## **HTML BASICS**

- Introduction: From HTML2 to HTML5
- HTML basics: most often used basic tags
- HTML editors:
  - Software: EasyHTML, BlueGriffon
  - Online editors: CKEditor
  - Open source content management systems: Plone CMS
- Image map: definition, tags, making, cartographic use
- Image map editors: Easy HTML, Web based apps

Final task for the semester



Website with an image map & Google Map



Converting a map to image map, completing the content with multimedial information, making of website

## HTML (HyperText Markup Language):

1989 – First proposal by Tim Berners-Lee at CERN

The first description mentioned in Internet was written by Tim Berners-Lee in 1991. Title: HTML Tags

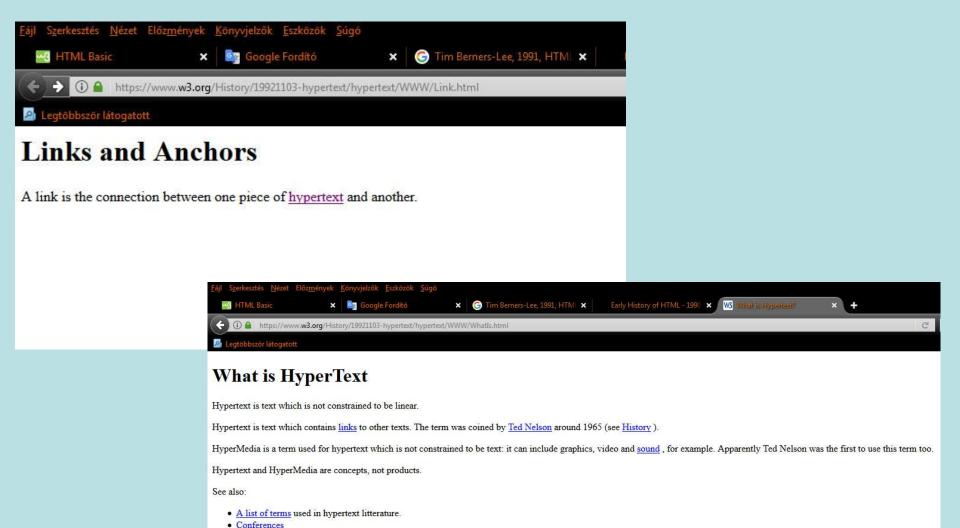
In this article can be found the first 22 tags of this language (13 of them were still used in HTML 4)...







# HTML (HyperText Markup Language): Earliest HTML document on the Web - 13<sup>th</sup> November, 1992



Commercial (and academic) products
 A newsgroup on hypertext, "alt.hypertext"

Standards

WorldWideWeb is a project which uses hypertext concepts.

## HTML (HyperText Markup Language):

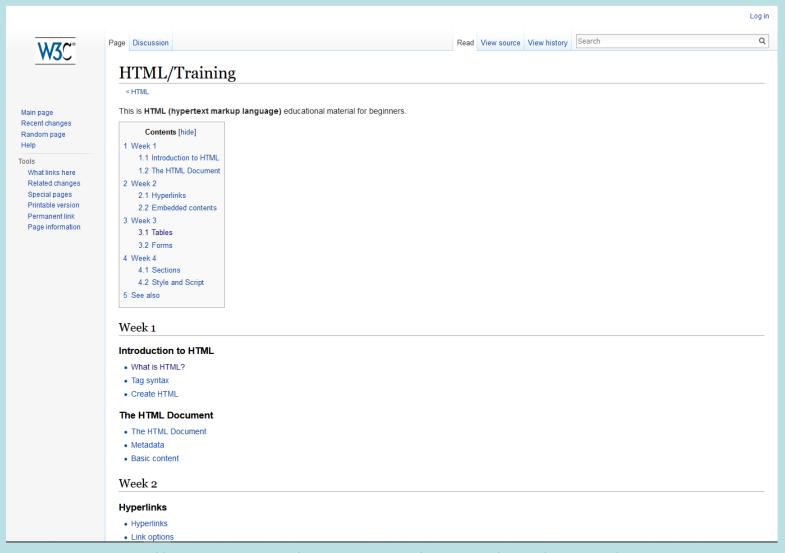
- Standard *markup* language for creating web pages and web applications
- Different versions in the last almost 30 years (HTML, 2, 3 and 4 as well as XHTML)

