

DES 251 Digital Media Design

- Associate Professor Daria Tsoupikova

Electronic Visualization Laboratory EVL - Cyber-Commons
Mondays 1:00 PM - 6:40PM

The Internet & World Wide Web

Markup - HTML

Intro to HTML

- HTML skeleton
- HTML tags for text, links, lists
- HTML tags and web standards for images (graphics)

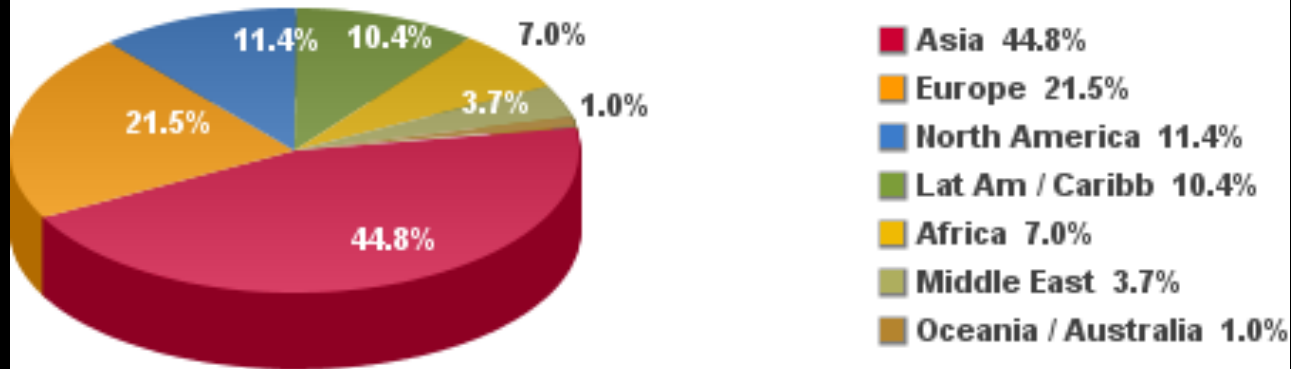
Midterm and Final

- Midterm - March 5
- Final - April 30
- End of the Year Party – May 2 / Innovation Center

The Internet

2.4 billion Internet users world-wide (34% of world population)

Internet Users in the World Distribution by World Regions - 2012 Q2



Source: Internet World Stats - www.internetworldstats.com/stats.htm

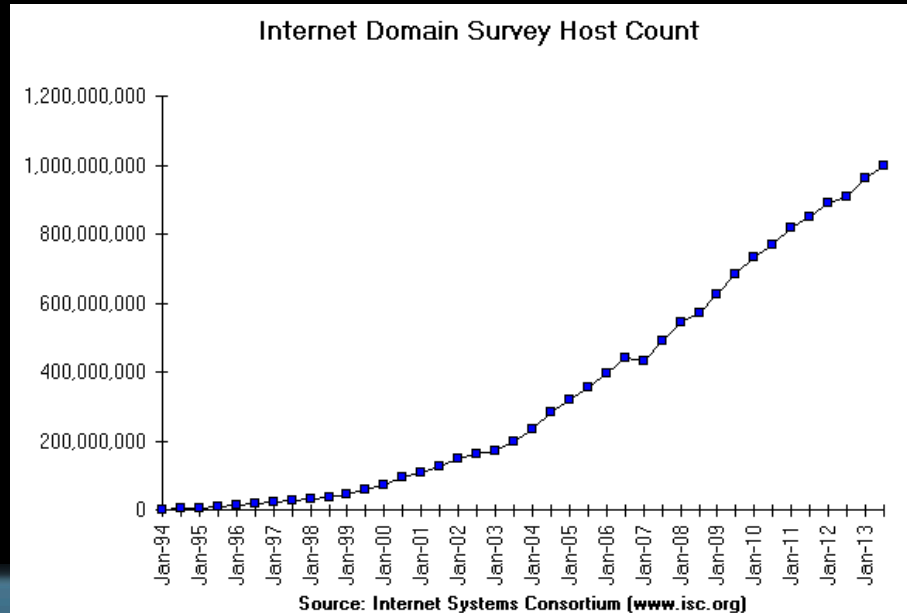
Basis: 2,405,518,376 Internet users on June 30, 2012

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The Internet

66% of American adults have broadband at home.

