

# WEB DEVELOPMENT

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## Lecture 04 Images

# There is more to life than text data...

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- Images
- Image Maps
- Favicons

# Images

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`<img>...</img>`                      or                      `<img />`

## Attributes

src            specifies the name and location of the image  
alt            text that will be displayed if the image is unavailable

``

Try to keep in mind the distinction between

- images that make up the content of a page, and
- images (like backgrounds) that are merely for decoration

The latter type should be referenced from CSS stylesheets, and not referred to in the HTML page directly.

# Images – CSS properties

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## HTML

```

```

## Stylesheet

```
img#star1  
{  
width: 50px;  
height: 100px;  
}
```

What happens if the image is not the size specified in the CSS?

# Image Formats

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Always remember that the images on your webpage have to be transmitted over a network.

Keep the file size as low as possible.

- Reduce the height and width of the image.
- Reduce the resolution of the image.
- Use a compressed image format.

The most widely used ones are jpeg, gif and png.

# GIF – Graphics Interchange Format

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- Developed by Compuserve in 1987
- Maximum 256 colours (8 bit)
- Use a lossless compression algorithm
- Can contain transparent areas
- May contain multiple images, allowing for simple animations
- Best suited to images with areas of flat, solid colour (logos, icons, cartoons)

# JPEG – Joint Photographic Experts Group

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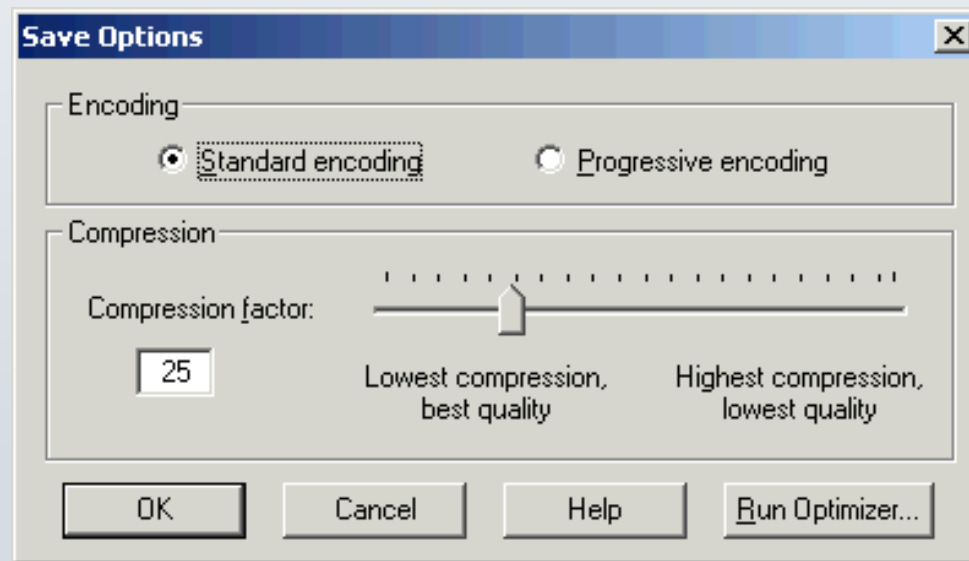
- Developed by the JPEG early 1990s
- Maximum 16 million colours (24 bit)
- Uses a 'lossy' compression algorithm
- Does not support transparency
- Does not support animation
- Best suited to photographic images
- Not good at images with flat solid colour or sharp edges

# More on JPEG

When you save a jpeg image, you can control the image quality – average 10:1 compression ratio.

High quality = More detail = Large file size

Low quality = Less detail = Small file size



Once you have lost the detail, you cannot get it back.



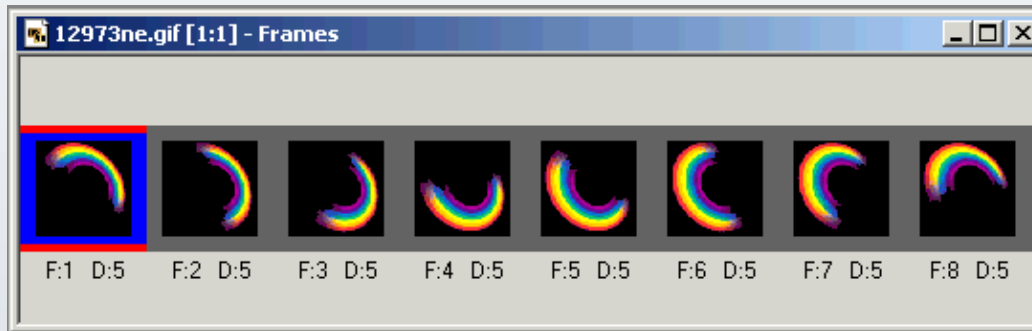
# PNG – Portable Network Graphic

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- Developed by PNG development group in 1995 to replace GIF
- Can store 24 or 48 bit colour, 16 bit grayscale images.
- Uses a lossless compression algorithm
- Allows up to 65,000 shades of transparency
- May contain gamma adjustment and colour correction information.
- May contain embedded text for tagging.

# Animated GIF Images

The GIF image contains a number of frames layered on top of each other.



It also contains a set of instructions that specify things like the length of delay between frames and whether or not the animation should loop.

Packages such as Macromedia Fireworks, Paint Shop Pro and the open source GIMP project contain facilities for creating animated GIFS.