Last version: **HTML5** (2004-2014)



http://www.w3.org/

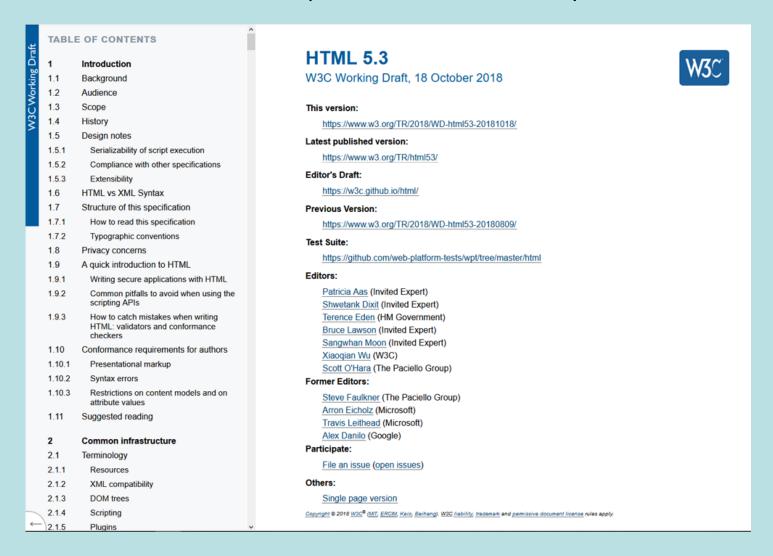
# HTML (HyperText Markup Language): HTML5 – HTML5.3 (2004–2018)



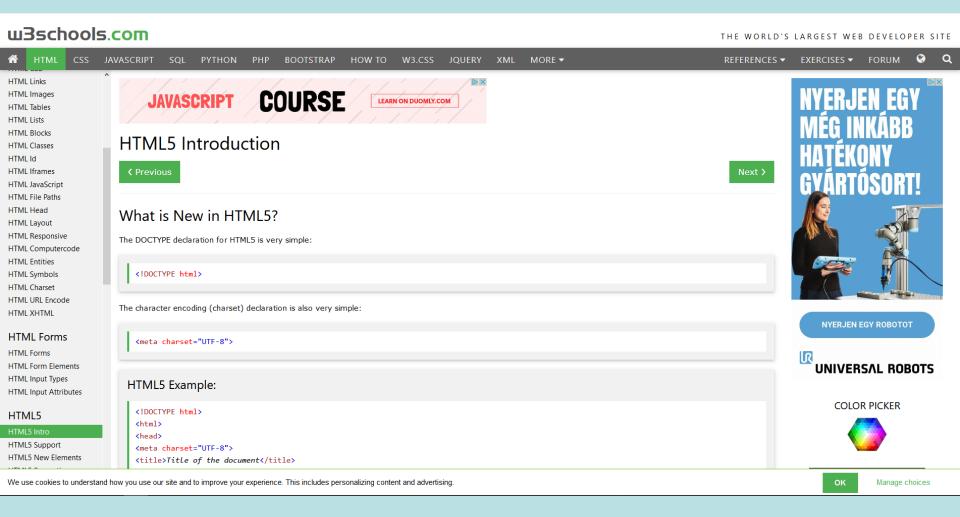
https://www.w3.org/community/webed/wiki/HTML/Training

## HTML (HyperText Markup Language):

## Last version: HTML5.3 (18 October 2018)



# HTML (HyperText Markup Language): Last version: HTML5.3 (18 October 2018)



# HTML (HyperText Markup Language): HTML5

## **Novelties:**

- Multimedia (video & audio)
- Graphics
- Data management: Local data storage, file access, SQL database
- New semantic elements for headers, menus, forms, etc.
- Use of CSS3 (*Cascading Style Sheets*) /animations, 2D/3D, shadow effects, downloadable fonts, etc)

Aim: Using web applications do not need to install plugins (e.g. Adobe Flash, Microsoft Silverlight, Sun JavaFX)...

## HTML (HyperText Markup Language):

## HTML5

#### **New HTML5 Elements**

The most interesting new elements are:

New semantic elements like <header>, <footer>, <article>, and <section>.

New form control attributes like number, date, time, calendar, and range.

New graphic elements: <svg> and <canvas>.

New multimedia elements: <audio> and <video>.



In the chapter HTML5 Support, you will learn how to "teach" old browsers to handle HTML5 semantic.

#### **Elements Removed in HTML5**

<frameset>
<noframes>

<strike>

The following HTML4 elements have been removed from HTML5:

## New HTML5 API's (Application Programming

The most interesting new API's are:

- HTML Geolocation
- HTML Drag and Drop
- HTML Local Storage
- HTML Application Cache
- HTML Web Workers
- HTML SSE



Local storage is a powerful replacement for cookies.