82% of American adults use the Internet Over 1000 million Internet hosts as of Jan 2013, [ISC Internet Domain Survey](#)



The Internet and www

The Internet is a global system of interconnected computer networks that use the standard Internet protocol suite (*TCP/IP*) to serve several billion users worldwide.

The World Wide Web (abbreviated as *WWW* or *W3*, commonly known as the web) is a system of interlinked hypertext documents accessed via the Internet.

The Internet Traffic Types

Web

- HTTP

Video

- RTMP
- RTSP

Email

- SMTP
- POP
- IMAP

File Transfer

- FTP
- SFTP
- FTP over SSH

Login

- Telnet
- SSH

World Wide Web Features

- Hyper Text Information System
- Cross-Platform and Cross-Device
- Distributed Around 187 million active sites as of January 2013.
- Open Standards Internet, TCP/IP, HTTP, (X)HTML, CSS, Javascript
- Open Source Apache HTTP Server, Mosaic, Netscape, Firefox, JavaScript, Perl, PHP, etc.
- Web Browser: provides a single interface to many services
Information, Communication, Shopping, Banking, ...
- Dynamic, Interactive, Evolving

URL- Uniform Resource Locator

<http://www.evl.uic.edu/datsoupi/251/index.html>

| | | | | |

Protocol

world wide web

domain name

directory (folder)

subdirectory

webpage (file)

URL- Uniform Resource Locator

<http://www.evl.uic.edu/datsoupi/251/index.html>

| | | | | |

Protocols

http- hyper text transfer protocol

https - Hypertext Transfer Protocol Secure

FTP – File Transfer Protocol

TCP - Transmission Control Protocol

UDP - User Datagram Protocol

URL- Uniform Resource Locator

<http://www.evl.uic.edu/datsoupi/251/index.html>

| | | | | |

domain name

DNS connection

.edu – educational

.com – commercial

.net – network

.org – non profit organization

.gov – government

.mil - military

HTTP Client – a webpage

Structure
(Content)

+

Style

+

Function

Markup (XHTML, HTML)

