**HTML 5**

**The past, the present, the future**

HTML Basics

Telerik Software Academy

<https://telerikacademy.com>

**Table of Contents**

* [Hypertext Markup Language](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/html)
* [HTML Terminology](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/terminology)
* [HTML Document Structure](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/structure)
* [HTML Common Elements](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/commonelements)
* [Section Elements](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/sectionelements)
* [Semantic Structural Tags](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals#/semantic)

**Hypertext Markup Language**

* **HTML** – **H**yper **T**ext **M**arkup **L**anguage
  + A **notation for describing**
    - document structure (semantic markup)
    - formatting (presentation markup)
  + Looks (looked?) like:
    - A Microsoft Word document
* The markup tags **provide information** about the page content structure
* A **HTML** document **consists of many tags**

**Creating HTML Pages**

* An **HTML** document must have an **.htm** or **.html** file extension
* **HTML** files can be created with text editors:
  + *Notepad*
  + *Notepad++*
  + *Sublime Text 2/3*
  + *Atom*
  + *Visual Studio Code*
* Or **HTML** editors ([WYSIWYG](https://en.wikipedia.org/wiki/WYSIWYG) Editors):
  + Microsoft WebMatrix
  + Microsoft Expression Web
  + Microsoft Visual Studio
  + Adobe Dreamweaver

**HTML – Past, Present, Future**

* 1991 – HTML first mentioned – Tim Berners-Lee – HTML tags
* 1993 – HTML (first public version, published at IETF)
* 1993 – HTML 2 draft
* 1995 – HTML 2 – W3C
* 1995 – HTML 3 draft
* 1997 – HTML 3.2 – “Wilbur”
* 1997 – HTML 4 – ”Cougar” – CSS
* 1999 – HTML 4.01 (final)
* 2000 – XHTML draft
* 2001 – XHTML (final)
* 2008 – HTML5 / XHTML5 draft
* 2011 – feature complete HTML5
* <http://en.wikipedia.org/wiki/HTML5#Plan_2014>

**HTML Terminology**

* Concepts in **HTML**
  + **Tags**
    - Opening tag and closing tag
    - The smallest piece in HTML
  + **Attributes**
    - Properties of the tag
    - Size, color, etc…
  + **Elements**
    - Combination of opening, closing tag and attributes

**HTML Tags**

* **Tags** are the **smallest piece** in HTML Document
  + Start with < and end with >
* Two kinds of **tags**
  + **Opening**
    - Mark the start of an HTML element
  + **Closing**
    - Mark the end of an HTML element
    - Starts with </

<html>

<body>

<h1>Hello Pesho!</h1>

</body>

</html>

Opening tags

Closing tags

**Attributes**

* Attributes are **properties of HTML Elements**
  + Used to **set** size, color, border, etc…
  + Put **directly in the tags**
  + Has value surrounded by **single** ' ' or **double** " " quotes
    - The value is always a string

<!-– makes a hyperlink to Google -->

<a href="http://google.com"> go to Google</a>

<!-– makes a horizontal line -->

<hr width="95%" size="3px"/>

<!-– adds an image in the web page -->

<img src="images/SEB-Ninja.png"/>

Some tags don't have closing tag

**Most Common Attributes**

* There are some **attributes that are common** for every HTML element
  + id, class, name, style
* Some attributes are **specific**
  + For example the attribute src of the img element
    - Shows the path to the image to be shown

**HTML Elements**

* HTML Elements are **combination of tags and attributes**
  + Opening tag with some or none attributes and a closing tag

<a href="http://google.com"> go to Google</a>

<html>…</html>

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/01.HTML-concepts.html)

**HTML Document Structure**

* Some elements are **essential** to each HTML Document:
  + html, head, body, doctype
* The html element
  + Used to **mark the beginning** and ending of a HTML document
  + All the content of the web page is inside this tag

<html>

<!-- content goes here -->

</html>

**Head Element**

* The head tag contains markup that is not visible to the user (i.e. the person using the browser)
  + But **helps the browser** to render correctly the HTML document
* **What is in there**?
  + Styles, scripts
  + Declare encodings
  + Etc..
  + The title tag - the text in the tab of a browser

**Body Element and Doctype**

* body element contains **all the visible to the user markup**
  + Headings, text, hyperlinks, images, etc…
  + Textboxes, sliders, buttons…
* Doctype is kind of the validator of the page
  + **Tells the browser** in which version of HTML the page is written
  + HTML 5 Doctype

<!DOCTYPE html>

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/02.HTML-structure.html)

**Text Formatting**

* Text formatting tags modify the text between the opening tag and the closing tag
  + Ex. <b>Hello</b> makes "Hello" bold
  + Many of the formatting tags are deprecated
    - **Use CSS instead**