9	Element	Use instead
	<acronym></acronym>	<abbr></abbr>
	<applet></applet>	<object></object>
	<pre><basefont/></pre>	CSS
	        	CSS
	<center></center>	CSS
	<dir></dir>	<ul></ul>
	<font></font>	CSS
	<frame/>	

CSS

CSS

# HTML (HyperText Markup Language):

HTML5

## HTML 5 DEMOS AND EXAMPLES

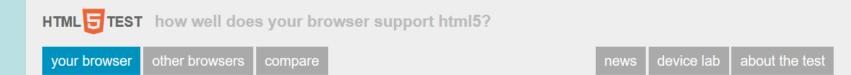
HTML 5 experimentation and demos I've hacked together. Click on the browser support icon or the technology tag to filter the demos (the filter is an or filter). HTML5 also presents new challenges to online privacy, so if you're at all concerned about your privacy please read my comprehensive notes on <a href="VPN Services">VPN Services</a> like <a href="Express VPN">Express VPN</a> and <a href="NordVPN">NordVPN</a>.

Filter demos: canvas classlist contenteditable dataset dnd events file-api file geolocation getUserMedia hidden history manifest offline postMessage sql-database storage svg video (websocket) workers (xhr2)

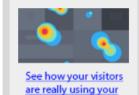
Demo	Support	Technology
Stream video and filter with canvas	<i>◎</i> <b>◎ 0 ◎</b>	getUserMedia canvas
Stream video to the browser Also works on Opera Mobile 12	<i>∅</i> <b>0 0 0</b>	getUserMedia
Drag and drop and XHR upload	Ø 0 Ø Ø	file dnd xhr2
Hidden property	Ø 0	hidden
Simple class manipulation	Ø 0	classlist
Storage events	Ø	storage
dataset (data-* attributes)	<ul><li>9 0 </li><li>9</li></ul>	dataset
History API using pushState	Ø 0	history
Browser based file reading Not part of HTML5	ି 🕲 O 🍪 🥙	file-api
Drag files directly into your browser Not directly part of HTML5	<b>∅ 0 ⊚ </b>	file-api dnd
Simple chat client	<i>○</i> <b>○ ○ ○</b>	websocket

http://html5demos.com

## HTML5 test: http://html5test.com/



YOUR BROWSER SCORES 4 OUT OF 555 POINTS



website.....

You are using Firefox 62.0 on Windows 10

Correct? V X



Compare to...



1/2.1

Yes ./



#### semantics

Dareing inline MathML

#### **Parsing rules** 5 Yes 🗸 <!DOCTYPE html> triggers standards mode Yes 🗸 HTML5 tokenizer Yes < HTML5 tree building HTML5 defines rules for embedding SVG and MathML inside a regular HTML document. The following tests only check if the browser is following the HTML5 parsing rules for inline SVG and MathML, not if the browser can actually understand and render it. Yes < Parsing inline SVG

#### **multimedia**

Viaeo	29/33
video element	Yes 🗸
Subtitles	Yes 🗸
Audio track selection	No ×
Video track selection	No ×
Poster images	Yes 🗸
Codec detection	Yes 🗸
Video codecs	

## **HTML** basics

## Most important elements and tags:

- Structure and head of a HTML file: HEAD (TITLE, META, STYLE, SCRIPT), BODY
- · IMG
- TEXT elements + FONT tag
- A HREF (links)
- TABLE
- DIV (formatting)
- FRAME (defining subsections)

Elements and tags can be written using upper- or lowercase

```
The start and end of the program
            are indicated with this tag
<HTML>
  <h >HEAD> Heading of a program: It includes title,
            description, style, script, etc.
  </HEAD> End of head
```

End of program

</HTML>

Within the Head:

## <TITLE>Cartographic website</TITLE>

Very often the first tag after HEAD, a caption is defined to be shown at the top of the browser window

## <META...>

Defining the metadata of the current program. Importance: Web searchers will read these META elements when starting a search.

Most important metadata:

Keywords:

<META name="keywords" content="X, Y, Z">

Description:

<META name="description" lang="en,hu" content="XYZ">

Author:

<META name=,,author" lang=,,es"
content=,,Jesús Reyes">

Others: copyright, date

Style Sheets:

CSS(1)- Cascading Styles Sheets, last version a CSS3

- Styles solve (in part) the limitations of HTML language (e.g.: line spacing, font, color, etc)
- The user defines it after the META element in the file.
- The programmer can use a META element to describe which CSS will be added:

<META http-equiv="Content-Style-Type" content="text/css">

## Styles:

```
<style type="text/css">
      <!--
      A:link {color:"#653614"; text-decoration: none;}
      A:visited {color:"#653614"; text-decoration: none;}
      A:hover {color:"#8A4A1C";text-decoration: none;}
SELECT
      COLOR: #000080;
         FONT-FAMILY: Verdana, Arial, Helvetica;
             FONT-SIZE: 8pt;
```

## Script tags:

It is used to embed or refer an executable script that was created to enhance HTML efficiency. It is placed within the HEAD. It is then referred using an HTML command in the BODY.