- Structure
- Content
 - text
 - images
 - media

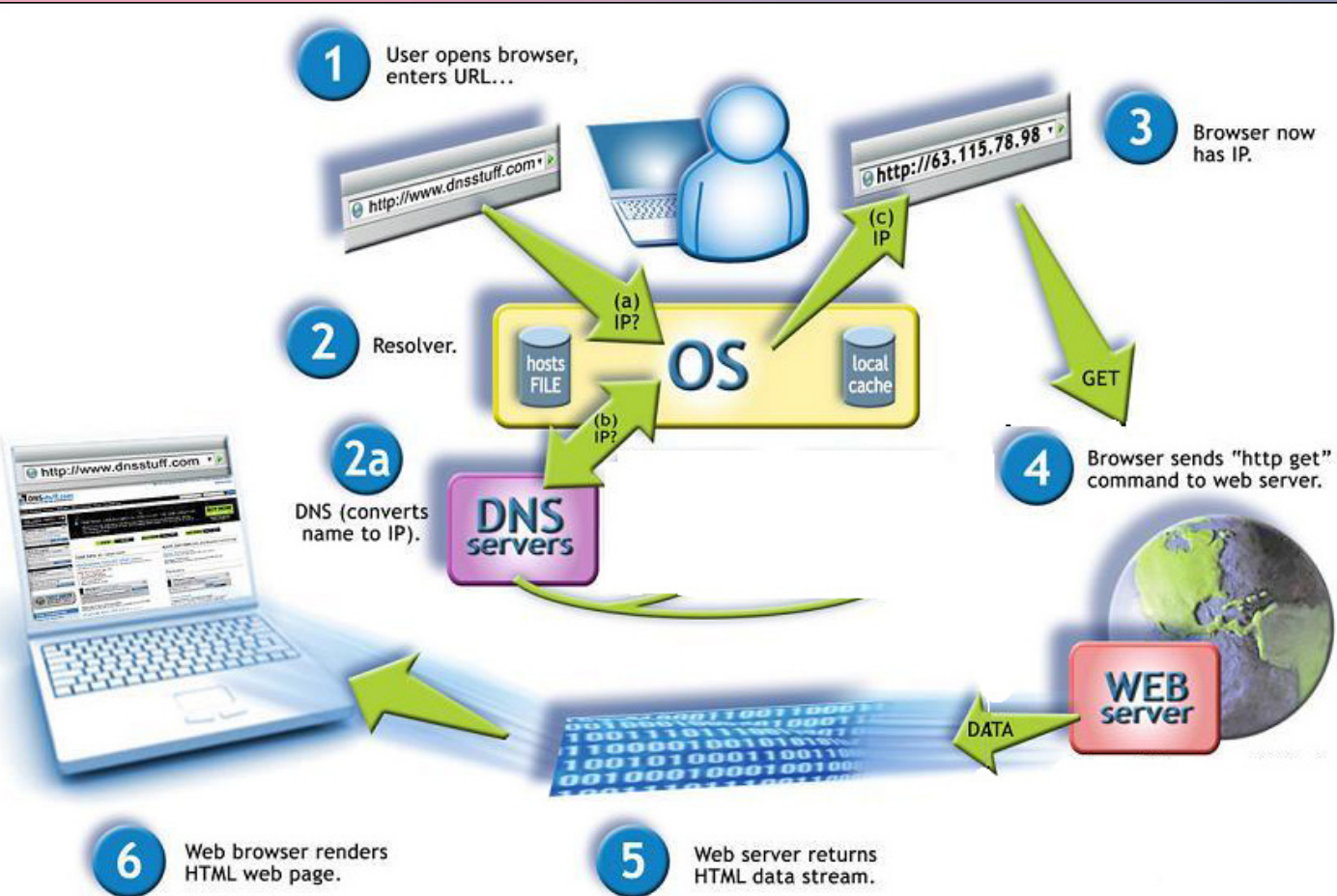
CSS

- Style
- Presentation
- Appearance
 - page layout

Javascript
frameworks

- Actions
- Events
 - scripts
 - database inter.

How the Web Works



How Internet works – DNS
Posted in Business &
Management
by Zbigniew Gargas+

School of Design – Markup (XHTML)

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Center Programs](#)
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School of Design – Markup +Style

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School of Design

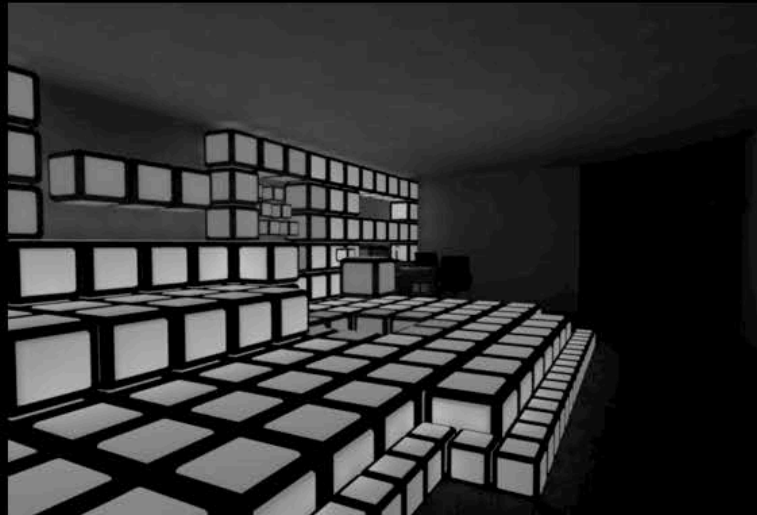


School of
Architecture

School of Art & Art
History

School of Design

School of Theatre
& Music



The practice of design is a responsibility and a privilege. It is an independent pursuit that precipitates collective action. Design

