

## **Module 5: Images**

### *What needs to be added to include an image on a page?*

You will have to add code to your HTML as well as add a separate file – the image. The image should be placed on your web server.

The convention is to place all your images in a directory called “images”. I expect you to do this for every assignment, no matter how trivial. This is a good habit, and will make maintenance much, much easier.

If you have a lot of images, as most sites do, you will probably want to further organize them. Placing additional directories within the “images” directory will make maintaining your web site much easier. For example, if your navigation bar includes a lot of images, place a directory called “navbar” within the “images” directory. If you have a lot of head shots for your business, set up a directory in “images” called “headshots”. Etc.

Of course, you do not have to have the image you wish to link on your server – you could link to someone else's image on their server. However, this is generally considered unacceptable and may even be legally punished. (Chances are, you'd be asked to remove the link. I don't know of any legal precedent, though I'm guessing this happens frequently.) The reason is because you are not only linking to someone else's content, but you are utilizing their server's bandwidth.

(When a browser gets your HTML page from your server, it reads that it needs to download an image from someone else's server and does so. That means their bandwidth is being used to download the image, and images can be quite large!)

### *The code*

To include an image in a page, make sure the image is already on the server in the image folder. Assuming the image folder is a **subdirectory** of the directory containing the HTML file (a **subdirectory** is a directory within another directory), use the following code:

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**Note:** your “images” directory should have the following path: “/inp150/images/”. Your “index.html” and “about.html” both qualify to use the above code since they are in the “inp150” directory and “images” is a direct subdirectory of “inp150”.

### *Types of images and extensions*

Chances are, your images will end with “.jpg” or “.gif”. These are both examples of **file extensions** (as is “.html”). Windows machines and Macs both use file extensions to know which application to use to open a file. Other machines don't rely on the file extension, and in fact, one is not required! This is true for most servers, which run on Linux machine. However, for portability and readability sake, always include the appropriate file extension.

Note that JPEGs and GIFs are both compressed files. Though compression is not a topic for this class, note that resizing a JPEG or GIF may result in loss of quality. Therefore, if you must resize an image, save it first as a non-lossy, non-compressed image (e.g., TIF or BMP) and resize that image. Then, re-save the TIF as a GIF or JPEG.

JPEG is intended for *photo-realistic* images. This includes digital photographs. GIFs are intended more for graphic art and computer-generated images. GIF images can only have up to 256 colors, but JPEGs do not impose a limit on the number of colors (though your photo-manipulation application may, such as Photoshop or GIMP).

You can use either format for any image you like: however, if you choose the appropriate format, not only will you get much smaller file sizes, you may even get better quality.

For more information:

- <http://en.wikipedia.org/wiki/Jpeg>
- <http://en.wikipedia.org/wiki/GIF>

### *File naming*

Always give your files self-explanatory names. You may only have to type the name a couple times, which means longer names is not such a burden (though be reasonable), and you may have to find the file many times. Save time by doing the work upfront by offering very explicit names.