Unix Sidetrack

Permissions problems

You can use the konsole command "ls -l" to view the contents of the current directory in long form.
Among other things, this will show the permissions for the files:

There are 10 characters, split into 4 groups: 1, 3, 3, 3.
The first character can be d (meaning it's a directory), - (meaning it's a normal file), or l (meaning it's a symbolic link, which links to another place on the file system, like a href).

The other groups of 3 are equivalent, but apply to different users. The first 3 are for the user, the second 3 are for other users in the same group, and the third 3 are other users (e.g. the webserver).

Of each 3, the first is read permissions (r or -), the second is write permissions (w or -), and the third is execute permissions (x or -).
Execute permission has a different meaning for directories, it means accessible.

For fixing permission problems, your files must have permissions 604 (i.e. 110/000/100). Your directories need 705 (111/000/101), so that the server can access the directories.
In later courses, we may need the server to be able to write files, in which case we will have to give the server write permissions as well.

Note: the permissions of each file depend on the permissions for the entire folder path.

Cross-Domain Requests (cont.)

The image linked to in the SRC attribute does not have to be an image. It can be, for example, a program which returns an image, and can, say, log when the image was sent.

Image File Formats

PNG — portable network graphic
- best for logos, icons
- similar to gif but with no issues with licensing

JPEG
- bitmap for photos
- lossy compression
- not designed for straight lines and high contrast
- designed instead for natural-looking things, for photos
- also designed around the human eye
  - RGB is converted to YUV
    - Y is brightness
    - U and V are colour info
  - Y is stored in higher resolution than the other two, as well as better quantisation
  - there is then also a fast fourier transform involved

GIF
- bitmap for icons etc.
- lossless compression
- can be animated
- controversy over licensing

SVG — scalable vector graphic
- lossless
- good for logos because they can be resized to any size
- not based on pixels, based instead on instructions how to draw a picture

- not possible to translate a natural scene into this format

Picture formats are not changing

Picture formats are not changing much. He reckons it'll be JPG for a long time. Video formats on the other hand are changing all the time, apparently.

There's also a progressive JPG format which is used for gradually loading the picture at higher resolutions. Used for very big photos.

MP4

MP4 image format now allows you animate things over a pixel background. This allows for a lot of editing.

Font characters

Fonts are now stored both as pixel formats and as vector formats. You can zoom in as much as you like on some text and it will not be blurry.

BMP

Do not use bmp. It is optimised for the windows operating system, and it can not be displayed on other operating systems. It is not internet safe. Linux browsers do not support it natively, for example.

BMP files only exist in Windows program folders.

They're also really big.

Some More Common HTML Elements

<P>

- for paragraphs
- cannot be nested (can't have paragraphs within paragraphs)
- must have a closing tag in HTML 5

- forced line break
- no closing tag

<SPAN>

- to give a scope to class or ID
- cannot be nested

<DIV>

- same as span but in new paragraph
- can be nested

<HEAD>

- have seen this already
- but can also put metatext to describe the webpage in here
- we've just used title and style so far
- head is for things that aren't shown

Classes

To do multiple classes, but them all in the single CLASS attribute, in the quote marks, separated by whitespace.