**CS 110 Website Production Introduction to HTML**

Department of Computer Science

Western Connecticut State University

# Session overview

* Introduction to HTML
* Tools for creating a HTML document
* The general form of a HTML document
* Standard HTML Document Structure
* HTML Basic Syntax
* Hypertext markup language (HTML) is a language used to design Web pages.
* HTML first became an Internet standard in 1993.
* HTML 4.01 was released in 1999, widely used.
* HTML 5.2 is the latest.
* HTML documents are composed of tags and content.
* The file extension for an HTML document is .html or .htm.
* The unique address for an HTML document is called a uniform resource locator (URL).
  + Example of a URL: http://www.course.com
* Web pages are displayed using a program called a Web browser.
  + Examples of Web browsers:Edge, Internet Explorer, Firefox, Safari, Chrome, Opera.
* Web server: the computer where Web pages are stored.
* Web browser requests pages from the Web server.
* Assembling and formatting HTML documents is called *parsing* or *rendering,* done by browser.
* HTML documents contain tags which are enclosed in brackets, and content.
  + Example of HTML content with tags:

<b> This will create bold text </b>

* The opening tag is <b> and the closing tag is

</b>

* The content is: This will create bold text

# The Web Programmer’s Toolbox

• HTML

* To describe the general form and layout of documents
* Not the first computer markup language (TeX, LaTeX)
* An HTML document is a mix of content and controls
* Controls are tags and their attributes

# The Web Programmer’s Toolbox

* Tags often delimit content and specify something about how it should be arranged in the document, e.g. That's called <i> hypertext </i> isn't it?

(italics)

<title> My Document </title>

(standard format for title)

* Attributes provide additional information about the content of a tag

<img src = "redhead.jpeg">

(attribute src specifies the file for the image)

# Tools for creating HTML documents

* **HTML editors - make document creation easier**

– Provide shortcuts to typing tag names, spell-checker…

* **WYSIWYG (What You See Is What You Get)**

## HTML editors

* Examples: Dreamweaver, Microsoft FrontPage, Nvu, SharePoint Designer
* Advantage: need not know HTML to create HTML documents
* Disadvantage: the quality of the documents sometimes is poor and may use non-standard tags

# The Web Programmer’s Toolbox…

• *Overview of JavaScript*

* An alternative where the computation is done on the client (the user’s computer vs the server)
* Less powerful than Perl, but more focused on HTML documents
* Only related to Java through syntax
* Dynamic typing
* Not really object-oriented
* Provides a way to access elements of HTML documents and dynamically change them
* Typically embedded in HTML documents

# The Web Programmer’s Toolbox…

• *Overview of Java*

* General purpose object-oriented programming language
* Based on C++, but simpler and safer
* Web programming through applets and servlets
* This course will not address Java

# Introduction to HTML

* HTML is derived from SGML (ISO standard for

Standard Generalized Markup Language) – Other text-formatting languages not based on SGML:

* PostScript
* LaTeX
* Original intent: General layout of documents that could be displayed by a wide variety of computers

– No emphasis on low-level details (font style, size, …)

# Introduction to HTML

* Popular versions: – HTML 4.0 - 1997
* Introduced many new features and *deprecated* many older features
* Introduced style sheets for low-level presentation details
* HTML 4.01 - 1999 - A cleanup of 4.0
* HTML 5.2 - 2014
* XHTML 1.0
* XHTML 2.0 is no longer being designed

• Just 4.01 modified to fit the XML syntax

* XML is a meta-markup language for specifying markup languages » Makes it easier to attach meaning to the form --

• HTML standards are controlled by World Wide Web consortium (W3C)

[–](http://www.w3c.org/) [http://www.w3c.org](http://www.w3c.org/)

# Introduction to HTML

* HTML is not case-sensitive. <B> and <b> are the same tag.
* HTML documents begin with <html> and end with </html>.
* Some HTML tags do not require a closing tag, like <hr> (which represents a horizontal rule).
* HTML tags are divided into ***structural*** tags and ***formatting*** tags.

# Introduction to HTML

Common structural and formatting tags:

|  |  |
| --- | --- |
| **<body>**  **</body>** | Encloses the body of the HTML document |
| **<br>** | Inserts a line break(goes on to a new line) |
| **<html>**  **</html>** | Required tags that start and end an HTML document |
| **<p> </p>** | Identifies enclosed text as a paragraph. Inserts a blank line above the paragraph contents. |

11/27/2023 Website Production

# Introduction to HTML

Common structural and formatting tags:

|  |  |
| --- | --- |
| **<b> </b>** | Format enclosed text in bold |
| **<hr>** | Inserts a horizontal rule, that is, a solid line across the screen |
| **<head>**  **</head>** | Encloses the page header and contains information about the entire page |
| **<h1></h1> through <h6></h6>** | Bolds enclosed text and changes size of text. h1 is largest, h6 is smallest, h4 is normal |
| 11/27/2023 | Website Production 15 |

## The general form of an HTML document

The general form of an HTML document is as follows:

**<html>**

**<head>**

**<title>title goes here</title>**

**</head>**

**<body>**

**The body of the document goes here**

**</body>**

**</html>**

**Note: There is only 1 head and 1 body in an HTML document**

**The general form of an HTML document…**

* ***Attributes*** are used to configure HTML tags.
* The ***src*** in the following image tag is an example of an attribute:

### <img src=“myhouse.gif”>

• To insert blank lines in an HTML document, use the **<p>** or two breaks in a row, **<br> <br>,** tags.

# HTML Basic Syntax

* Documents consist of elements defined by *tags*

(markers) and text

* Tag format:
  + Opening tag: <name> – Closing tag: </name>
* The *content* of a tag appears between its opening tag and its closing tag
  + The content is what appears on the screen
* Not all tags have content
  + If a tag has no content, we write it as <name/>

# HTML Basic Syntax…

* If a tag has *attributes*, they appear between its name and the right bracket
* Every tag that has content must have a closing tag
* Tags must be properly nested. A tag plus its content must not contain any unclosed tags
* Comment form: <!-- … -->
* Browsers ignore comments, unrecognizable tags, line breaks, multiple spaces, and tabs
* Tags are only suggestions to the browser, can be ignored even if they are recognized by the browser

– Browsers can be configured to react in a specific way to specific tags

# Standard HTML Document Structure

**<!-- An example to illustrate document form -->**

**<html>**

**<head>**

**<title> Our first document </title>**

**</head>**

**<body>**

**Greetings from your Webmaster!**

**</body>**

**</html>**

* A document consists of a head and a body – The head has information about the document
* Content of the **<head>** tag

– The body has the content of the document

• Content of the **<body>** tag

# Standard HTML Document Structure

* The tags <html>, <head>, <title>, <body> are required
* All four can have attributes
* The whole document must have <html> as its root
* The <title> tag is used to give the document a title, which is normally displayed in the browser window’s title bar (at the top of the display)

– Also identifies the document in browser's bookmarks and in search engines catalogues

* Text without tags is displayed in lines, with as many words as will fit in each line and then continuing on the next line