## <SCRIPT>

The script commands are placed

within these tags

</SCRIPT>

Script tags:

Example of a reference using a HTML tag:

<a href="javascript:poplmage('images/overlay1.jpg',
'Text describing the image')">
After clicking on this text a new window will be opened
with the image
</a>

poplmage is a function defined in the <SCRIPT>

Script tags:

IMPORTANT!!! Do not be afraid of scripts!

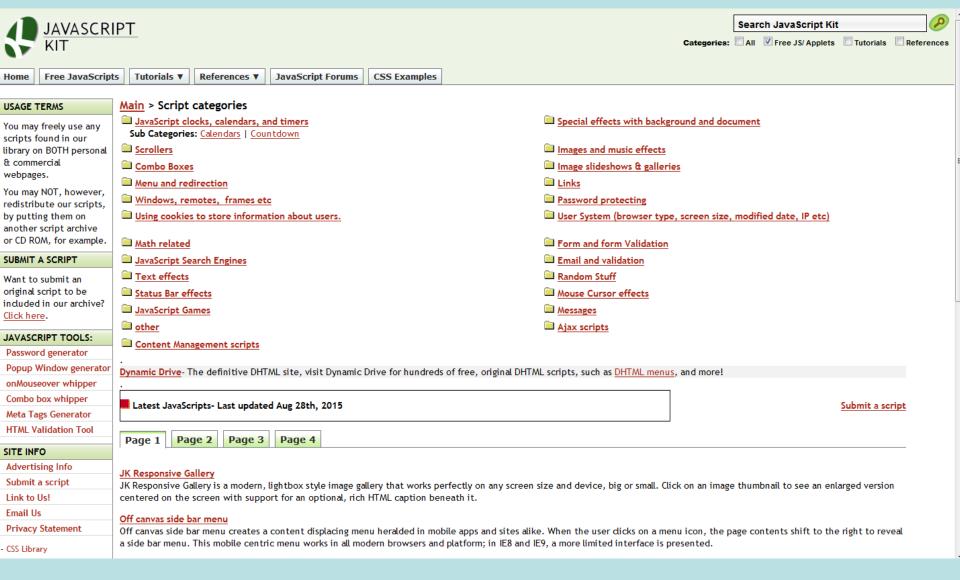


You do not need to programme JavaScript if you want to use a script!



Free script collections on the Web:

http://www.javascriptkit.com/cutpastejava.shtml



http://www.javascriptkit.com/cutpastejava.shtml

The <SCRIPT> tag is the last one before ending the heading </HEAD>

After the head begins the section called "BODY": our website is programmed here...

```
<BODY>
.
.
.
/BODY>
```

<IMG> - Displaying an image in the browser window Parameters (attributes):

- src source of image (path to find and open the image file)
- alt text to be visualized instead of (or with) the image
- width width given in pixels
- height height given in pixels
- align middle, center, left, right, etc

width and height are important - faster visualization

<IMG>

Other **OBSOLETE** attributes (rather use CSS):

- border it specifies the width of the border around an image (pixels)
- hspace, vspace specifies the white space on left OBSO tht side of an made pale of ED!!

<IMG src="images/overlay.jpg" width="200"
height="250" alt="Overlay" border=2>

**TEXT** element:

Text → Typing straight into the file



Some text tags are defined in HTML (e.g. <abbr>, <small>, <big> etc), but I rarely used them.



I prefer to use the TEXT elements

## **TEXT** elements:

- <b>... </b> bold
- <i>... </i> italic
- <u>... </u> underline
- <s>... </s> strikeout
- <H?>... </H?> headline (where ? can be a value between 1 and 6) /1 is the largest size/
- <sub>... </sub> subscript
- <sup>... </sup> superscript
- paragraph line break
- <br> line break
- <center>...</center> alignment to center

IMPORTANT: The last two are valid not only for text !!!

- <em>... </em> emphazised (really italic)
- <strong>... </strong> strong emphazised (bold)

## <font>...</font> Parameters:

- size font size
- color font colour
- face font type

These parameters can also be given by styles !!!

But it is useful if we want to use different font sizes within the file (e.g. in tables).

```
<font color=#000000 size=2
font face="verdana,arial,helvetica,sans-serif">
```

<a href...>...</a> - reference to a specific element within a page, to an extern file (e.g. other HTML file), to an e-mail address or to other website

target – where does the named object appear? The target can be \_blank – the object appears in a new window or tab

Beginning the text in the same file:

```
<a href="#top">Go to top</a> <h2 id="top">Top of page!</h2>
<A HREF="begin.htm">The explanation begins here...</A>
<a href="#top">Go to top</a> <h2 id="top">Top of page!</h2>
<a href="#top">Top of page!</a>/A>
```

<A HREF=,,http://www.esri.com" target=,,\_blank">ESRI website</A>

<a href...>...</a> example:

