Basic look of a Web Page

The most important part of a web page is the part where the eyes focus on upon first seeing.

Typical components of a web page:

- Name of the web page and logo (if present)
- Motto
- Indication of the purpose of the web page (e.g. blog, portal, business web page, etc.)
- Navigation to the key parts of the web site
- Important links (like: Register, Log in, . . .)
- Space for ads (if present)

Usually, the upper left corner gains the primary focus of the user.

Sectioning and formatting of the content

In HTML 4, the content is not clearly defined from the rest of the page.

The tags used to structure the page are for general purpose.

- body, div, span - for positioning and containment.
- ul, ol, li, dl, dd, dt - for enumerations and lists
- p, q, adress, blockquote, cite, pre, abbr, b, bt, code, del, dfn, em, hr, i , ins,s, small, strong, sub, sup - used for text formating

Global Attributes for HTML 4

Global Attributes (not present in: base, head, html, meta, param, script, style and title elements)

Attribute	Value	Description
class	classname	defines class for the element
id	uniqueID	Defines unuque idetifier for the elements
style	stylename	inline style for the element
title	text	title of the element
accesskey	text	Keyboard shortcut to the element
dir	ltr, rtl, auto	Text direction
lang	text	Language of the content in the element
tabindex	number	Index of the element in the document structure

Global Attributes defined in HTML5

HTML5 defines additional global attributes:

Attribute	Value	Description
contenteditable	true, false	Defines if the element should be editable by the user
contexmenu	menu id	Defines the right click menu of the element
data-*	текст	This class of attributes, called custom data attributes, allows proprietary information to be exchanged between the HTML and its DOM representation that may be used by scripts.
draggable	true, false	indicates whether the element can be dragged, using the Drag and Drop API.
dropzone	copy, move, link	Indicates what types of content can be dropped on an element, using the Drag and Drop API.
hidden	true, false	indicates that the element is not yet, or is no longer, relevant.
itemid itemprop itemref itemscope itemtype	текст	Microdata features.
spellcheck	true, false	Defines whether the element may be checked for spelling errors.

Body element

- The content that should be presented to the user is usually placed in the body element.
- Although it has defined attributes (besides global attributes), other attributes are considered depricated (HTML 4), or forbidden (HTML 5)
- All the attributes are accessible through CSS or JavaScript
- There should be **only one** body element inside a sigle HTML document, or none in case of framesets.

Block vs Inline

- The two most used types of elements are block and inline
- Block elements begin in a new line and can contain other HTML elements. They automatically expand as much as possible (in regerds to the parent element), starting from the top left corner.
- Inline elements usually define textual data. They continue the dataflow of the other element. Important: They do not have width and height properties.

BLOCK ELEMENT

Expands as much as possible (in respect to the parrent)

INLINE ELEMENT An inline element is only as wide as its content, and will flow with text

Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Vestibulum tortor quam, feugiat vitae, ultricies eget, tempor sit amet, ante. Donec eu libero sit amet quam egestas semper. Aenean ultricies mi vitae est. Mauris placerat eleifend leo.

Div element

- The purpose of the div element is to contain other HTML elements.
- Div is a block element.
- In HTML 4, the visual design is usually formatted using div.
- It is used in grouping and formatting elements.
- Usage of a lot of embeded divs is called "divitis".

Divitis

```html
<div id="container">
  <div id="content">
    <div id="news">
      \colorbox{red}{<div class="headline"> News item 1 </div>}
      <div class="newsstory"> story here </div>
      \colorbox{red}{<div class="headline"> News item 2 </div>}
      <div class="newsstory"> story here </div>
    </div> <!-- end news div -->
  </div> <!-- end content div -->
</div> <!-- end container div -->
```

Why use div elements for creating headings? You should use h1..h6 elements.

Divitis example

```html
<h2>Contacts</h2>
<div id="contacts" class="">
  <div id="item0" class="item">Amar</div>
  <div id="email0" class="email">
    <a href="mailto:example@live.com">My mail</a>
  </div>
  <div class="details">
    <div id="phone0" class="phone">713-555-8207</div>
    <div id="address0" class="address">
      3715 Ferris Ave - <a href="http://maps.google.com/maps?f=q&h1=en&q=3715
          States"> map </a>
    </div>
    <div id="city0" class="city">Houston</div>
    <div id="province0" class="province">TX</div>
    <div id="postalCode0" class="postalCode">77005</div>
    <div id="country0" class="country"/>
    <div id="avatar0" class="avatar">
      <img src="avatar.gif" />
    </div>
    <div>
      <a href="">Chats</a>
      -
      <a href="">Emails</a>
    </div>
  </div>
</div>
```

Possible solution for Divitis

```html
<h2>Contacts</h2>
<ul>
  <li class="h">
     Amar
     <a class="e" href="mailto:amar@live.com">Mail me </a>
     <div>
        <img src="avatar.gif">
        <ul>
          <li class="p">713-555-8207</li>
          <li>
             3715 Ferris Ave -
             <a href="http://maps.google.com/maps?f=q&h1=en&q=3715States"> map </a>
          </li>
          <li>Houston, TX</li>
          <li>
          <a href="">Chats</a>
          -
          <a href="">Emails</a>
          </li>
        </ul>
     </div>
</ul>
```

Span element

- Span element is an inline element
- When data is in a span element, we can add styles and further manipulate the element.
- Doesn't have width and height

e.g.

```html
<p>My kid has <span style="color:lightblue">blue</span> eyes.</p>
```

My kid has blue eyes.

