

Six file formats you need to know

File formats are things like JPG, PNG or GIF. You've come across most of these at some point.

Almost all of these are Raster (or Bitmap) file types

JPGs are great for photos on the web.

PNGs are great for transparent backgrounds.

File Formats

A file format is the way in which a file is actually saved.

There are a set of six file formats you are expected to know about:

- BMP files
- JPG files – for photos
- PNG files – for transparency
- GIF files – for animations
- TIFF files – for commercial printing
- PDF files

A useful way to summarise these might be in a table of some kind.

1. BMP – Bitmap:

BMP codes each pixel that makes up the image separately. This makes the files easy to edit and no detail is lost, but can make the file size much larger, especially with big images. The size of BMP files is a problem when using large images on the web as they take a long time to download.

2. JPG - Joint Photographic Experts Group:

JPG, or JPEG, files are used for **photographs** or any other type of complex **raster** (bitmap) graphic. They are a **compressed** type of file, which means that some detail in the image can be lost but that the size of the image file is reduced. This can be a good thing if the image is going to be used online as it will load quicker.

The amount of compression will effect how much detail in the image is lost - if you're careful it's normally impossible to tell that the image has been compressed.

Modern JPG files have 16.7 million colours to use. This makes them able to create images that look just like the ones we can see with our eyes.

3. PNG - Portable Network Graphic:

PNG files can use **transparent** backgrounds. They are partly **compressed** but work in a way which means that detail isn't lost, unlike JPG.

The file size can be larger than the same JPG image however and this means they may not be as suitable for online use unless a transparent image is essential. This means that they are often used for logos, diagrams or icons - where transparent backgrounds are likely to be more important - but not for photographs where there is unlikely to be any transparent pixels.

4. GIF - Graphics Interchange Format:

GIF images use only 256 colours. This means that photographs can't usually be stored as GIFs without effecting the colour quality of the image. It does means that they are effective for simple images such as some logos, diagrams or icons. File sizes are usually quite small, especially with simple images, and no detail is lost because of the type of compression used.

GIFs are great for simple logos or for animations.

GIFs are also the only file type which can be **animated** for use online, although animations can only be a few seconds long. This makes them effective for some onscreen graphics such as adverts. The file size of an animated GIF will certainly be much smaller than a video file.

5. TIFF - Tagged Image File Format:

TIFF images are **high quality** images used by **commercial printers** when producing printed products. Data can stored without any being lost and they can use **layers** within images, allowing graphics to be edited more effectively. The file size is much larger and this means they take longer to transfer between computers.

TIFFs are great for sending to the printers once you've finished creating an image.

Most web browsers don't handle TIFF files so they can't be used on the web. This means that a TIFF file needs to be saved as a JPG, PNG or GIF before it can be used online.

6. PDF - Portable Document Format:

Used by Adobe as a way of laying out **pages** containing images and text, so can be used as a way of storing digital graphics. Can include both bitmap and vector graphics, and so are sometimes used by commercial printers.

PDF are best for laying out a whole page, but you're unlikely to use them in your work.

Two more formats

There are then two more types of file that you could really use knowing a little bit about.

a) PSD - PhotoShop Document:

Can only be used inside **Photoshop**. Retain the layers used when building up complex graphical images so are good to use whilst creating and editing images, but can't be used for a final product.

Your work will be saved as PSD files while you're still using it.

b) SVG - Scalable Vector Graphic:

SVG are an example of a **vector graphic** format. They are **scalable**, which means they can be made larger without losing image quality.

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