



Introduction to Web Technologies & HTML 5 Language

XHTML & HTML 5



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Topics we will Learn...

- ☐ What is XHTML?
- ☐ What is HTML 5?
- ☐ HTML 5 New Features



XHTML

XHTML

“documents must be marked up correctly & well-formed”



What's XHTML?

- ❑ XHTML stands for “Extensible HyperText Mark-up Language”.
- ❑ XHTML is a new and more well-structured way of writing HTML.
- ❑ XHTML Versions
 - ❑ XHTML 1.0 became a W3C on January 26, 2000.
 - ❑ XHTML 1.1 became a W3C on May 31, 2001.
 - ❑ XHTML5 is undergoing development as of September 2009, as part of the HTML5 specification.
- ❑ XHTML consists of all the elements in HTML 4.01, combined with the strict syntax of XML.



What's New in XHTML?

□ The Most Important Differences

- XHTML documents must have one root element.
- XHTML elements must be properly nested.
- XHTML elements must always be closed even empty elements.
- XHTML elements must be in lowercase.
- Attribute names must be in lower case.
- Attribute values must be quoted.
- Attribute minimization is forbidden.
e.g. `checked="checked"`.
- The id attribute replaces the name attribute.
- The XHTML DTD defines mandatory elements.
i.e. `<!DOCTYPE html>` Is Mandatory



<!Doctype html>

- ☐ It is not an HTML tag
- ☐ it is an instruction to the web browser about what version of HTML the page is written in
- ☐ <!DOCTYPE> tag does not have an end tag



<!Doctype html> (cont.)

Common DOCTYPE Declarations

HTML 5

```
<!DOCTYPE html>
```

HTML 4.01 Strict

This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
```

HTML 4.01 Transitional

This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
```

HTML 4.01 Frameset

This DTD is equal to HTML 4.01 Transitional, but allows the use of frameset content.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN" "http://www.w3.org/TR/html4/frameset.dtd">
```

XHTML 1.0 Strict

This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

XHTML 1.0 Transitional

This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

XHTML 1.0 Frameset

This DTD is equal to XHTML 1.0 Transitional, but allows the use of frameset content.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
```

XHTML 1.1

This DTD is equal to XHTML 1.0 Strict, but allows you to add modules (for example to provide ruby support for East-Asian languages).