Headings h1...h6

h1 to h6 define headings for structuring the docuemnt.

```
<h1>This is header 1</h1>
<h2>This is header 2</h2>
<h3>This is header 3</h3>
<h4>This is header 4</h4>
<h5>This is header 5</h5>
<h6>This is header 6</h6>
```


This is header 1

This is header 2

This is header 3

This is header 4

This is header 5

This is header 6

Authomatic formatting in HTML

- HTML automatically colapses multiple empty spaces and other whitespace characters
- If we want to use special characters, we have to use its code
- The symbols that can't be entered as characters are called **entities**
- Example: to display "<" in HTML, then we should write < (less than)

Commonly used entities

Result	Description	Entity Name	Entity Number
	non-breaking space		
<	less than	<	<
>	greater than	>	>
&	apersand	&	&
£	pound	£	¢
§	section	§	§
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®

Link to the list of all entities: here

Lists

There are 3 types of lists in HTML:

- ordered list (ol)
- unordered list (ul)
- definition list (dl)

Ordered and unordered list have "li" (list item) elements, but other lists can be embeded or other HTML elements.

Ordered lists

- Usually used for enumeration
- li element is used for inputing elements

Attributes:

Attribute	Value	Description
start	number	start value of the list
type	1, A, a, I, i	the list enumeration type
reversed (HTML 5)	reversed	should the list be reveresed (9, 8, 7, . . .)

ordered list - examples

```html
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<ol start="50">
  <li >Coffee</li>
  <li value="10">Tea</li>
  <li>Milk</li>
</ol>
```

If using ordered list, li elements can have the attribute value

1. Coffee
2. Tea
3. Milk

50. Coffee
10. Tea
11. Milk

Unordered lists

Defined using the ul tag and has embedded li (list item) elements or other HTML elements.

```html
<ul>
  <li>Coffee</li>
  <li>Green Earl <a href="
      tea.html">Tea</a></
      li>
  <li>Milk</li>
</ul>
```

- Coffee
- Green Earl Tea
- Milk

Definition lists <dl> <dt> <dd>

- Used for defining of terms
- It is used with <dt> (definition term) and <dd> (definition description)

```
<dl>
   <dt>Coffee</dt>
   <dd>Black hot drink</dd>
   <dt>Milk</dt>
   <dd>White cold drink</dd>
</dl>
```

Coffee

    Black hot drink

Milk

    White cold drink

Embedded lists

```html
<ul>
  <li>First element</li>
  <li>Second element</li>
  <ol type="I">
    <li>First element</li>
    <li>Second element</li>
    <li>Third element</li>
  </ol>
  <li>Third element</li>
</ul>

<ol type = "a">
  <li>First element</li>
  <dl>
    <dt>Term 1</dt>
      <dd>Explanation of term 1</dd>
    <dt>Term 2</dt>
      <dd>Explanation of term 2</dd>
  </dl>
  <li>Second element</li>
  <li>Third element</li>
</ol>
```
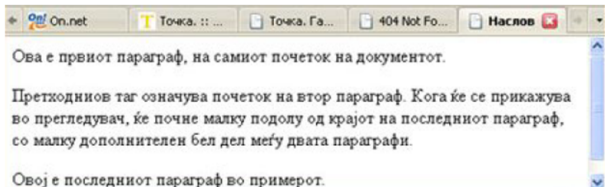
- First element
- Second element
    - I First element
    - II Second element
    - III Third element
- Third element

a. First element

  Term 1
      Explanation of term 1
  Term 2
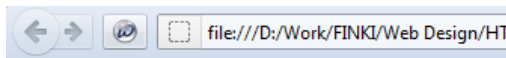   Explanation of term 2

b. Second element
c. Third element

Paragraph <p>

- It is used usually for displaying text.
- Paragraph element creates empty space on top and bottom
- The first paragrapg begins with the first line of the body element (if not specified otherwise)

Example

```
<p>
  Lorem ipsum dolor
      \ldots
</p>
<p>
  Vestibulum urna
      urna \ldots
</p>
<p>
  Quisque eg \ldots
</p>
<!-- The text is
     shortened -->
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit,
enim porta dui elementum ultricies in condimentum enim

Vestibulum urna urna, pulvinar sit amet ultricies ac, dic
Phasellus ipsum felis, consectetur a porta sed, egestas
leo nec magna pulvinar vestibulum. Nulla facilisi. Nulla
viverra enim lacinia. Ut blandit sapien vitae lorem dictu

Quisque egestas tristique nisi eget porttitor. Vivamus at
consectetur quam ac nulla dapibus et tempus est cursu
aliquam est magna eget sem. Integer non semper enim

Preformatted text \<pre\>

- Preformatted text is used to show original data (including all whitespace characters)
- To achieve that, the text must be embedded in \<pre\> tag.

