
Announcements

- ❖ Great HTML Reference: *Web Design in a Nutshell* by Jennifer Niederst,,
 - ❖ <http://www.htmldog.com/>
 - ❖ <http://tidy.sourceforge.net/>
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Image Files

- Discussion based on material by Rick Matthews (<http://www.wfu.edu/~matthews/misc/graphics/formats/formats.html>)
- Different storage formats: jpg, gif, tiff, png, bmp
- Why do many formats?
 - One main reason is the need for compression
 - Different images have different number of colors
- **Compression**
 - Definition – reducing file size
 - Two types
 - Lossless – no information is discarded. One possible approach to compress data is to look for recurring patterns
 - Lossy – some information is discarded. For example, we can capitalize on human vision limitations to discard some colors
- Pixel
 - Picture element
 - Represented using bits

Images Types

- **gif** (Graphic Interchange Format)
 - ❑ Lossless for image with 256 colors or less.
 - ❑ When image has more than 256 colors an algorithm is used to map the image colors to the 256 available colors.
 - ❑ Does compression
 - By reducing number of colors (less bits per pixel)
 - By looking for patterns
 - ❑ Suitable for line art, for images with large areas of uniform color with fewer than 256 colors
 - ❑ Do not use for photographic images
- **tiff** (Tagged Image File Format)
 - ❑ Can be lossless or lossy
 - ❑ In practice used as lossless with no compression.
 - ❑ Best quality output from a digital camera
 - ❑ Do not use for web as image size is big and most browsers don't display image
- **png** (Portable Network Graphics)
 - ❑ Supports 16 million colors
 - ❑ Lossless storage format
 - ❑ Does compression (Looks for patterns)
 - ❑ Suitable for line art, for images with large areas of uniform color with a number of colors exceeding 256, and to display a photograph without loss on the web

Images Types

- **jpg (Joint Photographic Experts Group)**
 - ❑ Stores information as 24 bit colors
 - ❑ Optimized for photographs
 - ❑ Great compression ratios preserving image quality
 - ❑ Does compression by eliminating information human eye will not notice
 - ❑ Level of compression is adjustable
 - ❑ Not suitable for line art
 - ❑ Format of choice for photographs on the web.
- **Others**
 - ❑ Raw – lossless, used on some digital cameras
 - ❑ Bmp (bitmap)- Microsoft proprietary format and common still image file on PC systems
- **Comparison**
 - ❑ Choose between png and jpg
 - ❑ png better than gif
 - ❑ png will not replace jpg as jpg can achieve greater compression of photographic images
- Example in Matthew's page illustrates images using the different formats

Deploying a Web Page to the Internet

- Remember that an html document is a text document that the browser (client) processes.
- You could write an html file and see how it looks in the browser without having to connect to the internet. That is how we have demonstrated several of our examples.
- How can you make a page of yours accessible to others. In other words, how can we place it on the Internet?
 - You need an ISP that facilities this process. Your html files (your page) will be place in a folder that is accessible by the ISP web server.
 - Glue/Wam allow you to deploy a page of yours to the web.

Deploying Using Wam or Glue

- To deploy your web page in either system
 - Place your html files in the directory
/pub/<yourLoginID>
 - Make sure you have an index file (index.shtml or index.html)
- Let's deploy one of our examples as a web page in wam
- Your site will be:
<http://www.wam.umd.edu/~<YourDirectoryID>>

Character Set

- Character set – Set of basic units of a written language system where every unit is assigned a number
- You can specify an encoded character set by using the meta tag as shown in example1.html
- Examples of other encodings:
 - ❑ ISO-8859-1 Latin 1
 - ❑ ISO-8859-5 Cyrillic
 - ❑ ISO-8859-6 Arabic
 - ❑ ISO-8859-7 Greek

Attributes of the tag

- alt – Text alternative used when image cannot be displayed or graphics have been turned off
- width – Allows you to specify width of image in pixels
- height – Allows you to specify height of image in pixels
- id – Assigns a name (identifier) to the image which can be referred later on in a style sheet.
- **Example: example1.html**

Validation

- Also through firefox you can use ***tidy*** for html validation. Tidy also provides suggestions for code that cannot be validated.
- You can also validate using the w3 validator (<http://validator.w3.org>)
- Let's validate the previous example

Tables

- To define a table we use the `<table>` tag
 - Border attribute controls table's border
- The following tags are associated with tables
 - `<tr>` - defines a row
 - `<td>` - defines a data element
 - `<th>` - define a header data element
 - `<caption>` - provides a summary of the table's purpose
- Example: `example2Table.html`

Tables

- You can combine table entries using the attributes `rowspan` and `colspan`
- **Example: `example3Table.html`**
- Spacing can be controlled with
 - `cellspacing`
 - `cellpadding`
- **Example: `example4Table.html`**
- Sides of the frame that are visible can be controlled via the *frame* attribute. Some of the values it can assume are:
 - `void` – no sides (default)
 - `above` – top side only
 - `below` – bottom side only
 - `hsides` – top and bottom sides only
 - `vsides` – right and left sides only
 - `box` – all four sides
 - `border` – all four sides
- **Example: `example5Table.html`**

Tables

- You can align the contents of table cell by align attribute that could take the following values:
 - left
 - center
 - right
- **Example: example6Table.html**