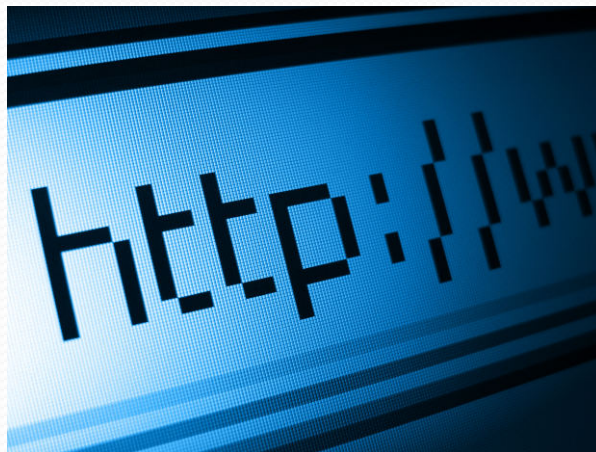


Introduction to HTML

CST8285 – Web Programming

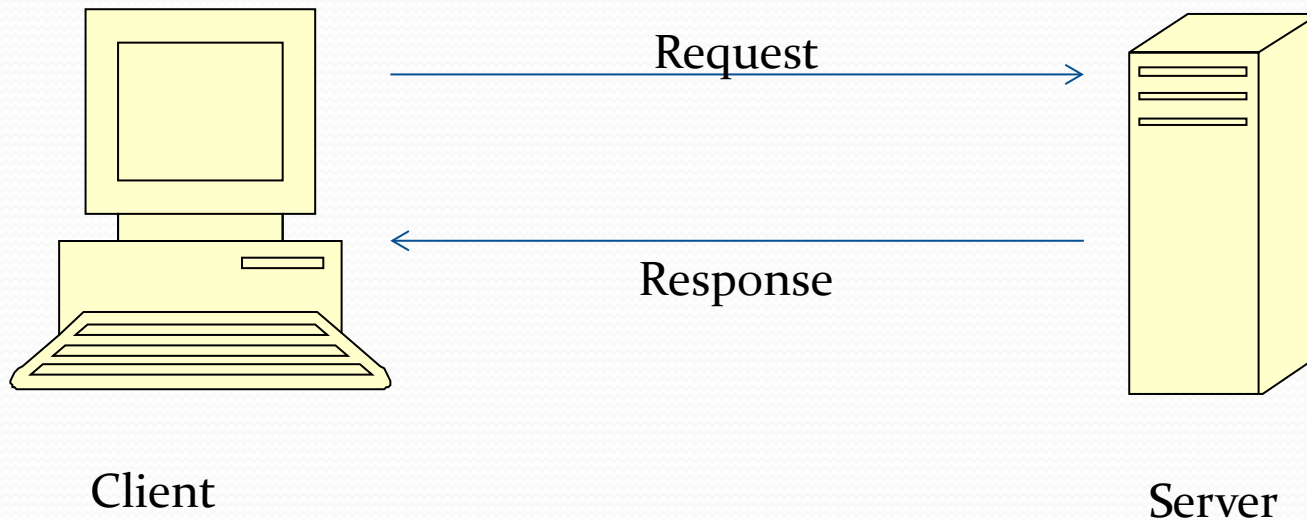
The World Wide Web

- Centered around the idea of being able to link documents together with hyperlinks
- Was first used for scientific purposes.
- The first draft HTML specification, and the first graphical browser (Mosaic), were introduced in 1993.



The client/server model

- This model is the basis for the world wide web
- The client (browser) sends a request to a server (Apache, IIS, etc), and the server returns a response containing the requested resource back to the browser.



Domains & URLs

- A domain name is used to locate an organization or entity on the internet.
- The domain name system (DNS) translates the domain name (reddit.com) into an IP address (165.254.27.96)
- A URL puts together the protocol, subdomain(not required, but often used), domain name and, sometimes, a requested resource.

Parts of a URL

http://www.google.com/analytics



Protocol

Subdomain

Domain name

Resource

HyperText Transfer Protocol (HTTP)

- HTTP is a set of rules for exchanging files such as text, images, videos, and sounds.
- When a URL is entered into a browser, it builds an HTTP request, which is forwarded to the server.
- The server then responds with the requested file.

HTML

- Stands for HyperText Markup Language
- HTML is a language, organized by elements, that describes how data should appear in a browser.



```
Source of: http://imgur.com/ - Mozilla Firefox
File Edit View Help
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-str
2 <html lang="en" xmlns="http://www.w3.org/1999/xhtml">
3 <head>
4 <title> imgur: the simple image sharer</title>
5 <meta http-equiv="content-type" content="text/html; charset=utf-8" />
6 <meta name="robots" content="follow, index" />
7 <meta name="keywords" content="images, funny pictures, image host, image upload, image sharing,
8 <meta name="description" content="imgur is used to share photos with social networks and online
9 <meta http-equiv="X-UA-Compatible" content="IE=Edge;" />
10 <link rel="alternate" type="application/rss+xml" title="imgur Gallery" href="http://feeds.feedbu
11 <link rel="stylesheet" type="text/css" href="http://s.imgur.com/min/global.css?1375395668" />
12 <link rel="stylesheet" href="http://s.imgur.com/min/gallery.css?1378494139" />
13 <style>#footer, #voxel { display: none; }</style>
14 <!--[if IE 9]><link rel="stylesheet" href="http://s.imgur.com/include/css/ie-sucks.css?0
15
16
17 <script type='text/javascript'>
18 var googletag = googletag || {};
19 googletag.cmd = googletag.cmd || [];
20 (function() {
21 var gads = document.createElement('script');
22 gads.async = true;
23 gads.type = 'text/javascript';
24 var useSSL = 'https:' == document.location.protocol;
25 gads.src = (useSSL ? 'https:' : 'http:') +
26 'http://www.googletagservices.com/tag/js/gpt.js';
27 var node = document.getElementsByTagName('script')[0];
28 node.parentNode.insertBefore(gads, node);
29 })();
30 </script>
31 </head>
32 <body>
33 <div id="topbar" >
34 <div class="header-center">
35 <div id="header-logo">
36 <a href="//imgur.com"></a>
37 </div>
```