Opening a new window at a specified size, not resizable and without rolling bars:

```
<A HREF="link.html" onClick="popup = window_crefn('link.html', 'PopupPage',</p>
'height=450,width=500,scrollbars=no,resit able ind , return false" target="_blank">....
</A>
<script>
winpops=wir
"fullscreen=no,toolbar=yes
                                              bar=yes,scrollbars=yes,
resizable=yes, directories; yet, lo at on=yes,
                           100,top=100,screenX=100,screenY=100")
width=500,heigh
</script>
<a href="../images/tabp3.jpg"</a>
onClick="javascript:window.open('../images/tabp3.jpg','mywindow','width=600,height=614')
; return false "target="_blank"> <IMG SRC="../icons/tabp4.jpg" WIDTH="200"
HEIGHT="204" ALT="Tabula Peutingeriana" BORDER=2><BR>
\langle a \rangle
```

... - defining a table

The tag was important not only to make a "traditional" table!!!

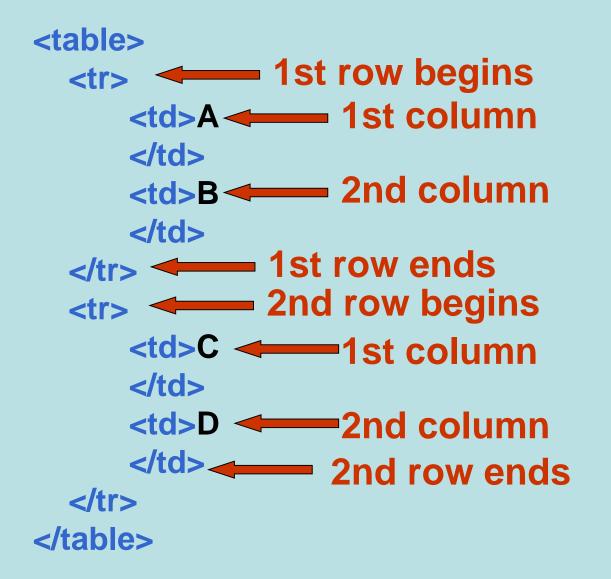


I used it for formatting pages, to assure the same size and layout, or to implement some publishing-editing solutions (e.g. figure captions)

Professional programming solutions – not using tables, but STYLES (CSS) <- I recommend it...

Example: http://lazarus.elte.hu/hun/dolgozo/jesus/tt/kezdes.htm

## Structure of a table:



Α	В
C	D

```
 tag:
```

```
...
```

- cellpadding Distance (in pixels) between the content and the frame of each cell
- cellspacing Distance (in pixels) between each cell
- border Width (in pixels) of the frames of a tables
- width Table width (in pixels)
- height Table height (in pixels)
- background wallpaper for the table

## tag:

Obsolete (due to the use of styles), but applicable parameters:

- bgcolor background color
- align alignment of a table (left, right, center)

The column width can be fixed using <col> within

Condition: Giving a <width in the lead of <table>

Three solutions to fix the width:

Fixed (in pixers) Perconditions Fixed (in pixers) Percentage (%) and Proportional (defining an X part of the total as a width, marked with a \*)

## tag:

<col> within :
specifies column properties
for each column within a
<colgroup> element.

Useful when applying styles to entire columns, instead of repeating the styles for each cell or for each row

– defining header cells

```
<colgroup>
 <col span="2" style="background-</pre>
color:red">
 <col style="background-</pre>
color:yellow">
</colgroup>
ISBN
 Title
 Price
3476896
 Programming HTML
 $55
```

```
 tag:
```

It defines a row in an HTML table. A elements contains one or more or elements.

HTML5 – without specific attributes

Attributes are defined in CSS. E.g.:

```
tr {
    display: table-row;
    vertical-align: inherit;
    border-color: inherit;
}
```

# tag:

It specifies the width of a table cell (columns).

The width can be given in pixels or in percent:

```
Month
         Month
         Salary
Salary
January
         January
$3100
         $3100
```

# tag, example:

```
<H3>Photos taken during the ICC 2005 Conference (A Coru&ntilde;a,
Spain)</H3>
```

# More professional example:

https://www.w3schools.com/html/tryit.asp?filename=tryhtml\_table\_intro

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy

# **DIV** tag:

It is used to group block-elements to format them according to CSS. Example:

# DIV tag:

It is used to group block-elements to format them according to CSS. Example:

Defining a background color for a text:

https://www.w3schools.com/tags/tryit.asp?filename=tryhtml\_div\_test

Defining different color backgrounds for different texts: <a href="https://www.w3schools.com/css/tryit.asp?filename=trycss\_se">https://www.w3schools.com/css/tryit.asp?filename=trycss\_se</a>
<a href="mailto:lename=trycss\_se">Lattribute\_end</a>

**DIV** tag + Javascript:

https://www.w3schools.com/bootstrap/tryit.asp?filename=try bs\_panels\_contextual&stacked=h