```html
<pre>
 Text in a pre element
 is displayed in a fixed-width
 font, and it preserves
 both       spaces and
 line breaks
 and we can input entities like "<"
</pre>
```

```
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both       spaces and
line breaks
and we can input entities like "<"
```

Text Formatting

```html
<em>Emphasis</em> looks <i>italic</i>. <br />
<strong>Strong</strong> looks like <b>bold</b>. <br />
<code>Code</code> is for monospaced font. <br />
<small>Small</small> looks smaller.<br />
<blockquote>Blockquote</blockquote> is quoting in multiple lines.<br /><br />
<q>quote</q> is quoting in the same line.<br />
<var>Variable</var> looks <i>italic</i>. <br />
```

Emphasis looks *italic*.
Strong looks like **bold**.
Code is for monospaced font.
Small looks smaller.

> Blockquote

is quoting in multiple lines.

"quote" is quoting in the same line.
Variable looks *italic*.

```
<dfn>Definition</dfn> also looks <i>italic</i>. <br/>
<cite>Cite</cite> is shown as <i>italic</i>.<br />
<address>My address</address> looks like <i>address</i> + &lt;br&gt;<br />
&lthr />&gt adds horisontal line<hr />
<del>Delete</del> is deleted text.<br />
<ins>Insert</ins> Is inserted and underlined text.<br />
<s>This is a text</s> that is no longer relevant.<br />
H<sub>2</sub>0 is written using <sub>sub</sub> tag.<br />
e<sup>x<sup>x</sup></sup> is written using the <sup>sup</sup> tag.
```

Definition also looks *italic*.
Cite is shown as *italic*.
My address
looks like *address* +
<hr /> adds horisontal line

~~Delete~~ is deleted text.
<u>Insert</u> Is inserted and underlined text.
~~This is a text~~ that is no longer relevant.
$H_2 0$ is written using $_{sub}$ tag.

e^{x^x} is written using the ^{sup} tag.

Formatting in **HTML 5**

HTML 5 defines new tags for better structuring of the content.

Tag	Description
<article>	Defines and article
<aside>	Defines content aside from the page content
<details>	Defines details of an element
<footer>	Defines a footer for a section or page
<header>	Defines a header for a section or page
<hgroup>	Defines information about a section in a document
<mark>	Defines marked text
<nav>	Defines navigation links
<section>	Defines a section
<summary>	Defines the header of a "detail" element
<time>	Defines a date/time
<wbr>	Defines a possible line-break

Web page structuring

`<div id="header">`	`<header>`
`<div id="nav">`	`<nav>`
`<div class="article">` `<div class="section">`	`<div id="sidebar">`	`<article>` `<section>`	`<aside>`
`<div id="footer">`	`<footer>`

HTML 4   HTML 5

Examples of new elements in HTML 5

```html
<hgroup> <!--Defines group of Headers-->
  <h1>Welcome to my WWF</h1>
  This is my <mark> marked text</mark> <!--
      Text Marking-->
  <h2>For a living planet</h2>
  <!--Next goes the details-->
  <details>The text in &ltdetails&gt goes
      here.</details>
  <!--And the page summary-->
  <summary>Copyright 1999-2011.</summary>
  <!--This is a datetime element, good about
      tracking the time when the page was
      published-->
  <time datetime="2011-10-10" pubdate="
      2011-10-10">10 October 2011</time>
  Possible long word for line break: Super<
      wbr/>califragilistic<wbr/>
      expialidocious
</hgroup>
```

Welcome to my WWF

This is my marked text

For a living planet

▼ Details
The text in <details> goes here.
Copyright 1999-2011.
10 October 2011 Possible long word for line break: Supercalifragilisticexpialidocious

Document linking <a>

Every web resource has and URL
Links enable us to connect different documents.
By clicking the link, we transfer from one page to another od transfer to other part of the same page
Predefined, the links are rendered:

- unvisited link is blue and underlined
- visited link is underlined and purple
- active link is underlined and red

The most important attribute for links is „**href**". This attribute contains the URL to the resource.

```
<a href="http://www.google.com"> This is a link to Google </a>
```

Questions?