



# Web Design Fundamentals

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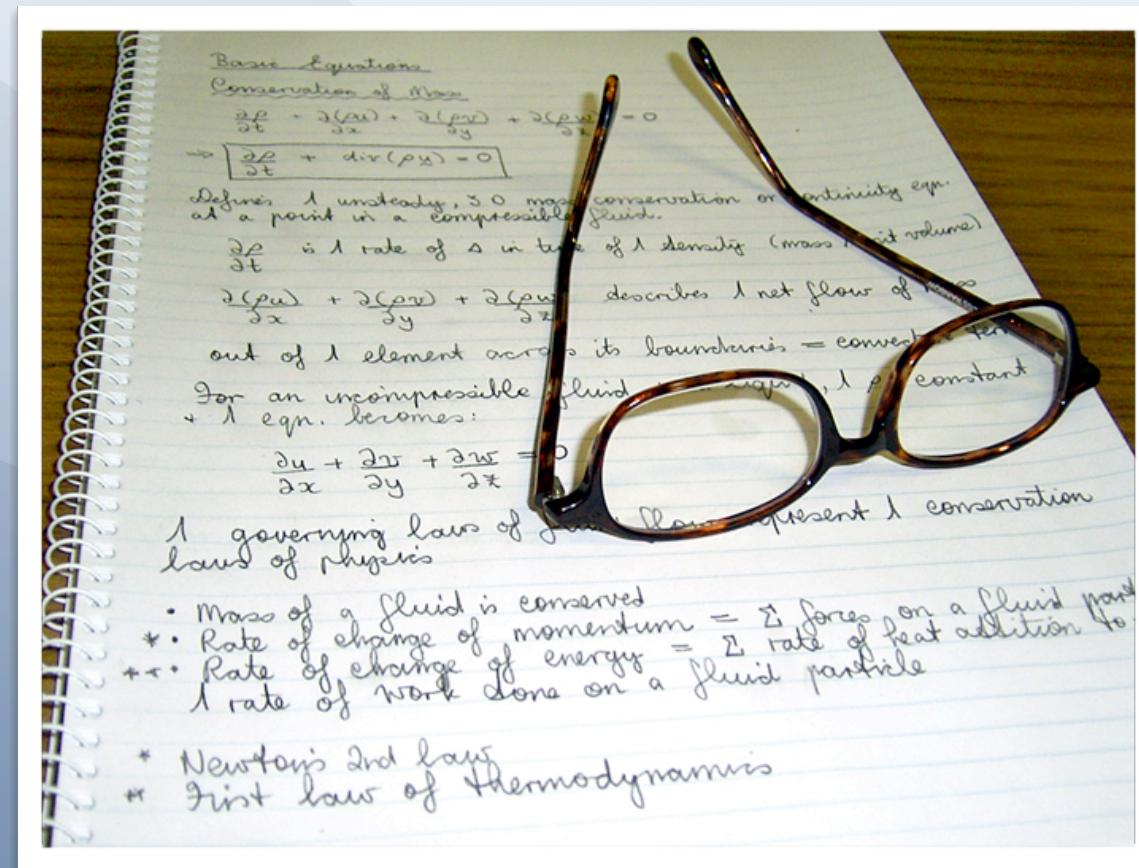
# Today's Topics

- Quiz I
- Images
- Multimedia

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# Quiz I





# Absolute vs. Relative Paths

## ○ Absolute Path

- path from root folder to a file
- *USA / FL / Winter Park / 3300 University Blvd / Bld FS4A /Room 105*
- `<link rel="stylesheet" type="text/css" href="http://wddbs.com/wdf/css/main.css" />`

## ○ Relative Path

- path to file relative to file you are in
- *next door*
- `<link rel="stylesheet" type="text/css" href="css/main.css" />`





# Relative Paths

- Path down into a subfolder
  - `<link rel="stylesheet" type="text/css" href="css/main.css" />`
- Path up to a parent folder
  - `<a href =".. / index.html" > Back to Home Page </a>`
  - `.. /` = move up one level
- Path up to a parent folder and down into subfolder
  - `<img src =".. / images / my_image.jpg" />`
- Works the same for images, multimedia, CSS, etc.





