GIF is the standard format for compressing images with flat color and crisp detail, such as line art, logos, or illustrations with type. Like the GIF format, the PNG-8 format efficiently compresses solid areas of color while preserving sharp detail.

PNG-8 and GIF files support 8-bit color, so they can display up to 256 colors. The process of determining which colors to use is called indexing, so images in GIF and PNG-8 formats are sometimes called indexed color images.

To convert an image to indexed color, a color lookup table is built to store and index the colors in the image. If a color in the original image does not appear in the color lookup table, the application either chooses the closest color in the table or simulates the color using a combination of available colors.

INTERACTIVE DESIGN/ADVANCED DESIGN FOR THE WEB

OPTIMIZATION

Optimization settings for GIF

LOSSY
(GIF only) Reduces file size by selectively discarding data. A higher Lossy setting results in more data being discarded. You can often apply a Lossy value of 5–10, and sometimes up to 50, without degrading the image. The Lossy option can reduce file size by 5% to 40%. *Note: You cannot use the Lossy option with the Interlaced option or with Noise or Pattern Dither algorithms.*

COLOR REDUCTION METHOD AND COLORS
Specifies a method for generating the color lookup table and the number of colors you want in the color lookup table. You can select one of the following color reduction methods:

PERCEPTUAL
Creates a custom color table by giving priority to colors for which the human eye has greater sensitivity.

SELECTIVE
Creates a color table similar to the Perceptual color table, but favoring broad areas of color and the preservation of web colors. This color table usually produces images with the greatest color integrity. Selective is the default option.

ADAPTIVE
Creates a custom color table by sampling colors from the predominant spectrum in the image. For example, an image with only the colors green and blue produces a color table made primarily of greens and blues. Most images concentrate colors in particular areas of the spectrum.

(RESTRICTIVE) WEB
Uses the standard 216-color color table common to the Windows and Mac OS 8-bit (256-color) palettes. This option ensures that no browser dither is applied to colors when the image is displayed using 8-bit color. (This palette is also called the web-safe palette.) Using the web palette can create larger files, and is recommended only when avoiding browser dither is a high priority.

CUSTOM
Uses a color palette that is created or modified by the user. If you open an existing GIF or PNG-8 file, it will have a custom color palette.

BLACK AND WHITE, GRAYSCALE, MAC OS, WINDOWS
Use a set palette of colors.