## DIV tag + class + id:

```
<html>
<head>
<title>Using class and id together</title>
<style>
 .bluecolor{color:#0000CC;}
 #otherfont{font-family:"Comic Sans MS";font-size:50px;}
</style>
</head>
<body>
 <div class="bluecolor"> Manó Kogutowicz</div>
 <div class="bluecolor"> Ágoston Tóth</div>
 <div class="bluecolor" id="otherfont"> János Tomka Szászky</div>
 <div class="bluecolor"> János Lipszky</div>
 <div id="otherfont">Sámuel Mikoviny</div>
</body>
</html>
```

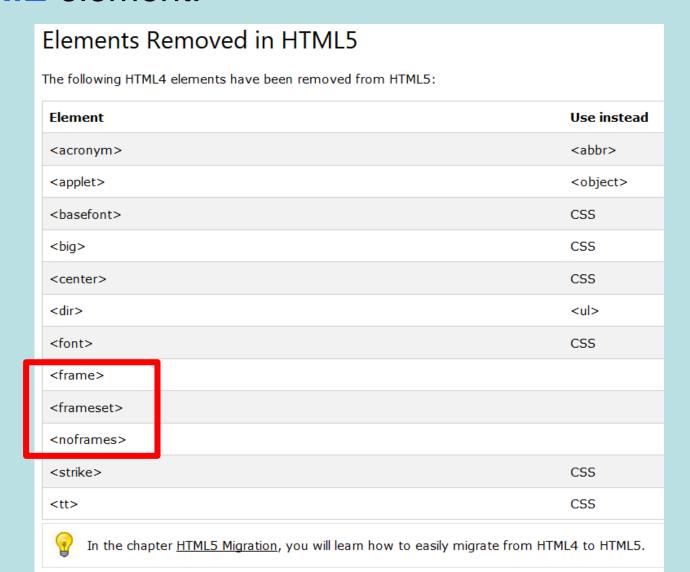
Planning and making a LAYOUT (structure of our homepage):

http://www.w3schools.com/html/html\_layout.asp

http://www.w3schools.com/html/tryit.asp?filename=try html\_layout\_float



## **FRAME** element:



## **SOFTWARE**

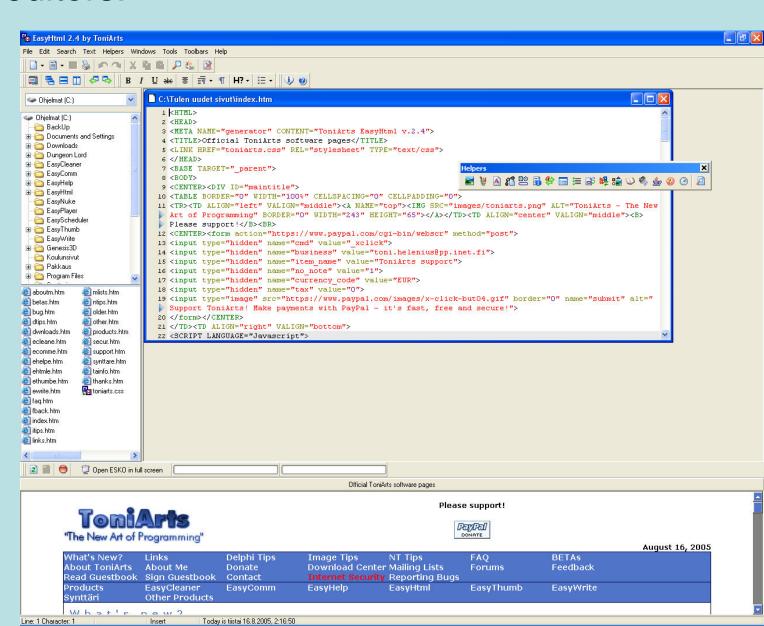
## HTML editors:

e.g. text /source code/ editors:

AceHTML
Arachnophilia
Cute HTML
HotHTML
HTMLPad
Notepad...

#### Freeware:

EasyHTML 2.4.6 (2005)



# SOFTWARE

Heading 1 <h1>

- HTML editors:

WYSIWYG editors:

