gif(jiff)

or

gif(gift)
PHOTOSHOP: GIF Animation
graphics interchange format

is a bitmap image format introduced in 1987 by CompuServe.

**gif** format supports up to 8 bits per pixel for each image.

8 bit color graphics is a method of storing image information in a computer's memory or in an image file, such that each pixel is represented by one 8-bit byte. The maximum number of colors that can be displayed at any one time is 256.

A **pixel** is a physical point in a raster image. All points are addressable, this means they can be controlled and located with physical coordinates. LCD pixels are manufactured in two dimensional grids and are often represented using dots or squares.
**dots per inch** and **pixels per inch** are not the same, **dpi** refers to the printers density of dot placement while **ppi** refers to the number of pixels that are used to represent an image. The more pixels used the more we closely resemble the original. We often refer to the number of pixels as resolution. Resolution depends on the size of the pixel. Images with smaller pixel sizes consist of more pixels. The number of pixels correlates to the amount of info within the image.
a single gif image can reference a palette of up to 256 different colors from the 24bit RGB color space

limited colors make gif less suitable for reproducing color photographs with millions of colors

gifs support animations
were designed to minimize file size and electronic transfer time one of the first two image formats commonly used on the web

other formats jpeg (aka joint photographic experts group) - full of color, lossy compression (means that every time you modify it, write it back to disk, you lose a bit of information), png (portable network graphics) has more colors than gif and allows transparencies except via internet explorer, bmp (windows bitmap format) - retains all information and is not compressed at all, very big files!
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uses compression algorithm to reduce file size

Dithering approximates a wider range of colors with a small color palette

Dithering is a process by which Photoshop mixes colors to simulate more colors than are actually in the file

if you want to preserve transparency use a gif or a png, if you want an animation use a gif... or there is also MNG (pngs animated gif replacement)... but it is not heavily embraced as a web format...
We can create simple gif animations using PHOTOSHOP and export these as gif files, which support animation.

Gifs do not support sound or interactivity.

Gifs are native to the browser and do not require a special plugin as in the case of Adobe Flash.

Animations are made out of a sequence of images that play or get displayed one after the other at a constant rate.
We call this rate as **Frame Rate**

Standard Frame Rate for film is 24 frames per second (24 images per second)

Other common frame rates for video are 25 fps and 30 fps

Animations can also be done at 12 fps
There are two main animation techniques:

**frame by frame animation**

**tween animation**

Frame By Frame Animation consist of drawing each frame manually. We make small variations in each frame to cause the effect of motion or change.

Tween Animation calculates the changes and draws frames in between a first frame and last frame.
Before any great animation, there is a story board. Story boarding is a process by which we create frames that represent what we want our animations to exhibit.

We document movement, panning, zoom and other information that we want to apply to that precise moment.

Story boards can be simple or complex and they resemble comic strips.

We even use these in architecture/design to plan how to tell the story/stories of the places/spaces we are designing.
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