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# INTRODUCTION TO WEB DESIGN

Module 3 Working With Graphics

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# UNDERSTANDING WEB GRAPHICS

Web graphics are very different from print graphics. In order to understand web graphics we need to look at the main file types that we use for web design.



**JPG files** are what is used mostly for photographs. They're great for photographs because they are able to convey continuous tone better than just about any other image format on the web. JPG's have small file sizes due to the compression that's included with them. That compression is called lossy compression, which means every time you open, edit, and save a JPG, you lose a little bit of pixel information, thus degrading it.

Watch your text in JPG's as the lossy compression can make text look pretty bad.

**GIF files** there are still some use cases for GIFs on the web today. And that would be for artwork with large areas of flat color. They're also the only types of files that can do animations out of these three. For objects with limited transparency, they are good as well. Limited transparency, means objects that have a clean cut edge all the way around them. No gradients or drop shadows.

**PNG files** There are two types of PNG's; PNG8 and PNG24. PNG8 behaves a lot like a GIF, and is not widely used. But PNG 24. Is the top of the line, in terms of web graphics because it is the best image file format for objects that have complex transparency.

Which are objects that have a lot of drop shadows or gradients and things like that hanging off the edges. They also produce a little bit larger file size but that's probably because they contain lossless compression. And they are also really great for color fidelity, and in fact there's some websites, Facebook for instance that actually recommend uploading your photos to their service in PNG format because it contains better color quality.

**SVG files** Scalable Vector Graphics (SVG) is an XML-based vector image format for two-dimensional graphics with support for interactivity and animation. The SVG specification is an open standard developed by the World Wide Web Consortium (W3C) since 1999. SVG images and their behaviors are defined in XML text files.

	Transparency	Animation	Browser	Vector	Numbers of Colors
GIF	✓	✓	All		256
PNG-8	✓ 1-bit		All		256
PNG-24	✓ Alpha transparency	APNG (not well supported)	All		Millions
JPEG			All		Millions
SVG	✓	✓	All	✓	Lots

## IMAGE COMPRESSION

In order to select the right file format like PNG or JPEG, you will need to understand what compression means.

### Why do we care about compression?

If you choose the correct graphic format and you optimize your images, your pages can load a lot faster and you'll also see performance improvements.

There are two main types of compression:

**Lossy compression** in the image when you go to save as a JPEG some pixel data is permanently eliminated. The more you compress, the more is lost. That means if you open a JPEG in Photoshop or whatever program you're using when you save it again as a JPEG, you are compressing a compressed file.

**Lossless compression**. PNG, GIF, and SVG - For the most part, it's lossless. In the image, the pixel data is compressed. With PNG and GIF, it's tied to a color palette or a number of colors. And for the most part, the number of colors determines the file size.

For the web the goal is to pick the best file type for the job and then compress it. Usually, you get to see a preview of the compressed file to ensure it meets the qualities you want. A lot of the compression features depend on the software you are using. Whichever software you select, research it and look for the save for web options.



## TEMPERATURE CHECK

How are you feeling so far?

Overwhelmed or are you Chillin'!

Overwhelmed send me an email and lets see how we can iron this out.

Web pages are capable of far more than text. In HTML, images are defined with the `<img>` tag. The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.

The `src` attribute specifies the URL (web address) of the image:

```

```

Here is a real example:

```

```

The **alt attribute** is required. A web page will not validate correctly without it.

The required alt attribute specifies an alternate text for an image, if the image cannot be displayed. The alt attribute provides alternative information for an image if a user for some reason cannot view it (because of slow connection, an error in the `src` attribute, or if the user uses a screen reader). This attribute also works for SEO as well.

Guidelines for the alt text:

- The text should describe the image if the image contains information
- The text should explain where the link goes if the image is inside an `<a>` element
- Use `alt=""` if the image is only for decoration

**The `img` tag is another tag that doesn't require (or allow) an end tag. You can use a forward slash for consistency if you wish.**

## COPYRIGHT LAWS

Graphics such as illustrations, paintings, computer-generated graphics, sketches, drawings, and designs are all protected under copyright law. Copyright law protects artistic works such as graphics by granting the author an exclusive bundle of rights. Any use of these rights without the permission of the author can lead to potential charges of copyright infringement.

### Copyright Registration

As soon as a graphic is fixed in a tangible medium such as on a canvas, a piece of paper or a computer hard drive, the graphic is protected by copyright law. However, it is important to obtain copyright registration for your graphics as copyright registration provides notice of your claim and allows you to sue for attorney's fees, court costs and statutory damages.

