

SGG 3643 Computer Programming III

Images, Color, and Backgrounds

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- Placing images on your page and making them become clickable (adding a hyperlink).
- Specifying alternatives to images for non-graphical browsers.
- Using image dimensions and scaling.
- Setting background images/colors and text colors.ss







- Images are very important for Web design. They are used in several ways:
 - Usual graphic (i.e. images) as part of the presentation,
 - button for hyperlinks,
 - symbol for enumerations / lists
 - page background,
 - background for tables.





Images on the Web

- Two types
 - Inline images loaded as part of the page
 - External images (i.e. tiff format) loaded only on request, additional viewer necessary (not discussed here).
- File formats accepted by browsers
 - ______.gif (accepted by more browsers)
 - _ .jpeg (sometimes spelled .jpg)
 - .png
- Best if extensions are always lower case



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File formats in the Internet

- gif (Graphic Interchange Format):
 - only 256 colors from color palette, »interlaced« or »noninterlaced«
 - transparent color supported animated gif, licensee problems
 - Could be called gif, gif87, or gif89
- jpg / JPEG (Joint Photographic Expert Group):
 - for larger images and photos
 - Compression algorithm, but lossy
 - 16 Million colors (TrueColor), progressive JPG
- png (Portable Network Graphics):
 - Lossless Compression
 - Well suited for lot of purposes





Sources

- Commercial Sources
- Open Source
- Own images
- Scan: Resolution vs. File size:
 - 75 dpi sufficient, if not magnified
 - Store first in lossless format (i.e. TIFF)
- Manipulation:
 - Cropping, Optimizing, Scaling
 - Optimization: Color depth, color palette, transparency
- Test, publication





Inline Images: Tag

- Used for integration of inline images
- has no closing tag
- Use the src attribute to specify the filename

 You can add an textual alternative for non-graphical browsers (required in XHTML 1.0). The content of this tag is often presented as additional "fly out" text.







• Additional attribute for images size:

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..., width="200" height="300" ...

- Enhances performance for displaying page content in the browser.
- Can use graphics package or Netscape to determine actual picture size
 - Netscape: View/Document [Page] Info, then select the image



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• If specified dimensions **larger** than that of the picture, the picture is sized to fit.

Why is this good? Why take care?

Avoid specifying smaller dimensions.
 Why?





Inline Images (continued)

- The tag (an inline box) should normally be contained within another element-tag section, such as
 ... or ...
- Note that some users could have image display disabled in their browser
 - Netscape: Auto Load Images
 - Internet Explorer: Show Pictures
- Note that some users use text-only browsers or they could be blind.



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An image can be placed within a line of text

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love Johor Bahru!

- In the above case, the text is displayed aligned with the bottom of the picture
- has an align attribute specifying image alignment
 - Values: "top", "middle", "bottom"
 - Other nonstandard values: "texttop", "absmiddle", "baseline", "absbottom"





Wrapping Text Next to Images

- Starting in HTML v. 3.2, you could wrap several lines of text around or beside an image
- Added two new align values: "left" and "right"
- Any text following the image would be wrapped to right and left of the image, respectively
- Can align two images right & left w/text in between



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in favour of CSS

- To stop the text wrapping (and have it proceed to the line below the image)
 deprecated in HTML v. 4.0
 - Use the clear attribute on the
 tag
 - <br clear="left" /> stops the wrapping, breaking to the left margin for left-aligned images
 - <br clear="right" /> analogous for right-aligned images
 - <br clear="all" /> breaks to a line clear to both margins





Adjusting the Space around Images

- This concerns the amount of space between an image and the text around it
- HTML v. 3.2 introduced the vspace and hspace attributes of the tag
 - Values are numeric (and in quotation marks)
 - Values represent number of pixels of space
 - Text alignment is based on the "expanded" image





Images and Links

 To make a hyperlinked, clickable image, simply embed the tag within the <a>... pair:

<a href="<u>http://www.utm.my</u>">

- Border attribute of lets you control width of border [deprecated in HTML 4.0]
 - Use number (pixels) in quotation marks
 - "0" means no border [Used mainly with graphical buttons]









<map name="Landkarte">

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<area shape="rect" coords="78,182,132,200"
href="http://www.karlsruhe.de/" alt="Karlsruhe">

<area shape="circle" coords="140,209,10"
href="http://www.stuttgart.de/" alt="Stuttgart">

```
<area shape="poly"
coords="48,311,105,248,96,210,75,205,38,234,8,310"
href="http://www.baden-aktuell.de/" alt="Baden"> </map>
```

```
<img src="karte.gif" width="345" height="312"
border="0" alt="Karte" usemap="#Landkarte">
```









Rect

Upper left corner, lower right corner

<area shape="rect" coords="78,182,132,200" href="http://www.karlsruhe.de/" alt="Karlsruhe">