School of Design – Markup +Style+ Function

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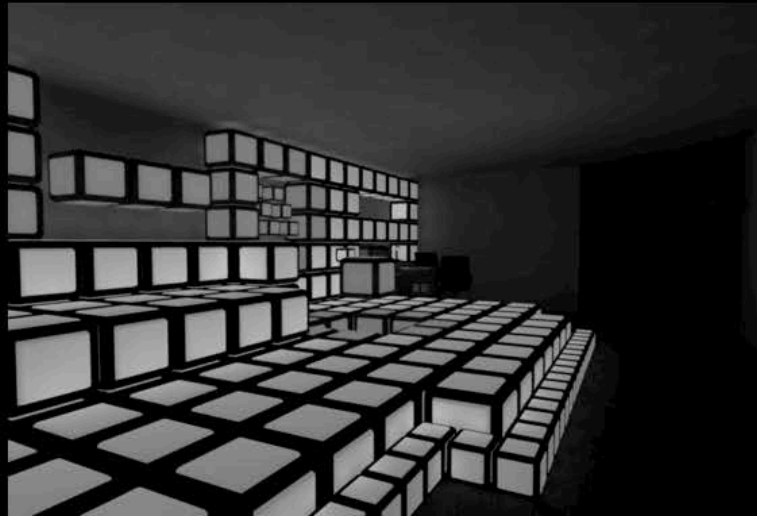
School of Design

School of
Architecture

School of Art & Art
History

School of Design

School of Theatre
& Music



The practice of design is a responsibility and a privilege. It is an independent pursuit that precipitates collective action. Design

XHTML 1.1

XHTML (Extensible Hyper Text Markup Language) is a family of XML markup languages that extend the widely used Hypertext Markup Language (HTML).

HTML is the language in which web pages are written.

XHTML– Extensible Hyper Text Markup Language

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN"
2 "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
3 <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" version="XHTML+RDFa 1.0" dir="ltr"
4 xmlns:content="http://purl.org/rss/1.0/modules/content/"
5 xmlns:dc="http://purl.org/dc/terms/"
6 xmlns:foaf="http://xmlns.com/foaf/0.1/"
7 xmlns:og="http://ogp.me/ns#"
8 xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
9 xmlns:sioc="http://rdfs.org/sioc/ns#"
10 xmlns:sioc_t="http://rdfs.org/sioc/types#"
11 xmlns:skos="http://www.w3.org/2004/02/skos/core#"
12 xmlns:xsd="http://www.w3.org/2001/XMLSchema#">
13
14 <head profile="http://www.w3.org/1999/xhtml/vocab">
15   <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
16   <link rel="shortcut icon" href="http://cada.uic.edu/sites/default/files/favicon.png" type="image/png" />
17   <link rel="shortlink" href="/node/36" />
18   <link rel="canonical" href="/design" />
19   <meta name="Generator" content="Drupal 7 (http://drupal.org)" />
20   <title>School of Design | cada.uic.edu | </title>
21   <style type="text/css" media="all">@import url("http://cada.uic.edu/modules/system/system.base.css?mw7ig5");
22 @import url("http://cada.uic.edu/modules/system/system.messages.css?mw7ig5");
23 @import url("http://cada.uic.edu/modules/system/system.messages.css?mw7ig5");
24 @import url("http://cada.uic.edu/modules/system/system.theme.css?mw7ig5");</style>
25 <style type="text/css" media="all">@import url("http://cada.uic.edu/modules/comment/comment.css?mw7ig5");
26 @import url("http://cada.uic.edu/modules/field/theme/field.css?mw7ig5");
27 @import url("http://cada.uic.edu/modules/node/node.css?mw7ig5");
28 @import url("http://cada.uic.edu/modules/search/search.css?mw7ig5");
29 @import url("http://cada.uic.edu/modules/user/user.css?mw7ig5");
30 @import url("http://cada.uic.edu/sites/all/modules/views/css/views.css?mw7ig5");</style>
31 <style type="text/css" media="all">@import url("http://cada.uic.edu/sites/all/modules/ctools/css/ctools.css?mw7ig5");
32 @import url("http://cada.uic.edu/sites/all/modules/eventwork/css/custom.css?mw7ig5");</style>
33 <style type="text/css" media="all">@import url("http://cada.uic.edu/sites/all/themes/cadaweb/assets/css/style.css?mw7ig5");
34 @import url("http://cada.uic.edu/sites/all/themes/cadaweb/assets/css/typography.css?mw7ig5");
35 @import url("http://cada.uic.edu/sites/all/themes/cadaweb/assets/css/layout.css?mw7ig5");
36 @import url("http://cada.uic.edu/sites/all/themes/cadaweb/assets/css/component.css?mw7ig5");</style>
37 <style type="text/css" media="print">@import url("http://cada.uic.edu/sites/all/themes/cadaweb/assets/css/print.css?mw7ig5");</style>
38
39 <!--[if lt IE 7]>
40 <link type="text/css" rel="stylesheet" href="http://cada.uic.edu/sites/all/themes/cadaweb/fix-ie.css?mw7ig5" media="all" />
41 <![endif]-->
42
43 <!-- dropdown menu -->
44
45 <script type="text/javascript" src="http://cada.uic.edu/sites/all/themes/cadaweb/assets/js/modernizr.custom.js"></script>
46 <script type="text/javascript">
47
48 var timeout = 10;
49 var closetimer = 0;
```

XHTML– Document Structure

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN"
  "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
<html>
  <head>
    <title>School of Design | cada.uic.edu | </title>
  </head>
  <body>
    <!-- content goes here -->
  </body>
</html>
```

