Web Development and Programming
CSCI-UA 61

HTML
HyperText Markup Language
Progressive Enhancement

An approach to web design that emphasizes accessibility, semantic HTML, and external stylesheets and JavaScript.

Uses web technologies in a layered way that allows anyone to access the basic content and functionality of a website, using any browser or Internet connection.

Also provides an enhanced version of the page to those with more advanced web browsers or greater bandwidth.
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HyperText Markup Language

Illustration by Dave Stewart
HTML
HyperText Markup Language

A language for describing Web pages
HTML is not a programming language, it is a markup language
JavaScript is a programming language
A markup language is a set of markup tags
HTML uses markup tags to describe Web pages
HTML Tag
Opening/Closing

Keywords surrounded by angle brackets, for example: `<html>`

HTML tags normally come in pairs, like `<h1>` and `</h1>`

The first tag in a pair is the “start tag,” the second tag is the “end tag”

Start and end tags are also called “opening” and “closing” tags
HTML Element

Everything from the start tag to the end tag

Example:
<p>This is a paragraph.</p>

Start tag:
<p>

Element content:
This is a paragraph.

End tag:
</p>
Web Pages

HTML Documents

Web pages are plain text documents that contain HTML tags.

HTML documents are Web pages.

Recommended plain text editors: Atom, Sublime Text, Text Wrangler, Notepad++
Web Browsers

Render HTML Documents

Reads HTML documents and displays them as Web pages

Web browsers do not display HTML tags, but use them to interpret the content of the page

This is also where most of our programs will be executed

Recommended browsers:
Chrome, Safari, Firefox
This is where we will publish our projects during the semester.

A server is just a computer that is always on, ready to serve files when they are requested.

i6 is a secure, Unix-based Web server.

You will receive an email with your account information (if you don’t already have one).
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i6 URL
i6.cims.nyu.edu/~netid
FTP

File Transfer Protocol

FTP, like HTTP, is a communications protocol of the Internet.

FTP allows us to transfer files between computers (i.e. laptop to Web server).

i6 requires a secure FTP connection, known as SFTP.

Recommended SFTP clients:
Fetch, Cyberduck, WinSCP, Transmit.
File Permissions

chmod

Standard file permission: 644
Owner can read and write file; group can read file; others can read file

Standard directory permission: 755
Owner can read, write and execute file; group can read and execute file; others can read and execute file
HTML5
New standard for HTML

First version published in 2008
An official W3C recommendation as of October 2014

- Simpler doctype declaration
- New elements
- New attributes
- Full CSS3 support
- Video and audio elements
- 3D graphics support
- Web applications
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