

Web Pages

- Encoded in HTML
 - Tag used to define data element
 - Hyperlinks point to other Web pages
 - Heading provides data about page
 - Body contains content
- Transmitted by Web servers
- Used by Browsers
 - Processes HTTP protocol
 - Receives & displays document
 - Transmits responses

Markup Languages

- Annotations to text
 - instructions on how text is to be displayed/used.
- Types:
 - Presentational
 - Procedural
 - Descriptive
 - GML/SGML
 - HTML/XHTML
 - XML

Hyper Text Markup Language

- First markup language of the WWW
- Used to deliver content on the web
- Open standard (W3C - World Wide Web Consortium)
- Readability
- Easy of use
- Portability



Structure of an HTML file

- File contains:
 - Content
 - anything that is not an instruction
 - Instructions (presentation)
 - instructions inserted as "tags"



HTML Tags

- Predefined Tags
 - Control how the text is displayed
 - Insert images into the document
 - Insert links to other documents



HTML Tags

- HTML tags normally occur in pairs
- A pair of tags surround the content
- Start tag
 - indicated with angle brackets: `<TAG>`
- End tag
 - indicated with a slash after the opening angle bracket: `</TAG>`
- Tags are NOT case sensitive
 - `
 =
`



Document tags

- 1 - Entire document
- 2 - Head containing browser information
- 3 - Body
- 4 - Contains content & associated presentation

Every HTML document has:

```

<HTML>
  <HEAD>
  .....
  </HEAD>
  <BODY>
  .....
  </BODY>
</HTML>

```

Basic HTML Structure

```

<HTML>
<HEAD>
<TITLE>Basic HTML Structure</TITLE>
</HEAD>
<BODY>
. . .
</BODY>
</HTML>

```

- Note: **<TITLE>** is displayed in the title bar of the browser

Heading Tags

- There are 6 heading levels
 - **H1, H2, H3, ..., H6**
 - **H1** is the largest
 - **H6** is the smallest
- To create a heading
 - enclose the text between the opening and closing tags for the heading level

```
<h1>My Webpage</h1>
```

Tags

- Formatting:
 - **<I>** - italics
 - **** - bold
 - **<U>** - underline
- Layout:
 - **<CENTER>** - center the text
 - **<P>** - new paragraph
 - **
** - break, start a new line
 - **<HR>** - horizontal rule, draw a line

Tags

Tags can be **nested**:

```
<B><U>Bold underlined text</U></B>
```

Bold underlined text

3/40

Images

- Images are added using `` tag
- A `` tag is not required
- The `SRC` parameter is used to indicate the **Source** of the image
- Example: ``

Standard Image Formats

- Image formats used on the Web are:
 - GIF - Graphics Interchange Format
 - JPG (JPEG) - Joint Photographic Experts Group
 - BMP - Windows Bitmap

URL

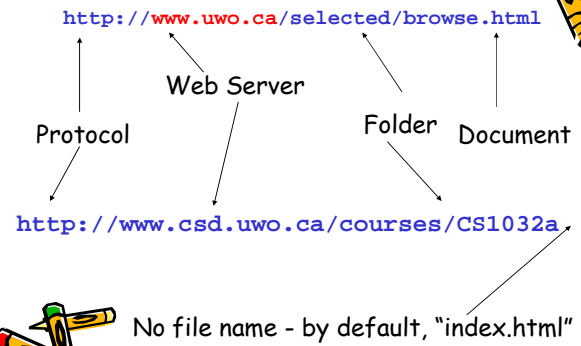
- Uniform Resource Locator (URL)
- URL contains information about
 - protocol used to access the document
 - address of a document on the Internet

Protocols

- **HTTP** - HyperText Transfer Protocol
 - transmits files on the WWW
 - `http://www.csd.uwo.ca`
- **FTP** - File Transfer Protocol
 - exchange files over the Internet
 - `ftp://ftp.csd.uwo.ca`
- **SMTP** - Simple Mail Transfer Protocol
 - sends email over the Internet
 - `mailto:cs1032@csd.uwo.ca`



Example URLs



Images from different locations

- Specify location in `src` attribute as the exact location of the image file

```

```



Anchors

- Anchor tags (`<A>` & ``) insert
 - Hyperlinks
 - Link to another document on the WWW
 - Bookmarks
 - Named location within the document
 - Invisible to the reader



Anchors as Links

- Link declared with `HREF` attribute.
- Hypertext REFERENCE (`HREF`)
- `HREF` specifies the URL of the link
- Content inside the anchor tag (`<A>` ``)
 - Displayed
 - When selected activates the link
 - Default appearance
 - [blue underlined text](#)
- Example: `information`



Anchor- HREF, Example

...
This is a link to
`Western's`
home page. ...

Anchor Tag with HREF attribute

Text displayed as a link

``
`` ``



The content inside the `<A>` and `` tags can also be an image.

Anchors as Bookmarks

- Entry point on a web page, Name parameter
``
``
- Link on the same page
`information`
`Go to Chapter 1`
- Link to another page
`information`
``
Go to Chapter 1



```
<html>
<head> <title>Sample bookmark webpage</title> </head>
<body>
<h1>Bookmark Example</h1>
<a name="Top of the page"></a>
Information<br>
More Information<br>
Even more Information<br>
<a href="#Top of the page">Go to the top of the page</a>
</body> </html>
```