XHTML is extension of HTML

Document Structure

XHTML `<!DOCTYPE>` is mandatory

The XML namespace attribute in `<html>` is mandatory

`<html>`, `<head>`, `<title>`, and `<body>` is mandatory

XHTML Elements

XHTML elements must be properly nested

XHTML elements must always be closed

XHTML elements must be in lowercase

XHTML documents must have one root element

XHTML Attributes

Attribute names must be in lower case

Attribute values must be quoted

Attribute minimization is forbidden

History of HTML

Tim Berners-Lee developed html in 1992 while at CERN, the European Laboratory for Particle Physics in Geneva in Switzerland.

He is currently the Director of the World Wide Web Consortium, the group that sets technical standards for the Web.





HTML5 : Past, Present & Future

Web and Mobile Applications

Timeline of Web Technologies

1991

HTML

1994

HTML 2

1996

CSS 1

+

1997

HTML 4

1998

CSS 2

2000

XHTML 1

2002

Tableless
Web

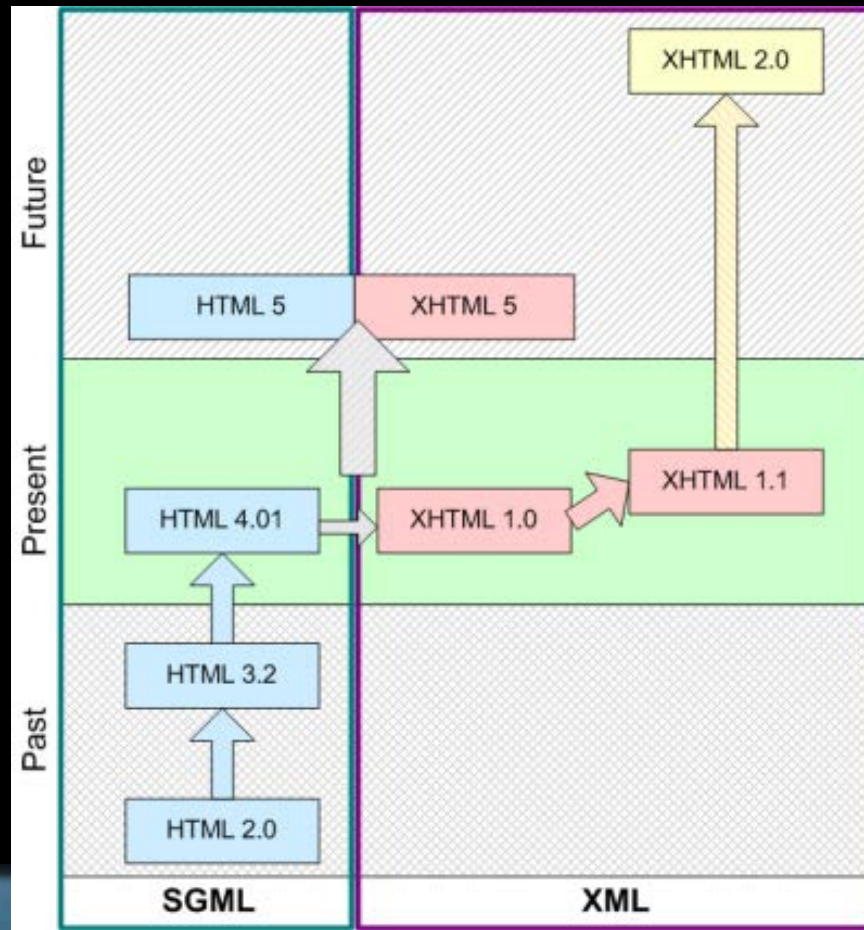
2005

AJAX

2009

HTML5

HTML Evolution by Harvard School of Continuing Education (CSCI E-153)



HTML5 Game Example



HTML

A collection of platform-independent markup tags that define the various components of a World Wide Web document

Allows you to format text, add rules, graphics, sound, and video and save it all in a text only file that any computer can read and view this file in the Browser

Any HTML file is called document and it has an extension .html
HTML documents can contain links to other HTML documents or to practically any information on the Internet

HTML

HTML uses tags are commands (keywords) enclosed in less than < and greater than > signs.