**Adobe Dreamweaver** 

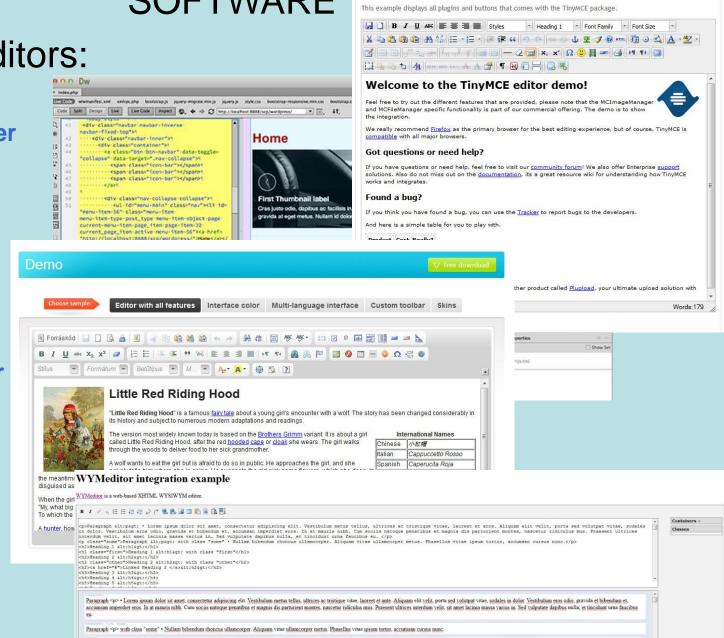
Online, web-based editors:

CKEditor
OpenBEXI
TinyMCE
YUI Rich Text Editor
WYMeditor

**CKEditor:** 

http://lazarus. elte.hu/~jesu s/ckeditor/

Free source Java Script



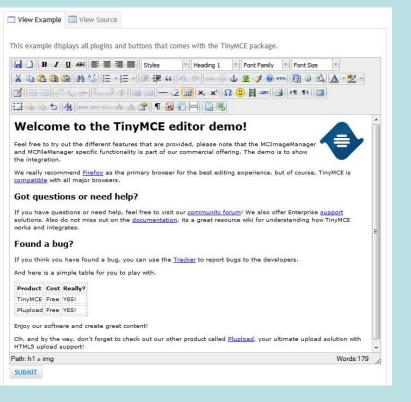
View Example View Source

## SOFTWARE

### HTML editors:

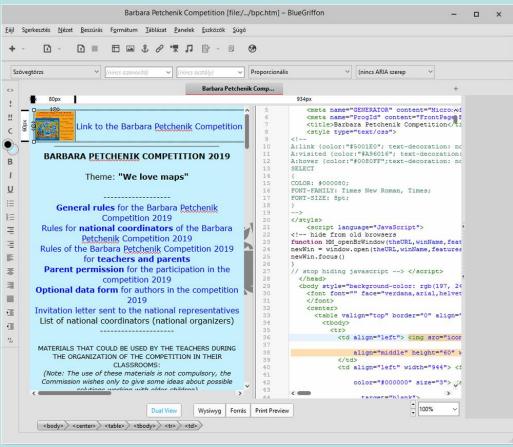
### Online, web-based editor:

#### **CKFditor**



#### Free source HTML editor:

### **Blue Griffon**



### **CKEDITOR ONLINE**

**Q**uackit

- #

CS

Scripti

Databa

#### • Popular

CSS Color Codes

Online Editor

HTML Codes

Microsoft Access Tutorial

Database Tutorial

SQL Server Tutorial

Marquee Code

Table Generator

HTML Templates

HTML Tags

CSS Properties

#### 5 HTML

HTML Tutorial

HTML Tags

HTML Codes

HTML Editors

HTML Templates

Character Set Reference

Bootstrap Tutorial

#### CSS & Design

CSS Examples

CSS Reference

CSS Properties

CSS Functions

CSS Data Types

CSS Selectors

Animatable Proportion

### Create a Website →



Here I explain the basic concepts of creating a website, from hosting, domain names, to coding.

I outline two approaches to creating a website — using a website builder, and coding it yourself.

I also show you how to get a free domain name with your website builder or hosting account.

### Create a Blog →



Here I guide you through the steps in creating your own blog using managed WordPress.

This includes a free domain name for your blog.

Managed WordPress is a hosting account where your blog is already installed and configured right from the start. It's the easiest way to create a blog and start blogging!

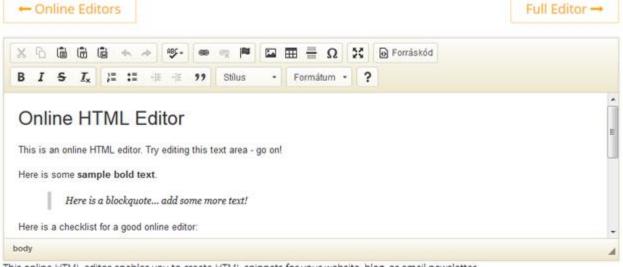
#### HTML →





Background color
Forms
Font code
Background image code
Background image code
Comment boxes

### Online HTML Editor



This online HTML editor enables you to create HTML snippets for your website, blog, or email newsletter.

Use the toolbar to format the HTML page. When you're ready to see the code, click the 🗟 source button.



Not enough buttons? Need a whole web page? Try the full editor.

### HTML & CSS Reference

#### **HTML Tags**

Full list of all HTML elements.