**Text Formatting - Tags**

| **Tags** | **Meaning** |
| --- | --- |
| <b></b> | **bold** |
| <i></i> | *italiazed* |
| <u></u> | underlined |
| <sup></sup> | samplesuperscript |
| <sub></sub> | samplebold |
| <strong></strong> | **strong** |
| <em></em> | *emphasized* |
| <pre></pre> | preformatted text |

**Some Simple Tags**

* Hyperlink Tags

<a href="http://www.telerik.com/"

title="Telerik">Link to Telerik Web site</a>

* Image Tags

<img src="logo.gif" alt="logo" />

* Text formatting tags

This text is <em>emphasized.</em>

<br />new line<br />

This one is <strong>more emphasized.</strong>

**Hyperlink Tags**

**Headings and Paragraphs**

* Heading Tags (h1 – h6)

<h1>Heading 1</h1>

<h2>Sub heading 2</h2>

<h3>Sub heading 3</h3>

* Paragraph Tags

<p>This is my first paragraph</p>

<p>This is my second paragraph</p>

* Sections: div and span

<div style="background: skyblue;">

This is a div

</div>

**Ordered Lists: <ol> Tag**

* Create an **Ordered List** using <ol></ol>:

<ol type="1">

<li>Apple</li>

<li>Orange</li>

<li>Grapefruit</li>

</ol>

* Attribute values for **type** are **1**, **A**, **a**, **I**, or **i**

**Unordered Lists: <ul> Tag**

* Create an **Unordered List** using <ul></ul>:
* Attribute values for **type** are:

**Definition lists: <dl> tag**

* Create **definition lists** using <dl></dl>
  + Pairs of text and associated definition; text is in <dt></dt> tag, definition in <dd></dd> tag

<dl>

<dt>HTML</dt>

<dd>A markup language …</dd>

<dt>CSS</dt>

<dd>Language used to …</dd>

</dl>

* Renders **without bullets**
* Definition is **indented**

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/03.Common-elements.html)

**The <div> Tag**

* <div> creates logical  
  divisions within a page
  + Block element
  + Used with CSS
* *Example*:

<div style="font-size:24px; color:red">DIV example</div>

<p>This one is

<span style="color:red; font-weight:bold">only a test</span>.

</p>

[](https://github.com/TelerikAcademy/HTML/blob/master/Topics/02.%20HTML-Fundamentals/imgs/pic18.png)

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/04.Section-elements-div.html)

**The <span> Tag**

* **Inline style** element
* Useful for **modifying a specific portion** of text
  + **Don't use it to create a separate area** (paragraph) in the document
* Mainly used to style parts of a text

<p>This one is

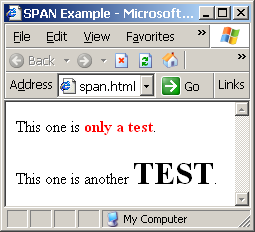
<span style="color:red; font-weight:bold">only a test</span>.

</p>

<p>This one is another

<span style="font-size:32px; font-weight:bold">TEST</span>.

</p>

[](https://github.com/TelerikAcademy/HTML/blob/master/Topics/02.%20HTML-Fundamentals/imgs/pic22.png)

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/05.Section-elements-span.html)

**Semantic Structural Tags**

**The Structure of a Web Page**

* A sample layout structure of a Web Page

**The "HTML 4 and Before" Way**

* Using **divs with IDs**
  + The **IDs are needed for styling**

<html>

<head> … </head>

<body>

<div id="header"> … </div>

<div id="navigation"> … </div>

<div id="sidebar"> … </div>

<div id="content"> … </div>

<div id="footer"> … </div>

</body>

</html>

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/06.Semantic-structural-tags-divs.html)

**The HTML5 Way**

* In **HTML5** there are **semantic tags** for layout
  + <nav>, <header>, <footer>, <section>

<html>

<head> … </head>

<body>

<header> … </header>

<nav> … </nav>

<aside> … </aside>

<section> … </section>

<footer> … </footer>

</body>

</html>

* Work only **in newer browsers**

[**Demo**](https://github.com/TelerikAcademy/HTML/tree/master/Topics/02.%20HTML-Fundamentals/demos/07.Semantic-structural-tags.html)

**Remember**

* It is important to have the **correct vision** and **attitude** towards HTML
  + **HTML is only about structure**, not appearance
  + Browsers tolerate invalid HTML code and parse errors – you should not
  + Always think about **semantics**
* The **W3C HTML Validator** is a way to validate your HTML
  + <http://validator.w3.org/>