

# Introduction to HTML & Library Web Page Development

**Web**

**HTML elements**

**Site design**

# How the Web Works: Clients & Servers



## Client (e.g. Netscape)

- runs locally
- initiates requests
- can pass files to other programs
- customizable

*Client:*

“get file index.html”

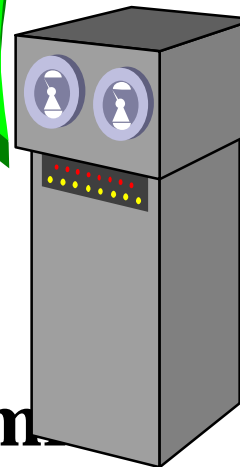


*Client:*

“get file index.htm”

## Server (e.g. httpd)

- runs on remote machines
- responds to requests
- stores and delivers requested files



# Terminology

- **HTML: Hypertext Markup Language**
- **Tags: surround text**
  - `<BODY>content</BODY>`
  - `<B>bold</B>`
  - Can have optional *attributes*  
`<BODY BGCOLOR="white" TEXT="black" LINK="red">`
- **URL: Uniform Resource Locator: web address**
  - Absolute `http://www.abc.com/dir/doc1.htm`
  - Relative `doc1.htm`
  - Can refer to a section on a page

# A Web Page

Browser looks at an encoded text file :

```
<HTML>
<HEAD>
<TITLE>My First Page</TITLE>
</HEAD>
<BODY>
<H1>My First Page</H1>
A list of web sites:
<UL>
<LI><A HREF='http://www.google.com'>Google</A>
<LI><A HREF='http://www.yahoo.com'>Yahoo</A>
</UL>
</BODY>
</HTML>
```

Browser shows:

## My First Page

A list of web sites:

- [Google](http://www.google.com)
- [Yahoo](http://www.yahoo.com)

# General Formatting Tags

- **Header tags:**
  - range in size from `<H1>Big Text in Bold</H1>` to `<H6>Little Text in Bold</H6>`
- **Paragraph:** `<P>Last updated 10/27/99</P>`
  - Inserts a space
- **Line break:** `<BR>` (no closing tag needed)
  - No space, just a line break
- **Horizontal rule:** `<HR>`
  - Makes a shadowed line (no closing tag needed)
- **Bold text:** `<B>Bold!</B>`
- **Italicized text:** `<I>Italics</I>`

# Saving an HTML file

- **An HTML page is plain (ASCII) text, but must be saved with special file extensions**
  - .html OR .htm
  - First file in web site should always be called index.html
- **The html document and the public\_html must have appropriate modes.**
- **To view a page:**
  - Browser menu: File> open page
  - Keep browser open, just click it's Reload button to see changes.

# Lists

- Putting things in order

- Bulleted

```
<UL>
```

```
<LI> item 1
```

```
<LI> item 2
```

```
</UL>
```

- Numbered

```
<OL>
```

```
<LI> item 1
```

```
<LI> item 2
```

```
</OL>
```

- Definition (no bullets or numbers)

```
<DL>
```

```
<DT>This
```

```
<DD>item 1
```

```
<DD>item 2
```

```
<DT>That
```

```
<DD>item1
```

```
<DD>item2
```

```
</DL>
```

# Hypertext Links

- **Link to a document:**
  - `<A HREF="http://www.yahoo.com/">Yahoo</A>`
  - or
  - `<A HREF="document.html">my document</A>`
- **Create a Mailto Link:**
  - `<A HREF="mailto:student@cs.colostate.edu">A Student</A>`
- **Always close a hypertext link!**

# Images

- **Basic image tag:**
  - `<IMG SRC="graphicurl.jpg">` - no closing tag needed!
- **Optional Attributes (parts of the image tag):**
  - `BORDER=1` places a lined border around the image
  - `ALIGN=right` places the image on the page in relation to the text in the same paragraph
  - `ALT="photo"` text description of the image
- **Images can be hypertext links.**
  - `<A HREF="next.html"></A>`

# Formatting

- **Adding color**
  - You can add color to the background and to fonts
  - See hex code sheet for colors
  - Always use the format “#xxxxxx” for colors
    - #FF0000 red
    - #00FF00 green
    - #0000FF blue
    - #FFFFFF white, #000000 black, #999999 gray
    - See “color tables” on the web
  - Color names may be supported by newer browsers
    - Green, Brown, Black, Acqua etc.

# Formatting

- **Fonts <FONT></FONT>**
  - Attributes: face, color and size
  - `<font size=+2 face="Verdana" color="Green">Hey I'm green and in Impact Font!</font>`
- **Centering**
  - `align="center"` (always use the quotes)
  - Use for headings like `<H1 ALIGN="CENTER">` or paragraphs like `<P ALIGN="CENTER">`

# Tables

- **Structure:**

```
<TABLE>  
  <TR>  
    <TD> Books </TD><TD>Bags</TD>  
  </TR>  
  <TR>  
    <TD> 5 </TD><TD> 3 </TD>  
  </TR>  
</TABLE>
```

- **You can align items, merge cells, control border etc.**

# Frames & Target

- **Structure**

```
<HTML>  
  <HEAD><TITLE>Frames Page</TITLE></HEAD>  
  <FRAMESET COLS="25%,*">  
    <FRAME NAME="side" SRC="side.html">  
    <FRAME NAME="main"  
      SRC="http://abc.def.com/main.html">  
  </FRAMESET>  
</HTML>
```

- **FRAMESET can be nested.**
- **A link can open in a frame or outside ("\_blank" )**  

```
<A HREF="url" TARGET="frame_name">Link</A>
```

# Maintaining Your Web Pages

- **Keep things current!**
- **Check links regularly**
- **Provide an option for feedback**
- **Keep a backup of your pages in case disasters (natural or otherwise) occur**
- **If deleted,**
  - **inform those who have a link**
  - **redirect**

# Things to avoid

- **Bad taste:**
  - **Blinking text**
  - **Too many colors/too many special fonts**
- **Large graphics (50k rule)**
- **Large layout**
- **Specialized designs:**
  - **Always provide ALT tags for images**
  - **If you use image maps, provide text links**
- **Slow servers: check load performance**