This is an alphabetical list of HTML elements, linking to a full page of details for each element.

All elements are based on the official HTML5 specification, and include usage notes, full attribute list, as well as links to the various specifications for each element (i.e. HTML4 spec, HTML5 spec, WHATWG spec).





#### **HTML Editors**

Online HTML Editor Full HTML Editor CK Editor - Standard CK Editor - Classic TinyMCE Editor HTML Scratchpad Table Editor

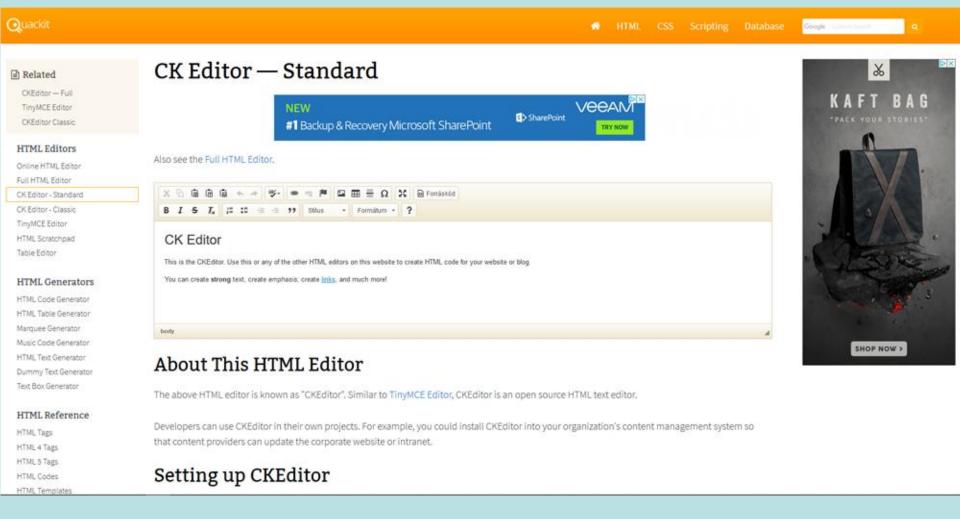
#### HTML Generators

HTML Code Generator HTML Table Generator Marquee Generator Music Code Generator HTML Text Generator Text Box Generator

#### HTML Reference

HTML Tags
HTML 4 Tags
HTML 5 Tags
HTML Codes
HTML Templates
HTML Editors
HTML Tutorial
Create a Website

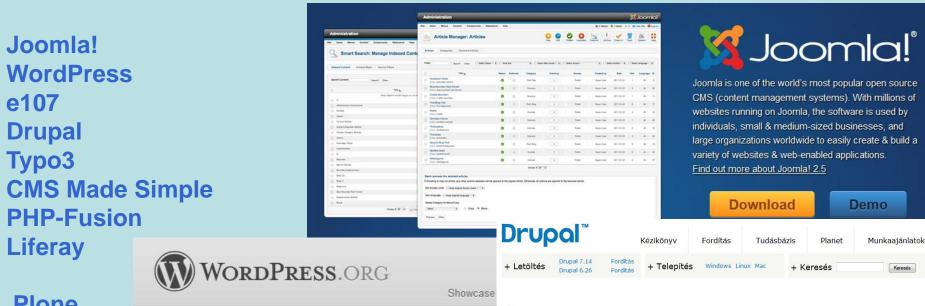
### **CKEDITOR ONLINE**



https://www.quackit.com/html/html\_editors/ck\_editor\_standard.cfm

## WEB-BASED, ONLINE EDITION

Open source content management systems:



**Plone** 



#### Hogyan induljak el?

874 944 személy 228 országból a Drupalt választotta.

Nézze meg a jó példákat, olvassa el a GYIK-ot, böngéssze át a kézikönyvet és a fogalomtárat!

Kapcsolódion a közösséghez, fogalmazza meg kérdését, és keresse meg rá a választ, vagy írja meg a fórumban!

#### Hogyan kapcsolódjak?

A Drupal egyik legnagyobb ereje a körülötte lévő közösségben rejlik. E közösség nyitott mindenki számára.

Számos ponton kapcsolódhat. Segíthet a hibák felderítésében, jelzésében, fordításokat készíthet és javíthat, segítséget adhat és kaphat a fórumon.

Ready to get started?

**Download WordPress 3.4.2** 

# WEB-BASED, ONLINE EDITION

Plone open source content management system:

Programmed on the Zope (Z Object Publishing Environment) application server, an object oriented web application server.

"Drag and drop" HTML editor working within a browser...

### **Plone-based websites:**

- Federal Bureau of Investigation (FBI)
- Brazilian Government
- Chicago History Museum
- DISCOVER magazine
- UNO
- European Environment Agency
- NASA Science
- Defending Children's rights