# There is more to life than text data...

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- Images
- **Image Maps**
- **Favicons**

# Image Maps

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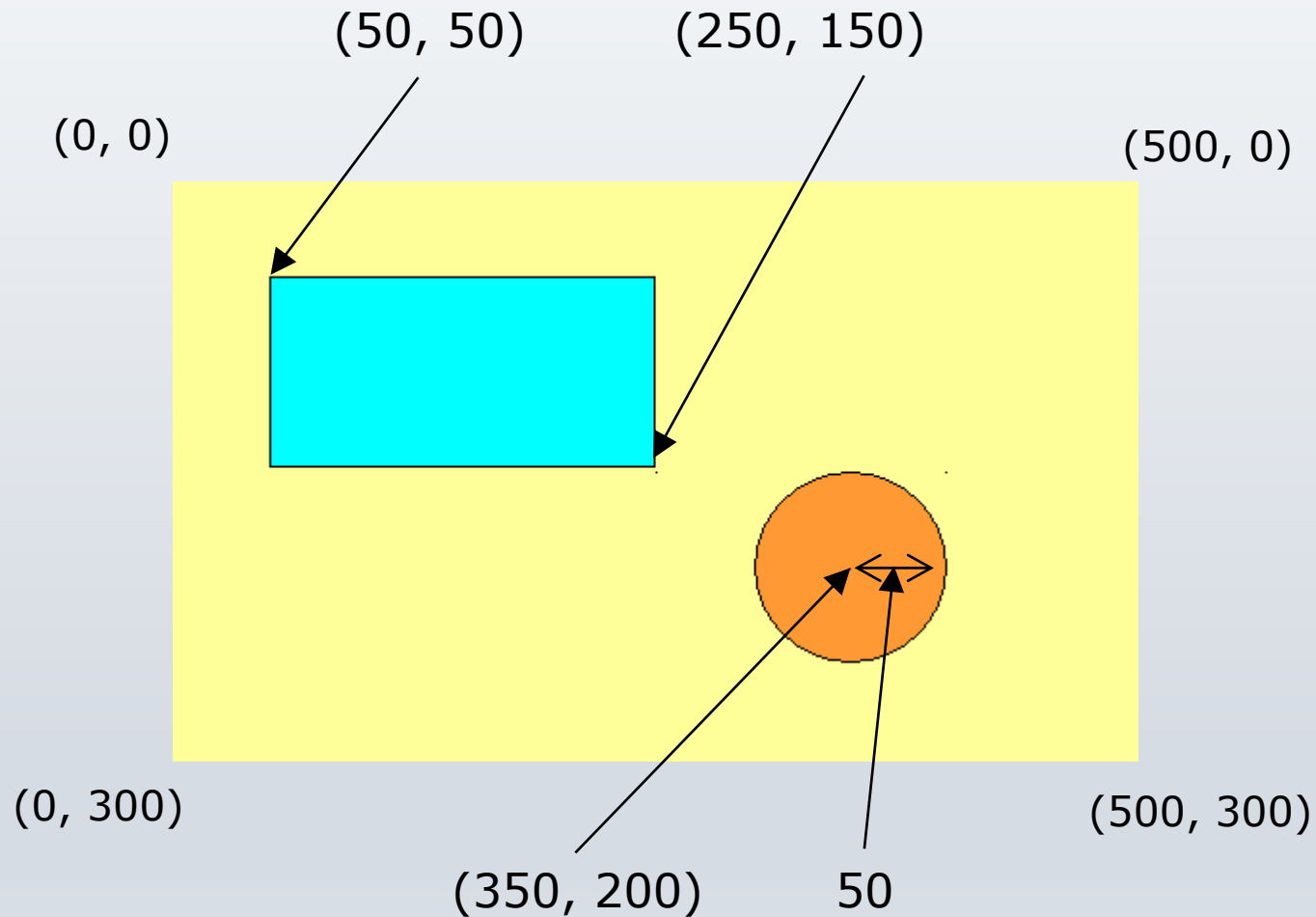
Image maps are images that contain 'hotspots' which are links to other items.

They involve the following elements:

- `<map>` Gives the image map a name
- `<area>` Lists the co-ordinates of the hotspots and the urls of the linked pages
- `<img>` (with the usemap attribute ) tells the browser which image to use

# Create map in Graphics Package

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# Example

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```

```

```
<map name="testone">
```

```
  <area shape="rect"
```

```
    coords="50,50,250,150" href="page1.htm" />
```

```
  <area shape="circle"
```

```
    coords="350,200,50" href="page2.htm" />
```

```
</map>
```

**You can also use `shape="poly"` for polygon. You use the area element to specify the co-ordinates of each of the corners.**

# Favicons

Some websites manage to display a little icon in the address bar of the browser, like this:



A favicon must be saved in the windows .ico format.

This can hold several images – 16x16 pixel version for address bar, and 32x32 pixel version for desktop icons.

Save as PNG and then convert to .ico format.

[www.rw-designer.com/3D\\_icon\\_editor.php](http://www.rw-designer.com/3D_icon_editor.php)

[www.iconcool.com/iconcoolstudio.htm](http://www.iconcool.com/iconcoolstudio.htm)

Must be saved with the name favicon.ico and uploaded to the root directory of the webserver.