

HyperText Markup Language

(HTML)



Content

- Principles
- Text Structures (Paragraphs, Characters)
- Hyperlinks
- Pictures, Clickable Maps
- Tables
- Forms
- Cascading Style Sheets



Sources

Hlavenka J. aj. *Vytváříme WWW stránky a spravujeme moderní web.* 1. vyd. Praha : Computer Press, 1997. 393 s. ISBN 80-7226-039-1.

Spainhour S. & Eckstein R. *Webmaster v kostce. Pohotová referenční příručka.* 1. vyd. Praha : ComputerPress, 1999, 504 s. ISBN 80-7226-251-3.

<http://www.fs.vsb.cz/books/priHTML/Welcome.htm>

<http://www.fs.vsb.cz/books/HTML/Default.htm>

[http://dusan.pc-slany.cz/internet/.](http://dusan.pc-slany.cz/internet/)



Principles

- **Tag**

- pair `<H1>... </H1>`, ` ... `, ...
- single `
`, `<HR>`, ...

- **Property**

`name="value"`, `name='value'`, ...

- **Event**

`onClick="applet"`



HyperText Document

```
<!DOCTYPE HTML PUBLIC "-//IETF/DTD HTML v.m//EN">
<HTML>
  <HEAD>
    <TITLE> ... </TITLE>
  </HEAD>
  <BODY>
  </BODY>
</HTML>
```



Document Header

- **Title**

`<TITLE> text </TITLE>`

- **Base**

`<BASE href="url" target="window name">`

- **Meta**

`<META name="identifier" content="value" http-equiv="identifier">`

`<META http-equiv="Content-Type" content="text/html; charset=windows-1250">`



Body

```
<BODY background="url" bgProperties="fixed" bgcolor="color"
text="color" link="color" alink="color" vlink="color">
</BODY>
```

- **Colors:**

- **named:**
aqua, black, blue, fuchsia, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, yellow

- **RGB:**
"#FFFF00" = yellow



Frames

- **Frame Set**

```
<FRAMESET rows="[n | n% | *]" cols="[n | n% | *]">
frames </FRAMESET>
```

- **Frame**

```
<FRAME src="url" name="window name"
marginheight="number" marginwidth="number"
scrolling="[yes | no | auto]" noresize>
```

- **Noframe Section**

```
<NOFRAME> text </NOFRAME>
```



Frames

```
<FRAMESET ROWS="180,*">
<FRAME SRC="0.htm" NAME="obsah" SCROLLING=auto NORESIZE>
<FRAMESET COLS="20%,*,20%">
<FRAME SRC="A1.htm" NAME="F1">
<FRAME SRC="A2.htm" NAME="F2">
<FRAME SRC="A3.htm" NAME="F3">
</FRAMESET>
</FRAMESET>
<NOFRAMES>
<BODY>
<H2>Frames are needed!</H2>
</BODY>
</NOFRAMES>
</HTML>
```

obsah		
F1	F2	F3



Text Structures

- **Paragraph**

`<P Align="[left | right | center | justify]">... </P>`

- **Headings**

`<H1>... </H1>, <H2>... </H2>`

- **Preformatted text**

`<PRE clear="[left | right | all] width="pic">... </PRE>`

- **Cited text**

`<BLOCKQUOTE>... </BLOCKQUOTE>`



Headers

`<Hn src="url" nowrap align="[left | right | center | justify]" clear="[left | right | all]" dingbat="symbol (mouse, clock, ...)" seqnum="numbering" skip="step"> text </Hn>`

n = 1 to 6



Text Parts

- **A part of text**

`<DIV class="chapter" nowrap align="[left | right | center | justify]"> text </DIV>`

- **Note**

`<NOTE class="[note | caution | warning]" src="url"> text </NOTE>`

- **Footnote**

`<FN id="name"> text </FN>`

` link to footnote `



Fonts



- **Font name, size**

` text `

- **Base font**

`<BASEFONT size="n" color="color" face="Font name">`



Break



- **Row break**

`<BR clear="[left | right | all]">`

- **No break section**

`<NOBR> text </NOBR>`

`<WBR>` - break in no break section



Tabulators



- **Tab stops**

`<TAB id="tab name" align="[left | right | center | decimal]" dp="="[default | . |,]">`

- **Tabs**

`<TAB to="tab name ">`



Line



• Horizontal Rule Line

```
<HR size="height" width="length" noshade  
src="url_picture" align="[left | right | center]"  
clear="[left | right | all]">
```



Character Formats



<I> italics	Idioms:
 bold	 emphasised text
<U> underlined text	 strong text
<S> stroked text	<KBD> keyboard input
<TT> typewriter text	<VAR> variable names
<SUP> superscript	<SAMP> program outputs
<SUB> subscript	<CODE> program sources
<SMALL> small text	an much more
<BIG> big text	