Example:

```
<table>
```

Many tags have special attributes hat offer a variety of options for the contained text.

Example:

```
<table border >
```

HTML

Attributes often have values:

Example:

```
<table border = "1" >
```

HTML browsers ignore any extra space that exist between the tags in your document.

Tags are usually come in pairs: opening and closing tag.

Example:

```
<table > opening tag
```

```
</table> closing tag
```

Link Element `UIC`

Opening Tag

```
<a href="http://www.uic.edu/">UIC</a>
```

Element

```
<a href="http://www.uic.edu/">UIC</a>
```

Attribute

```
<a href="http://www.uic.edu/">UIC</a>
```

Attribute Value

```
<a href="http://www.uic.edu/">UIC</a>
```

Content

```
<a href="http://www.uic.edu/">UIC</a>
```

Closing Tag

```
<a href="http://www.uic.edu/">UIC</a>
```

HTML Nesting

CORRECT

```
<li> <a href="http://www.uic.edu/"> UIC </a> </li>
```

|_____|

|_____|

INCORRECT

```
<li> <a href="http://www.uic.edu/"> UIC </li> </a>
```

|_____|

|_____|

XHTML– Document Structure - School of Design

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN"
  "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
<html>
  <head>
    <title>School of Design | cada.uic.edu | </title>
  </head>
  <body>
    <!-- content goes here -->
  </body>
</html>
```

HTML– Document Structure

```
<!DOCTYPE html >  
<html>  
  <head>  
    <title> Document Title </title>  
  </head>  
  <body>  
    <!-- content goes here -->  
  </body>  
</html>
```


HTML- Document Structure - tabbing

```
<!DOCTYPE html >
```

```
<html>
```

```
  <head>
```

```
    <title> Document Title </title>
```

```
  </head>
```

```
  <body>
```

```
    <!-- content goes here -->
```

```
  </body>
```

```
</html>
```

HTML- Headings

`<h1> This is a Main Heading </h1>`

`<h2> This is a Level 2 Heading </h2>`

`<h3> This is a Level 3 Heading </h3>`

`<h4> This is a Level 4 Heading </h4>`

`<h5> This is a Level 5 Heading </h5>`

`<h6> This is a Level 6 Heading </h6>`

HTML- Paragraph and Line Break

`<p> This is a paragraph </p>`

`
 This is a new line of text`

HTML- Bold & Italic & Underlined

` This is bold text`

`<i> This is italic text </i>`

`<u> This is underlined text </u>`

HTML- Horizontal Rule

```
<hr />
```

horizontal rule- can be used to separate text

HTML- Strong & Emphasis

```
<p> This is <strong> strong text </strong> inside a paragraph  
</p>
```

```
<em> This is emphasized word </em>
```

HTML- Ordered List

```
<ol> Ordered List opening tag  
  <li> List item </li>  
  <li> List item </li>  
  <li> List item </li>  
  <li> List item </li>  
</ol> Ordered List closing tag
```

HTML- Unordered List

`` Ordered List opening tag

`` List item ``

`` List item ``

`` List item ``

`` List item ``

`` Ordered List closing tag

HTML- Definition List

<dl> Definition List opening tag

 <dt> Definition Term </dt>

 <dd> Definition </dd>

<dt> HTML</dt>

 <dd> Hyper Text Markup Language </dd>

</dl> Definition List closing tag

HTML

Hyper Text Markup Language

HTML- Lists

Ordered - numbers

Unordered – bullets

Definition – used to define terminology

HTML- Links

```
<a href="http://www.uic.edu"> UIC </a>
```



opening tag



closing tag

HTML- Links