### Rights

The exclusive rights granted under copyright law include the right to make copies of the work, the right to distribute the work, the right to create derivative works and the right to publicly perform or display the work. For graphic artists, this means that any unlicensed display or dissemination of your graphic can be construed as copyright infringement. Typically, copyright infringement is pursued by sending a cease and desist letter followed by a lawsuit for copyright infringement.

### Copyright Infringement

Any unlicensed use of a graphic can lead to charges of copyright infringement. If the copyrighted graphic is registered, statutory damages can be as high as \$150,000 per violation if the court finds the infringement to be willful. There are many defenses to charges of copyright infringement including the doctrine of fair use. Fair use may apply when a graphic is used in a non-commercial manner for the purpose of comment, critique, education or parody.

### Multimedia Works

Multimedia works are works that combine elements from a variety of different sources which may include a graphical component. Examples of such works include websites or computer games. Although these types of works were not specifically contemplated when copyright law was developed, they are still granted copyright protection by the United States government. All of the artistic aspects of multimedia works, including graphical aspects, are granted protection under U.S. law.

## 1. IMAGES

The most common issue many web designers face when it comes to copyright law has to do with the images they use in their layouts. For some designers, it is common practice to find images they need by doing a Google search or pulling an unlicensed image from a stock photo library.

The problem with this is that, as Google itself warns, these images are usually protected by copyrights, and their use as part of a layout almost certainly constitutes an infringement. Historically, artists have not had many resources for finding such infringements, but as detection tools improve in quality and drop in price, more infringements are being detected.

It is important that you always make sure you have the rights to use an image in your layout, even if it is just a placeholder.

## 2. HTML/SOURCE CODE

Most Web designers are expected to crib some of their source code, either from other sites or their previous work. But where taking a portion of a page to get a table format or a few CSS elements from a stylesheet likely won't raise any alarm, large scale copying, such as taking an entire style sheet or whole theme elements, likely constitutes copyright infringement.

The problem is that HTML code, much like computer software, is considered an original work of authorship, even if it is created with the help of tools, and enjoys copyright protection. Though you can't copyright the general look of the site, meaning Google can't copyright a white background with a center logo, you can protect the code that created that work.

The best way to avoid any issues over your source code is to create as much of it yourself as possible and limit any copying to only things that you could trivially reproduce but wanted to save time on. The more it becomes clear where your code came from, the more likely the copyright holder may become upset.

### 3. PLATFORM LICENSING

The days of static websites went out nearly a decade ago. Most sites today are built on top of a platform of some variety or another, be it WordPress, Joomla, Presta Shop or some other software. However, many of these tools have strict and/or unusual licensing requirements and it is easy for designers to run afoul of their terms when setting up a new site.

The most common mistake is installing a purchased application on too many sites; for example, by buying a one-domain license for an application, but using it with multiple clients.

However, even open source applications carry risks as many designers, in an attempt to keep the site clean, remove attribution lines in the code and files on the server that are required as part of the license.

When using any software to build a site, take a moment to read through the license and understand what it means. Follow those terms closely. Developers are constantly becoming more savvy about tracking down those who violate their licenses and even authors that license under the GPL are becoming more aggressive about enforcing their terms.

### 4. OPEN SOURCE BLUNDERS

A related mistake comes when web designers use and publish works based on open source code, particularly GPLed code (which includes many WordPress themes) and forget to either retain the license information and/or fail to donate their modified code back to the GPL.

If you create a derivative work of a GPL-license, such as making a GPL WordPress theme a different color, the new theme has to be licensed under the GPL.

### 5. DUMMY COPY

Though the use of dummy text is largely a holdover from the print design world, many web designers continue to use it for various reasons. It can pose a great risk if the dummy copy is pulled from another site. Even if the copy is just for testing purposes, it still constitutes an infringement. It may be unwittingly harming the original authors if the search engines have detected the test site.

Generally speaking, it is best to either use content from the client's current site if possible or true lorem ipsum text if it isn't (<https://meettheipsums.com/>). Considering that lorem ipsum text is actually more flexible than using articles and content from other sites, it makes sense in nearly every regard.

Be especially careful of scraping RSS feeds for the purpose of filling up a test application or blog, this is especially frowned upon by bloggers and may have your test site mistaken for a spam blog.

### BOTTOM LINE

In the end, it is important to keep copyright infringement in mind when designing websites and services. This is especially crucial if your test sites are public facing or may be indexed by the search engines - as you may find your test pages taken down by your host. However, even if you test solely on a private server, it's worth keeping these issues in mind so you do not pass along an infringing site to your clients, even by accident. Nothing will sour a relationship with a client faster than them receiving cease and desist letters or take-down notices for content in your layout.