COMP 1017

Images for the Web

Colour Space

Now with added ‘u’!

Pop quiz: what are the three primary colours?

There’s keys to a new Buick at stake!

red, yellow, and blue.

However, these are the primary colours of pigment (i.e. paints and inks).

The primary colours of light are red, green, and blue.

Because screens use light to convey colour, we will be using an RGB colour space to create images intended for the web.

In fact, we've already been using RGB to define our colour values in CSS!

```
h1 {
    color: rgba(255,255,255,1);
}

/* This says that the first-level
heading will be white (as 255 is the
highest possible value, so everything is
as bright as it can possibly be). */
```

```
/* It also says that it will be
completely opaque (as the alpha value,
or how transparent something is, is a
decimal that ranges from 0 - 1. */
```

Trade Offs

When we are creating a website, one of the key things that we have to keep in mind is UX, or what our user's experience might be.

One of the major factors in good UX are load speeds.

We want our pages to load as quickly as possible — and to use as little bandwidth / data as possible while doing it.

Therefore, we want all of our resources (like images) to have the smallest file size possible.

However, if we compress our images too much, our user will get pixelated garbage.

And there’s the rub: optimising images for the web is all about trade offs.

.JPG / .JPEG

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.JPEG is an initialism/acronym for Joint Photographic Experts Group.

… you can forget that now.
That’s really just for trivia nights.

So, what do we *really* need to know about this file type?

Every time you save a .JPG, it gets compressed.

Compression is a way of removing data so that the resulting file size is smaller.

.JPGs are great for most photos; however, they will always be rendered as a rectangle or square.

They also do not support transparency or animation.

.PNG

Now with 100% more portability!

Portable Network Graphics (PNGs) have less compression than JPGs.

This means that they can be higher quality, but also larger file sizes.

.PNGs can also have transparency.

This comes in handy for things like icons, avatars, or something that you might want to render as an ellipse.

.GIF

…or however you choose to pronounce it!

The Graphic Interchange Format (.GIF) is one of the most ubiquitous formats on the web.

This file format supports multiple frames — that is to say, it supports animation.

Animated .GIFs can be played once, or on a loop.

However, it only supports 8-bit images (i.e. a palette of 256 or fewer colours).

It also allows for one transparent colour. This is great for things like logos, text, or simple cartoons.

References

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