HTML Tags

- A tag is used to define an HTML element.
- Tags are written in the form of `<tagname>`, where tagname is the type of html element required.
- Most elements (not all) have an opening tag, and a closing tag
- The closing tag is the same as the opening tag, with a forward slash (/) before the tag name.
- Ex: `<p>This is a paragraph tag.</p>`

HTML Tag Attributes

- A tag attribute provides additional information about an HTML element.
- For example, the `src` attribute of the `img` tag tells the browser where to locate the image to be displayed.
- Proper syntax is `<tag attribute="value">`
- The following would display an image found in a folder called images:

```

```

Nested HTML tags

- HTML elements can contain other HTML elements.
- Consider the following:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Web Page Title</title>
    <meta charset="utf-8">
  </head>
  <body>
    <h1>Welcome to Web Programming!</h1>
  </body>
</html>
```

HTML Comments

- Comments are defined as follows:

```
<!-- This is an HTML comment -->
```

- Comments are ignored by the browser.
- Comments can be anywhere in the HTML document **after** the `<!DOCTYPE>` tag.

Document type declaration (DTD)

- The DTD tells the browser the version of HTML in which the document is written.
- The DTD must be the first line of an HTML page.
- The DTD for HTML5, which we will be using, looks like this:

```
<!DOCTYPE html>
```

- The DOCTYPE tag does not have a closing tag.

The `html` Element

- The `html` is the parent element for all other elements in a web page.
- The opening `<html>` tag indicates the beginning of an HTML document, and the closing `</html>` tag indicates the end of the document.
- HTML element can also indicate the spoken language of the document, with the `lang` attribute.
 - Ex. `<html lang="en">`
- The HTML holds two sections of a web page: the head, and the body

The head Section

- Holds information about the webpage, such as the title, encoding, links to scripts and css files, and metadata for search engines.
- Most of what is shown here does not appear on the webpage itself.
- The head section is contained in `<head>.....</head>` tags.

The head section – common elements

- `<title>...</title>`
 - Holds the title of the page that is displayed in the browser, as well as by search engines.
- `<meta>`
 - Describes a characteristic of the webpage
 - Is a standalone tag, does not have a closing tag
- `<link>`
 - Used to link to an outside resource, such as a script or a css file.
 - Uses the `href` attribute to specify the resource location, and the `rel` attribute to describe the **type** of data (script, stylesheet, etc)
 - Is also a **standalone** tag.

The `body` section

- Defined by the `<body>...</body>` tags
- Most of the webpage code that you write will be within these tags.
- The body contains the code for the visual part of your web page.

HTML Text Headings

- There are six sizes of headings to choose from: h1 – h6, with h1 being the biggest font size, and h6 being the smallest
- Ex:
`<h1>Welcome</h1>`
`<h2>Welcome</h2>`
.....
`<h6>Welcome</h6>`

The paragraph `<p>` element

- Text contained in a paragraph element is displayed in a block with spacing above and below the text.

Ex:

```
<p>This is text in a paragraph tag.</p>
```

- By default, text in a paragraph element is aligned to the left, but that can be changed with CSS.

The element

- Text contained in a element will appear in **bold**.
- Ex:

```
<p>When cooking bacon, <strong>use a splash screen</strong> to keep yourself from getting burned.</p>
```

When cooking bacon, **use a splash screen** to keep yourself from getting burned.

The element

- Used to emphasize text
- Text in an element will appear in *italics*
- Ex:

```
<p>Both hard work <em>and</em>  
perseverance will help you reach your  
goals.</p>
```

Both hard work *and* perseverance will help you reach your goals.

The <a> tag

- Primarily used to create Hyperlinks to other web pages
- Text or images contained in an anchor tag with an href attribute will become a hyperlink.
- Can also use do define an anchor point on a page, which can be linked to within the document (ex. Jump to top of page)
- Ex:

```
<a href="http://www.google.ca">Google</a>
```

The <a> tag

- Defining an anchor point:

```
<a name="top"></a>
```

- Linking to an anchor point:

```
<a href="#top">Return to top</a>
```

Lists

- Two types of lists: ordered and unordered.
- Unordered list uses `...` tags
- Ordered list uses `...` tags
- List items defined by `...`

Ordered List Example

- ``
 `This is item 1`
 `This is item 2`
 ``

1. This is item 1
2. This is item 2

Unordered List Example

- ``
 `This is item 1`
 `This is item 2`
``

- This is item 1
- This is item 2