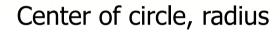


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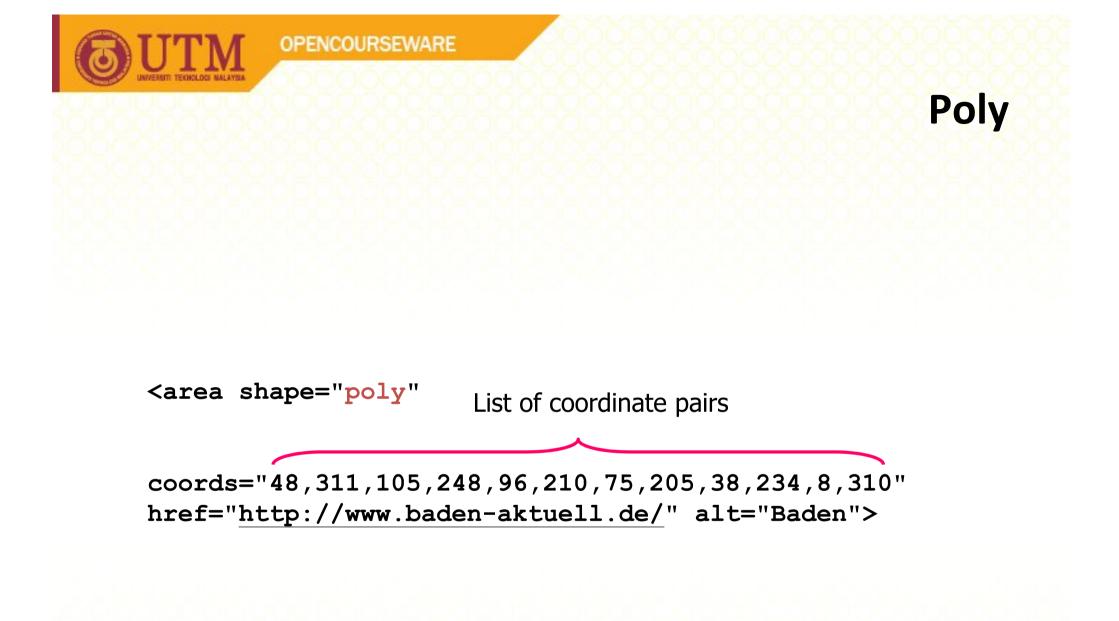


<area shape="circle" coords="140,209,10"
href="<u>http://www.stuttgart.de/</u>" alt="Stuttgart">



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Tool support for image maps

Phase 5, <u>http://www.qhaut.de/</u>

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Color [HTML 3.2, deprecated in 4.0]

- Colors as attribute values can be named or numbered
- Predefined color names
 - Black White Green Maroon Olive Navy Purple Gray Red Yellow Blue Teal Lime Aqua Fuchsia Silver
 - Supported by Netscape/IE--not always by other browsers
 - Much more color names are available in CSS!





Color numbers

- better supported & more flexible
- Color picker programs helpful here
- # followed by 6 hex digits [RGB] <u>www.lne.com/rgb.html</u>





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Color: Changing the Background Color

• Add an attribute called bgcolor to the <body> tag:

<body bgcolor="#800000"><body bgcolor="Fuchsia">

• Recommendation: Use CSS!





Color: Changing the Text Color

- Add any of the following attributes to the <body> tag
 - text=... All of the page's text (other than hyperlinks)
 - link=... All of the page's unvisited hyperlinks
 - vlink=... All of the page's visited hyperlinks
 - alink=... "Activated links," i.e., those links that the mouse button is being pressed over (but not released)
- Example (Halloween):

<body bgcolor="#ff9933" text="#000000" link="#800000">





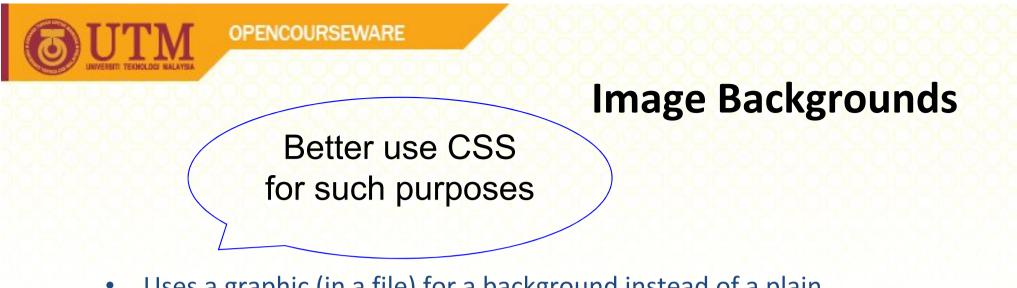


Color: Spot Changes to the Text Color

- You can add a color attribute to a tag
- Example

"You're just yellow," he said to McFly.





- Uses a graphic (in a file) for a background instead of a plain color...will be tiled
- Make sure the image flows smoothly when tiled, i.e., avoid "seams"
 - You can get clip art designed for backgrounds
- Simply put a filename in the background attribute of the <body> tag

<body background="bglines.gif">



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Responsible Use of Color

- You should always have a color scheme for any page that you design for other humans to view
- Use <u>http://www.ColorSchemer.com/online</u> for a quick, effective color scheme (complementary, monochromatic, split-complementary, or triadic)
- Use no more than 3 main colors (<7 total variants) on your page (+ white/black)





Wise Image Use: Hints

- Do you really need this image?
 - Want a balance of efficiency and fun!
 - Avoid animated images!
 - Remember handicapped people!
- Keep your images small
 - One way is to reduce the number of colors
 - Try to keep each inline image to <20K
 - 20K file takes 10 seconds to download at 28.8Kbps
- Reuse images as much as possible the browser keeps them in the cache!
- Provide alternatives to images (... alt="MyPhoto"...)
 - Alternative: Create alternate text-only pages