# Images



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# <img />

- Used to display images
- Self-closing
- Inline-level element
  - like all inline-level elements, *must* be nested in a block-level element.
- Two *required* attributes:
  - *src*
  - *alt*
- Optional attributes:
  - *width/height*
  - *title*





# src Attribute

- Provides *reference* to image
  - images are stored separately from XHTML document
- Location of image *relative* to document
  - path from XHTML document to the image
- `<p></p>`





# alt Attribute

- Alternative text which should be a short description
- Intended to be seen *instead of* image
- Image might not display because of:
  - bad file path
  - user has images turned off
- Useful for accessibility
  - can be read by screen readers
- Useful for search engines
- `<p></p>`





# Optional Attributes

- *width / height*

- tells the browser how much space to save for that image
  - image placeholder
- can be used to resize an image...
  - ...but **always** resize images ahead of time
  - large images will create a longer load time

- *title*

- additional information about the image
- displayed as tooltip





# Image Optimization

- Reduces the file size of an image
  - less data transferred from server
  - faster load time of web page
  - especially important for mobile devices
- Goal is to reduce image file size as much as possible *while* retaining image quality





# Save for Web

- For optimizing images, **never** use “Save As” in image editor
- “Save for Web” is specifically for optimizing images for use on the web
  - simplifies image optimization process
  - easy to compare image quality and file size
- Photoshop
  - Save > Save for Web and Devices...





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# Image Optimization

- Image optimization terms:
  - lossy file compression
  - lossless file compression
  - color depth
- Image optimization formats for the web:
  - JPEG
  - GIF
  - PNG-8
  - PNG-24





# Image Optimization

- Lossy File Compression
  - throws away image information to reduce file size
- Lossless File Compression
  - does not throw away image information
- Color Depth
  - number of colors an image format contains
  - measured in bits

8-bit = 256 colors

24 bit = 16 million colors





# JPEG

- Joint Photographic Experts Group

- used for photography and colorful images
- maintains gradients and other subtle changes
- lossy compression
- 24 bits of color
- .jpg file extension





# GIF

- **Graphics Interchange Format**

- used for logos, text graphics, and illustrations
- allows for 2 levels of transparency, on or off
- lossless compression
- 8 bits of color
- indexed color
- .gif file extension





# PNG-8

- Portable Network Graphics with 8-bit color depth

- used for logos, text graphics, and illustrations
- allows for 2 levels of transparency, on or off
- lossless compression
- quality indiscernible from GIF
- file size often smaller than GIF
- 8 bits of color
- indexed color
- .png file extension





# PNG-24

- Portable Network Graphics with 24-bit color depth
  - used for both photographic and graphic imagery
  - allows for 256 levels of transparency
  - transparent PNG-24 known as PNG-32 in Fireworks
  - lossless compression
  - file size often larger than JPEG
  - 24 bits of color
  - transparency **not** supported by IE 6
  - .png file extension





