



Valid HTML: It's not as easy as it sounds!

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Web Layout Languages

✦ Why do we need a layout language?

- Information
- Research
- Advertising
- Marketing
- Graphical User Interface
- e-Commerce



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HTML CSS XML XSL XHTML

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Current Layout Languages

- ✘ Information: text, HTML
- ✘ Research: HTML, PDF
- ✘ Advertising: HTML (GIF, JPEG, PNG)
- ✘ Marketing: HTML (2, 3, 4)
- ✘ Graphical User Interface:
 - CSS, Forms, Java Applets
- ✘ e-Commerce?
 - Can contain any or all of the above

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Current Web Technologies

- ✘ Text, **SDL** (use of standards)
- ✘ **HTML** (personal websites)
- ✘ HTML & **CSS** (most commercial)
- ✘ **XML**, **XSL**, and **DTDs** (?)
- ✘ **XHTML** (?)
- ✘ **WML** (?)
- ✘ DOM, MathML, PICS, RDF, SOAP, etc.

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Safe and Popular

- ✚ HTML is the most popular (if not the only current) web layout language
- ✚ XML requires XSL to be displayed
- ✚ XSL transforms XML into HTML
- ✚ Does this mean: **Internet=HTML?!**
- ✚ What about other technologies?

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Valid HTML: Why?

- ✚ We write HTML
- ✚ We test it (looks good!)
- ✚ We publish it!
- ✚ Visitors will view it:
 - Different than designed
 - Not see it at all!
- ✚ We loose potential customers

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Valid HTML: Syntax

- ✖ HTML has a specification
- ✖ HTML has a syntax
- ✖ HTML must look the same in all browsers
- ✖ HTML IS LAYOUT!
- ✖ It SHOULD work!

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Valid HTML: Syntax (cont'd)

- ✖ It doesn't fully support:
 - Embedded objects (browser-side)
 - Table background images
 - Background music
 - Fancy effects (hover, forms, client-side scripts, etc.)
- ✖ *"This site will look much better in a browser that supports web standards, but is accessible to any browser or Internet device."*

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Valid HTML: Consistent!

- ✎ Welcome to “browser-dependent” tags
- ✎ Background sounds
- ✎ ActiveX
- ✎ Java Applets
- ✎ The OBJECT tag!!!
- ✎ Client-side scripts CAN help!

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Code and Test (cont'd)

- ✎ Use scripts to check browser
- ✎ WRITE browser-dependent tag
- ✎ Test it using different browsers, resolutions, and colors
 - looks fine
- ✎ Publish it

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Code and Test (cont'd)

- ✖ It works 90% of the time
 - (but it is non-standard)
- ✖ Guaranteed for a limited time
- ✖ Problems might appear with new browsers
- ✖ *“This site is best viewed using Netscape Navigator at a resolution of 800x600 with more than 32000 colors”*

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Standards vs Browsers

- ✖ Standards evolve in two ways:
 - Try, fix, derive: standard is the result of experience
 - Start with a standard and update it as more functionality is required
- ✖ The Internet is a mix of the TWO

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Standards vs Browsers (cont'd)

- ✖ The Web Consortium (W3C) is responsible for HTML specifications
- ✖ An HTML validator is also available:
 - <http://validator.w3.org/>
 - Available locally and remotely

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Valid Layout: Our Definition

- ✖ Use standard HTML (valid syntax)
- ✖ For browser specific tags, include different tags for different browsers
- ✖ JavaScript or Jscript can help
- ✖ JavaScript and Jscript are NOT standards
- ✖ Always include a “not-supported tag”
- ✖ Our website must, **at least**, work

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JavaScript vs. JScript

- ✦ JavaScript and Jscript are two engines for the standard ECMAScript
- ✦ JavaScript developed by Netscape
- ✦ Jscript developed by Microsoft
- ✦ Difference: some functions, types, objects, etc.

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<Tips /> and <Tricks />

<With examples />

Background Sounds

✖ IE: `<bgsound src="...mid" loop="100">`

✖ Other: `<embed src="...mid"
hidden="true" autostart="true"
volume="100" loop="100">`

✖ Trick:

- Check browser
- If IE, include IE tag only
- If not IE, include both tags

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Java Applets

✖ `<APPLET CODE = JavaExample CODEBASE =
"." ARCHIVE = "JavaExample.jar" WIDTH = 600
HEIGHT = 500>`

✖ `</APPLET>`

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Java Applets (cont'd)

- ✦ Will work with the following conditions:
 - Browser must have a JVM
 - JDK compatible with Browser JVM
 - Java is enabled in browser
 - Might not work with hand-held devices
 - JVM must support JDK functions that are used

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Java Applets (cont'd)

- ✦ The Java Plug-in is now available
- ✦ It can be installed automatically (like Flash, Shockwave, etc.)
- ✦ It fully supports intended JDKs
- ✦ Multiple plug-ins for multiple JDKs can co-exist on the same platform

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Java Applets (cont'd)

```
<OBJECT classid="clsid:...5F499D93" WIDTH=695 HEIGHT=525
  codebase="http://...#Ver=1.3.0.0">
<PARAM NAME=CODE VALUE = JavaExample>
<PARAM NAME=CODEBASE VALUE = "." >
<PARAM NAME=ARCHIVE VALUE = "JavaExample.jar" >
<PARAM NAME="type" VALUE="application/x-java-applet; version=1.3">
<COMMENT>
<EMBED type="application/x-java-applet;version=1.3" CODE = JavaExample CODEBASE
  = "." ARCHIVE = "JavaExample.jar" WIDTH = 600 HEIGHT = 500 scriptable=false
  pluginspage="http://.../plugin-install.html">
</EMBED>
</COMMENT>
<NOEMBED>??</NOEMBED>
</OBJECT>
```

<Tips /> & <Tricks />

- ✎ Default values
- ✎ "strings" and "number" values
- ✎ Help section to get things working
- ✎ Style sheets and Style Attributes
- ✎ Inheritance (fault-tolerance)
- ✎ HTML Blocks (contexts)

Thank You!

For more information:

- HTML Validator
 - <http://validator.w3.org/>
- Java HTML Converter
 - <http://java.sun.com/>
- ECMA Script
 - <http://ecma.ch/>
- Send me an email:
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