Special Symbols



< ; <		 tabulator
> ; >	&#ascii; ACSII character
& ; ampersand - &	À ; À
" ; quote - "	Á ; Á
© ; copyright - ©	Â ; Â
 ; no break space	Ã ; Ã
° ; degree - °	Ä ; Ä
± ; plus/minus - ±	Å ; Å
	Æ ; Æ
	Ç ; Ç



Lists

• Bulleted list

```
<UL>  
<LH>Content</LH>  
<LI>Item</LI>  
</UL>
```

• Definition list

```
<DL>  
<DT>Term</DT>  
<DD>Definition</DD>  
</DL>
```

• Numbered list

```
<OL>  
<LH>Content</LH>  
<LI>Item</LI>  
</OL>
```



Bulleted list

```
<UL type="[disk | circle | square]"  
  dingbat="symbol" src="url_picture"  
  plain compact wrap="[vert | horiz]"  
  align="[center | left | right | justify]"  
  clear="[left | right | all]">  
list </UL>  
<LI type="[disk | circle | square | a | A | i | I | 1]"  
  value="number" start="number"  
  align="[center | left | right | justify]"> text </LI>
```



Numbered list

```
<OL type="[a | A | i | I | 1]"  
  start|seqnum="first number" continue compact  
  align="[center | left | right | justify]"  
  clear="[left | right | all]">  
list  
</OL>
```



Definition list

- **List**

```
<DL compact clear="[left | right | all]"> list </DL>
```

- **Term**

```
<DT> text </DT>
```

- **Definition**

```
<DT> text </DT>
```



Hyperlinks

- **Local hyperlink**

```
<A HREF="#local">hypertext</A>
```

```
<A NAME="#local"></A> (anchor)
```

- **Global hyperlinks**

```
<A HREF="http://www.me.cz:88/indy/h.htm#11">  
hypertext</A>
```

```
<A HREF="..h.htm#11">hypertext</A>
```



Hyperlink

```
<A href="url" name="label" title="text" rel="type"  
rev="type" methods="method" target="frame  
name" shape=["default" | "circle x,y,z" | "rect  
x,y,w,h" | "polygon x1,y1,x2,y2,..."]> text </A>
```

- **Standard target**

- **_blank** = new window

- **_self** = the same window (cancels parameter target from tag <BASE>)

- **_parent** = parent window in <FRAMESET>

- **_top** = the top window (browser window)



E-mail

- **Hyperlink to E-mail**

```
<A HREF="mailto: address">text</A>
```



Pictures

- **Image**

```
<IMG src="picture" lowsrc="picture" alt="text"
align="[top | middle | bottom | right | left | texttop
| absmiddle | baseline | absbottom]" width="120"
height="50" units="jednotka" vspace="2"
hspace="2" border="0" ismap usemap="name">
```



Picture Formats

- **GIF**

- transparent
- inherited
- animated



- **JPG**

- **PNG**



Clickable Maps

- **Map**

```
<MAP name="name"> hot spots </MAP>
```

- **Hot spot**

```
<AREA shape="[default | circle | rect | polygon]"  
  coords="coords list" href="url" alt="alternative  
  text" target="window name">
```



Clickable Maps

```
<IMG SRC="picture.gif" Width=171 Height=334 Align=Right  
  ALT="Content" BORDER=0 USEMAP="#main" ISMAP>
```

```
<MAP NAME="main">
```

```
<AREA SHAPE=CIRCLE COORDS="145,282,25" F
```

```
<AREA SHAPE=CIRCLE COORDS="144,170,25" F
```

```
<AREA SHAPE=CIRCLE COORDS="25,282,25" HF
```

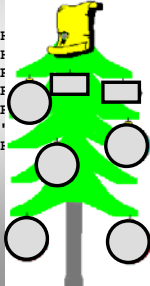
```
<AREA SHAPE=CIRCLE COORDS="58,192,25" HF
```

```
<AREA SHAPE=CIRCLE COORDS="27,119,25" HF
```

```
<AREA SHAPE=RECT COORDS="115,99,158,116"
```

```
<AREA SHAPE=RECT COORDS="54,89,96,107" F
```

```
</MAP>
```



Tables

```
<TABLE>  
<CAPTION>Title</CAPTION>
```

```
<TR>
```

```
<TH>
```

```
</TH>
```

```
<TD>
```

```
</TD>
```

```
</TR>
```

```
</TABLE>
```



Table

TABLE width="pixels | percent" cols="number"
colspec="pixels | percent" align="[left | right |
center | justify | bleedleft | bleedright]"
frame="[void | above | below | hside | rhs | lhs |
vside | box | border]" border="thickness"
rules="[none | basic | rows | cols | all]"
cellspacing="space among cells"
cellpadding="space to text" clear="[left | right |
all]" noflow units="[en | relative | pixels]"
nowrap> rows </TABLE>