# Save for Web Color Shift

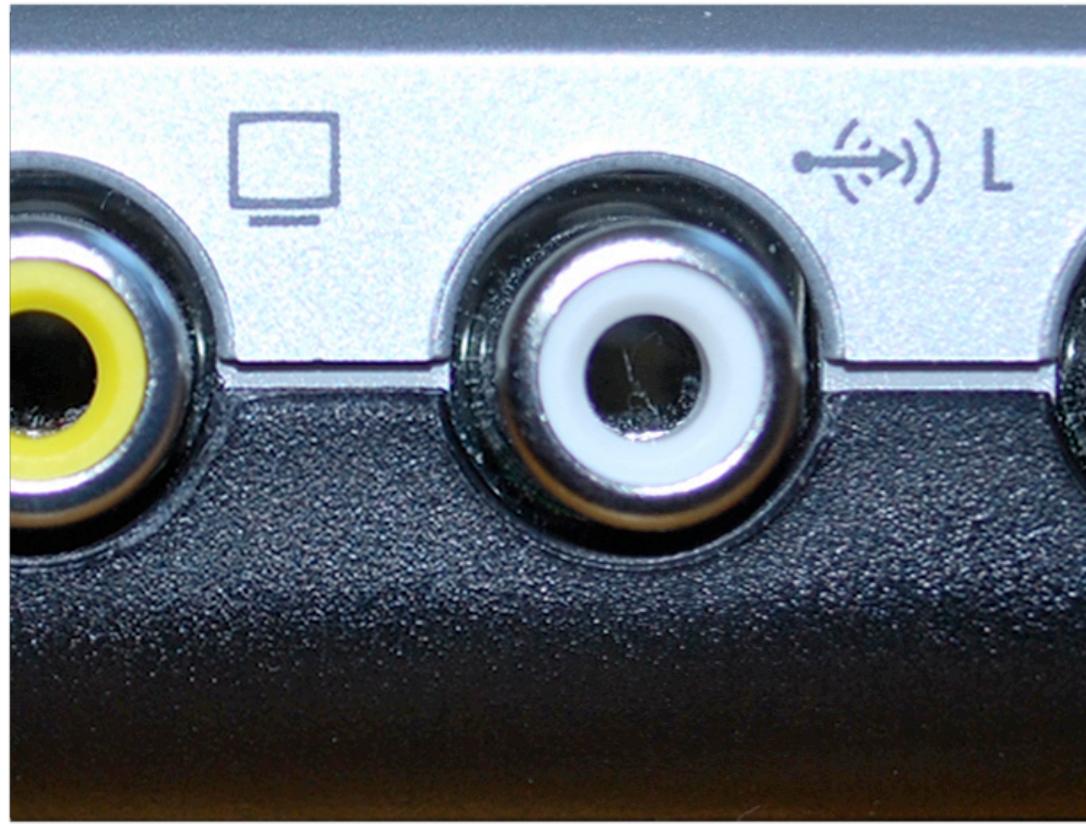
- The Mysterious “Save for Web” Color Shift
  - “Somewhere between PSD and JPG, Photoshop is draining our colors of their life, like some horrible, RGB-stealing vampire.”
- Three steps:
  - Color Profiles / Monitor Color
  - Proof Setup / Monitor RGB
  - Save for Web & Devices / uncheck sRGB
- <http://www.viget.com/inspire/the-mysterious-save-for-web-color-shift/>





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# Multimedia



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# <object>

- Used to incorporate multimedia
- Inline element
- Often require a plug-in
  - can be used with JavaScript to detect plug-in version and display alternate content
- Common attributes
  - *data* - path to file
  - *type* - tells the browser what type multimedia it is
  - `<object data="example.svg" type="image/svg+xml" ></object>`



# Object Parameters

- Used to specify object parameters
  - self-closing
  - different multimedia have different parameters
  - `<param name="quality" value = "high" />`
- [http://wiki.dreamhost.com/index.php/Object\\_EMBEDding](http://wiki.dreamhost.com/index.php/Object_EMBEDding)





# Objects in Action

- SWFObject

- for Flash content (.swf)
- always use *Dynamic publishing* for less markup
- *Express Install* allows user to download plug-in without leaving your web site
- <http://code.google.com/p/swfobject/>
- <http://www.adobe.com/devnet/flashplayer/articles/swfobject.html>

- QTOBJECT

- for Quicktime content (.mov, .mpg4)
- <http://blog.deconcept.com/2005/01/26/web-standards-compliant-javascript-quicktime-detect-and-embed/>



# Embedding ... what's the deal?

- The rebel <embed> tag
  - widely used by browsers, but not valid
  - created by Netscape against the recommendations of the W3C
  - <object> element = a valid substitute





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# Today's Lab

- Multimedia
  - Reading / Viewing Assignment
  - Daily Questions
  - My Sweet Ride

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