```
<a href="http://www.uic.edu"> UIC </a>
```



opening tag



closing tag

<a> - link tag

href – attribute = hyper text reference

“http://www.uic.edu” – value

UIC – content – user clicks on it

HTML- Relative Links

```
<a href="index.html"> link to home page </a>
```

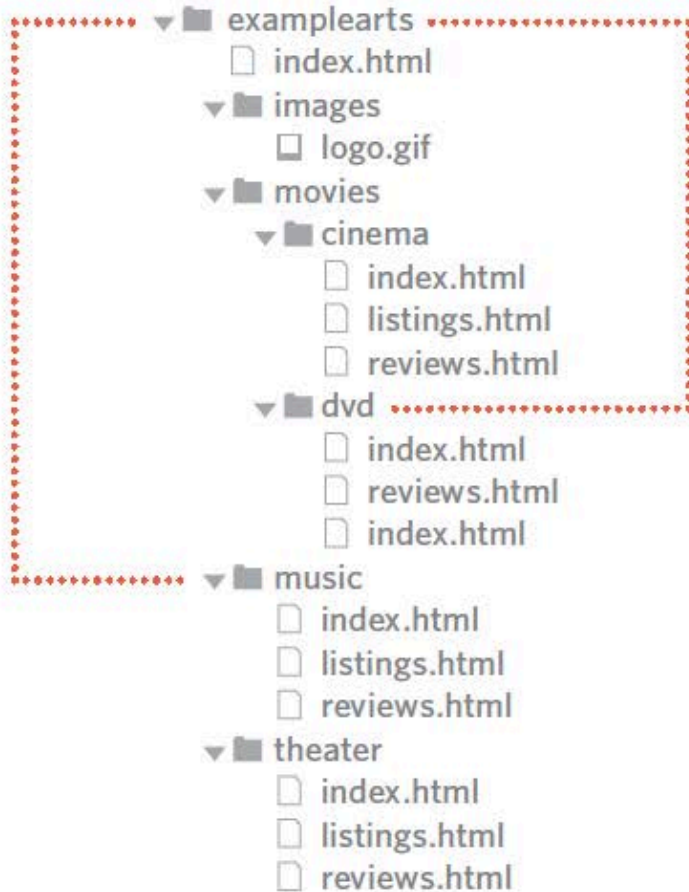
Links to other webpages on the same website

Provide a shortcut for the browser to find your webpage

- No protocol specified
- No domain name specified
- No www specified

PARENT

The *examplearts* folder is a parent of the *music* folder.



GRANDPARENT

The *examplearts* folder is a grandparent of the *dvd* folder.

GRANDCHILD

The *dvd* folder is a grandchild of the *examplearts* folder.

CHILD

The *music* folder is a child of the *examplearts* folder.

HTML- Relative Links

Relative Link Type

Same Folder

To link to a file in the same folder, just use the file name. (Nothing else is needed.)

Example

To link to music reviews from the music homepage:

```
<a href="reviews.html">Reviews</a>
```

Child Folder

For a child folder, use the name of the child folder, followed by a forward slash, then the file name.

To link to music listings from the homepage:

```
<a href="music/listings.html">Listings</a>
```

Grandchild Folder

Use the name of the child folder, followed by a forward slash, then the name of the grandchild folder, followed by another forward slash, then the file name.

To link to DVD reviews from the homepage:

```
<a href="movies/dvd/reviews.html">
```

HTML- Relative Links

Relative Link Type

Parent Folder

Use ../ to indicate the folder above the current one, then follow it with the file name.

Grandparent Folder

Repeat the ../ to indicate that you want to go up two folders (rather than one), then follow it with the file name.

Example

To link to the homepage from the music reviews:

```
<a href="../index.html">Home</a>
```

To link to the homepage from the DVD reviews:

```
<a href="../../index.html">Home</a>
```


HTML- Email Links

```
<a href="mailto:tsoupi@uic.edu"> tsoupi@uic.edu email</a>
```

mailto: - email link keyword

tsoupi@uic.edu - email address

HTML- Opening Links in a New Window

```
<a href="index.html" target="_blank"> link to home page </a>
```

Target - browser window

_blank

_new

_parent

_self

_top

HTML- Images

```

```

Img –image tag

Src- source (file)

“photo.jpg” – Image file name

HTML- Images

```

```

Height - attribute

"300" - height value