Title

- Title (Caption)

<CAPTION align="[top | bottom | left | right]">
text </CAPTION>



Columns

- Column

<COL span="number" width="size" align="[left |
center | right | justify | char]" char="character"
charoff="offset" valign="[top | middle | bottom |
baseline]">

- Columns group

<COLGROUP align="[left | center | right | justify |
char]" char="character" charoff="offset"
valign="[top | middle | bottom | baseline]">

columns </COLGROUP>



Table Parts

- Header

```
<THEAD align="[left | center | right | justify | char]" char="character" charoff="offset"
  valign="[top | middle | bottom | baseline]">
rows </THEAD>
```

- Body

```
<TBODY ...> rows </TBODY>
```

- Footer

```
<TFOOT ...> rows </TFOOT>
```



Row

- Row

```
<TR align="[left | center | right | justify | char]"
  char="character" charoff="character offset"
  valign="[top | middle | bottom | baseline]">
fields </TR>
```



Field

```
<TD align="[left | center | right | justify | char]"
  char="character" charoff="character offset"
  valign="[top | middle | bottom | baseline]"
  nowrap bgcolor="color" width="pixels | percent"
  colspan="columns number"
  rowspan="rows number" axis="label"
  axis="list of labels"> text </TD>
```

- Header

```
<TH ...> text </TH>
```



Forms

```
<FORM Action="ASP/CGI/..." Method="POST/GET">  
<INPUT type="type" name="name" value="text">  
...  
<INPUT type=reset value="Clear form">  
<INPUT type=submit value="Send data">  
</FORM>
```

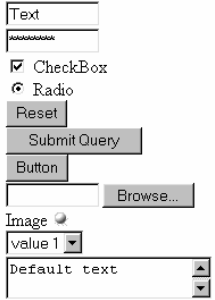


Form

```
<FORM action="script url" method="[get | post]"  
enctype="encoding system" script="script url"  
target="window | frame name">  
objects <FORM>
```

Form objects

- **Input**
 - Text
 - Password
 - Checkbox
 - Radio
 - Reset
 - Submit
 - Button
 - Hidden
- **Select**
- **TextArea**



Input

`<INPUT type="[text | password | checkbox | radio | submit | reset | hidden | image | file | range | scribble | jot]" name="name" value="default value" checked min="low limit" max="high limit" src="picture url" size="width" maxlength="number" align="[top | middle | bottom | left | right]" accept="file type" disabled error="message">`



Select

`<SELECT name="name" size="rows" multiple src="picture url" width="width" height="height" units="pixels | ..." align="[top | middle | bottom | left | right]" disabled error="message">`
`options`
`</SELECT>`
`<OPTION selected value="value to send" shape="hotspot shape" disabled error="message"> text </OPTION>`



Text Area

`<TEXTAREA name="name" rows="rows number" cols="columns number" wrap="[off | virtual | physical]" align="[top | middle | bottom | left | right]" disabled error="message"> default text </TEXTAREA>`



Cascading Style Sheets

CSS



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Document Styles

```
<HTML>
<HEAD>
  <TITLE>Title</TITLE>
  <STYLE Type="text/css">
    H1 {COLOR: rgb(0,0,132); FONT-FAMILY: Arial;
        FONT-SIZE: 18pt; FONT-WEIGHT: bold;
        TEXT-ALIGN: center; TEXT-DECORATION: none}
  </STYLE>
</HEAD>

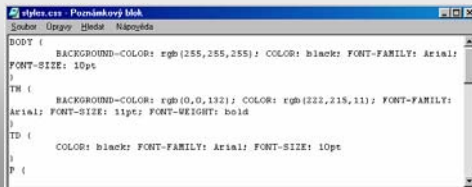
<BODY>
</BODY>
</HTML>
```



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External Definition

```
<HEAD>
  <TITLE>Title</TITLE>
  <META content="text/html; charset=windows-1252"
        http-equiv=Content-Type>
  <LINK href="styles.css" rel=STYLESHEET type=text/css>
</HEAD>
```



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Classes

```
<STYLE Type="text/css">
P.Abstract {FONT-STYLE: italic;
MARGIN-LEFT: 0.5cm; MARGIN-RIGHT: 0.5cm}
P.Figure {TEXT-ALIGN: center}
</STYLE>
```

```
<P CLASS="Abstract">
...
</P>
<P CLASS="Figure">
...
</P>
```



PseudoClasses

- **A:link**
- **A:active**
- **A:visited**
- **P:first-line**
- **P:first-letter**

```
<STYLE Type="text/css">
P:FIRST-LINE {FONT-STYLE: italic; MARGIN-LEFT: 0.5cm}
P:FIRST-LETTER {FONT-SIZE: 200%; FLOAT: left}
</STYLE>
```



... to be continued