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
```



HTML 5

HTML 5

“A chance to Do things Differently”



What's HTML 5?

- ❑ **HTML5 will be the new standard for HTML.**
- ❑ **The previous version of HTML, HTML 4.01, came in 1999. The web has changed a lot since then.**
- ❑ **HTML5 is still a work in progress. However, the major browsers support many of the new HTML5 elements and APIs.**
- ❑ **HTML5 is a cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).**
- ❑ **WHATWG was working with web forms and applications, and W3C was working with XHTML 2.0. In 2006, they decided to cooperate and create a new version of HTML.**



What's HTML 5 (cont.)?

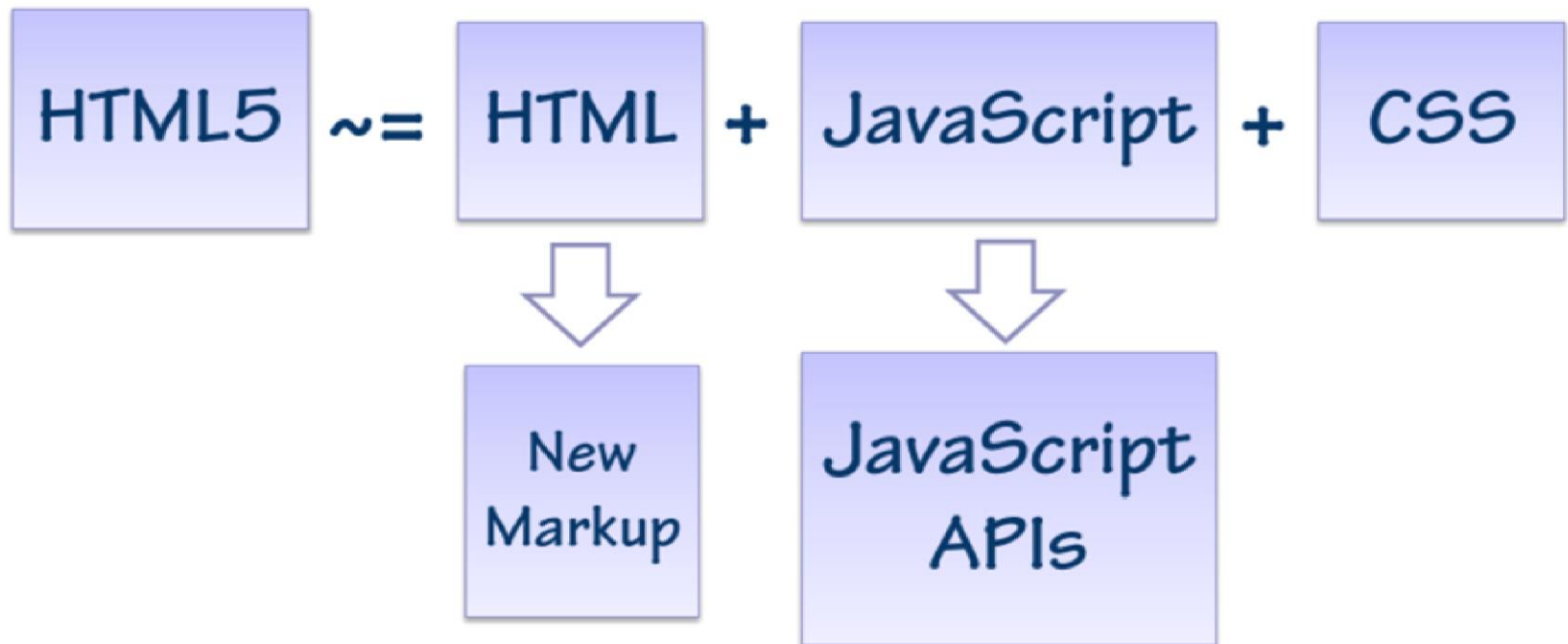
- ☐ **Some rules for HTML5 were established:**
 - ☐ New features should be based on HTML, CSS, DOM, and JavaScript
 - ☐ Reduce the need for external plugins (like Flash)
 - ☐ Better error handling
 - ☐ More markup to replace scripting
 - ☐ HTML5 should be device independent
 - ☐ The development process should be visible to the public



What's HTML 5 (cont.)?

What is HTML5

HTML5 is a Constellation of technology

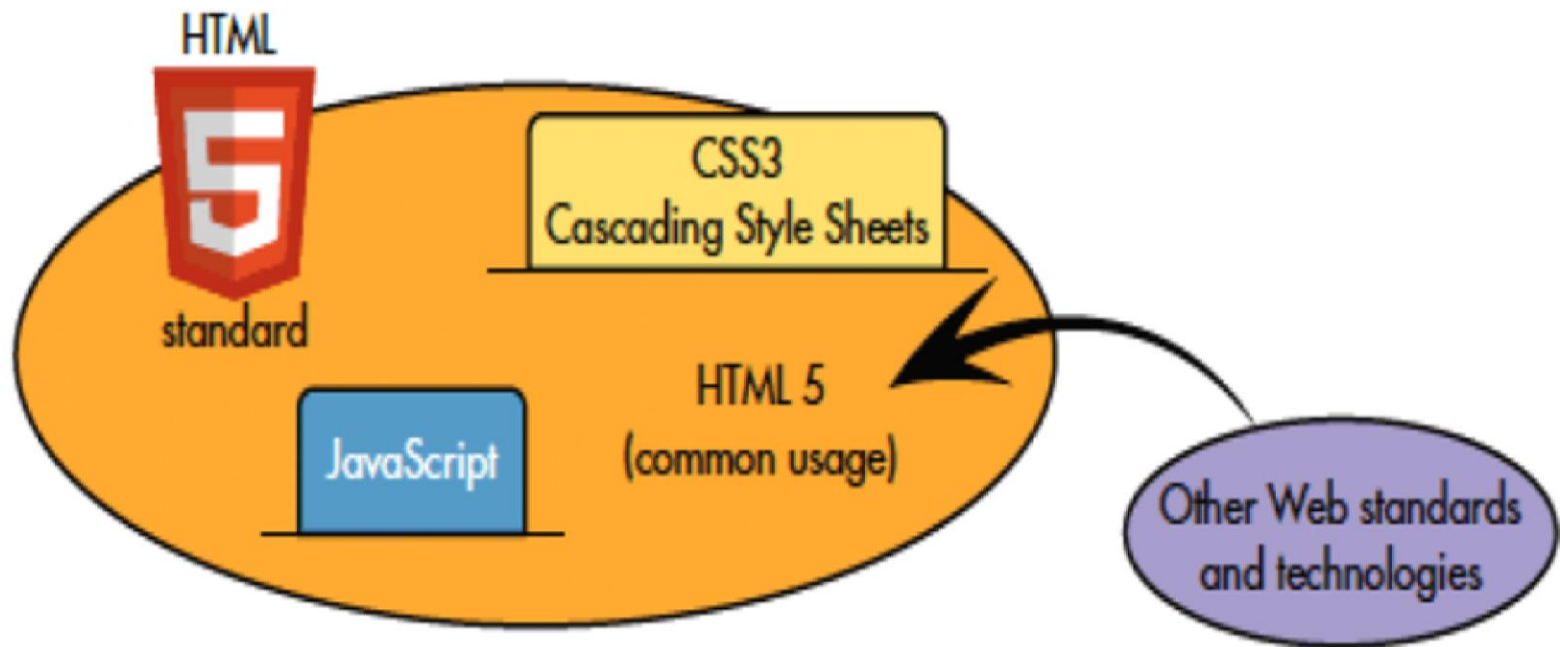




What's HTML 5 (cont.)?

What do we mean by HTML 5?

Add all new web technology into a box labeled HTML 5





HTML5 - New Features

- ☐ The `<canvas>` element for 2D drawing
- ☐ The `<video>` and `<audio>` elements for media playback
- ☐ Support for local storage
- ☐ New content-specific elements, like `<article>`, `<footer>`, `<header>`, `<nav>`, `<section>`
- ☐ New form controls, like calendar, date, time, email, url, search



HTML 5 Simple page...

❑ The HTML5 <!DOCTYPE>

- In HTML5 there is only one <!doctype> declaration, and it is very simple:

```
<!DOCTYPE html>
```

❑ Example for HTML 5 simple page:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the document</title>
  </head>

  <body>
    The content of the document.....
  </body>
</html>
```

❑ HTML 5 Style Guide and Coding Conventions:

http://www.w3schools.com/html/html5_syntax.asp



HTML 5 Elements...

- ❑ some elements in HTML 4.01 are obsolete, never used, or not used the way they were intended. These elements are removed or re-written in HTML5.

Tag	Description
<code><center></code>	Defines centered text
<code></code>	Defines font, color, and size for text
<code><s></code>	Defines strikethrough text
<code><strike></code>	Defines strikethrough text
<code><u></code>	Defines underlined text
<code><basefont></code>	Defines a default font, color, or size for the text in a page
<code><acronym></code>	Defines an acronym
<code><big></code>	Defines big text
<code><frame></code>	Defines a window (a frame) in a frameset
<code><frameset></code>	Defines a set of frames



HTML 5 Elements (Cont.)...

- ❑ To better handle today's internet use, HTML5 also includes new elements for better structure, better form handling, drawing, and for media content.

Tag	Description
<mark>	Defines marked text
<meter>	Defines measurement within a predefined range
<nav>	Defines navigation links
<progress>	Defines progress of a task of any kind
<section>	Defines a section
<source>	Defines media resources
<time>	Defines a date/time
<article>	Defines an article
<aside>	Defines content aside from the page content
<audio>	Defines sound content
<canvas>	Defines graphics
<figure>	Defines a group of media content, and their caption
<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



HTML charset Attribute

- ❑ To display an HTML page correctly, a web browser must know the character set used in the page.
- ❑ Available charsets:
 - ❑ ASCII was the first character encoding standard (also called character set). It defines 127 different alphanumeric characters that could be used on the internet.
 - ❑ ASCII supported numbers (0-9), English letters (A-Z), and some special characters like ! \$ + - () @ < > .
 - ❑ ANSI (Windows-1252) was the original Windows character set. It supported 256 different character codes.
 - ❑ ISO-8859-1 was the default character set for HTML 4. It also supported 256 different character codes.
 - ❑ Because ANSI and ISO was limited, the default character encoding was changed to UTF-8 in HTML5.
 - ❑ **UTF-8 (Unicode) covers almost all of the characters and symbols in the world**
 - ❑ More Details: http://www.w3schools.com/html/html_charset.asp
- ❑ This is specified in the <meta> tag:

//For HTML 4

```
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
```

//For HTML 5

```
<meta charset="UTF-8">
```



Try it...

<http://slides.html5rocks.com>

<http://www.chromeexperiments.com/>

<http://tokyo.bleedinghtml5.appspot.com/#>

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HTML 5 Resources...

[http://www.w3schools.com/html/default.a
sp](http://www.w3schools.com/html/default.asp)

<http://fmbip.com/litmus/>

<http://www.wufoo.com/html5/>

<http://html5readiness.com/>



Summery..

- ☐ What is XHTML?
- ☐ What is HTML 5?
- ☐ HTML 5 New Features



<Questions> ? </Questions>



Thank You...