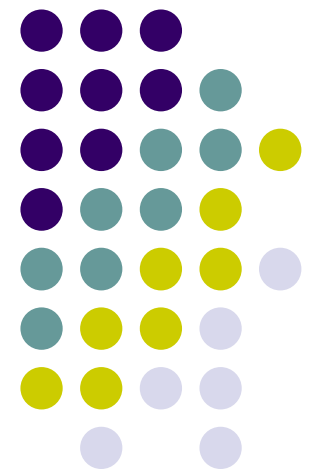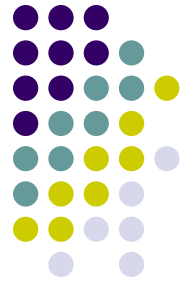# Navigational Tools

Seema Sirpal
Delhi University Computer Centre
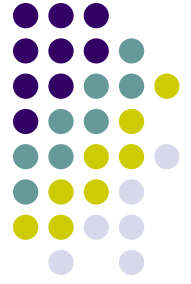
What Are Navigational Tools?

- Allow user to get around a Web site
- Provide orientation to users
- Easily distinguished from content
- Use standard navigational tools
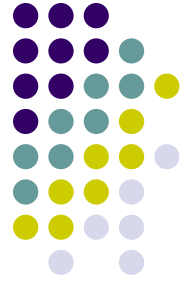
Standard Navigational Tools

- Navigation bars or menus (global and local)
- Home button
- Logos
- Footer
- Search
- Standard and non-standard links

More Standard Nav Tools

- Site map
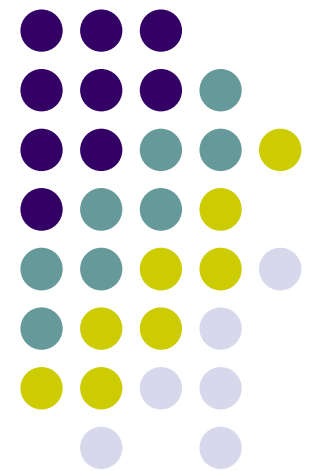- Site index
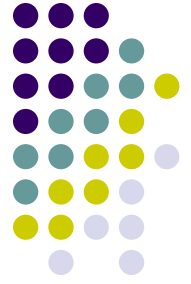- Shortcuts
- Help
- Feedback

Choosing Navigational Tools

- Not all navigational tools are suitable
- Consider each when designing a site

Preparing Images for the Web

Why Use Images

- Images enhance Web sites
- Users expect visually engaging sites
- Images can be used to portray information that would be difficult to explain using only text
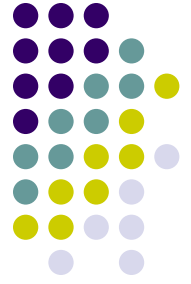- Images can increase the user experience

Image Utilisation

- **Poor utilisation can be very costly**
- **Poor navigation**
- **Increased download time:**
  - Frustrated users
  - Users who suffer a bad experience won't return to the site
  - Damaged reputation

Images and the Web

- **When preparing images for the Web there are a number of important considerations:**
  - Image file format (e.g. GIF, JPG etc)
  - Image file size (bytes)
  - Image dimensions (pixels)
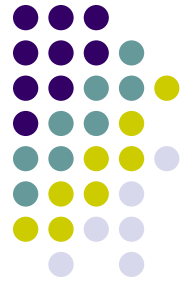 - Number of colours in the image (colour depth)

Image Formats

- **Common formats supported by browsers:**
  - GIF (.gif) - Graphics Interchange Format
  - JPEG (.jpg or .jpeg) - Joint Photographic Experts Group
  - PNG (.png) - Portable Network Graphics

- **In addition, there are image formats that require a browser plugin:**
  - SWF - Flash Movie (ShockWave Flash)
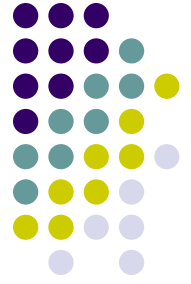 - SVG - Scalable Vector Graphics

JPEG

- **Most suited to:**
    - Photographs
    - images requiring more than 256 colours
    - pictures with continuous tone
- **Good compression ratios (typically 10:1 – 20:1 without visible loss)**
- **Not good at compressing images with large blocks of colour, intense changes of colour and/or sharp edges**
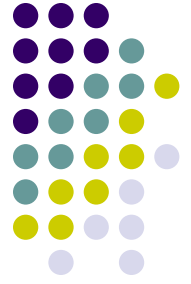
PNG

- **Most suited to:**
    - Photographs
    - images requiring more than 256 colours.
    - pictures with continuous tone
- **Supports 8 and 24-bit colour**
- **Lossless compression**
- **Limited browser support**
    - Microsoft Internet Explorer version 4+
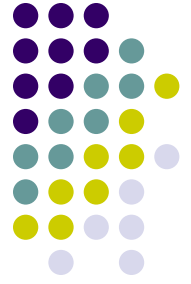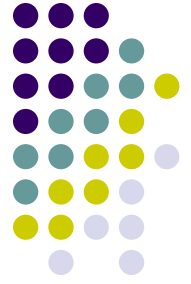   - Netscape Navigator version 4+

GIF

- Most suited to:
  - Graphic/cartoon images
  - Buttons and banners
  - photographic images with limited colour
- GIF has a maximum of 256 colours
- Lossless compression
- GIF supports animation.

File Size (bytes)

- Image file size is determined by:

  - **Image dimensions**
    the number of pixels in the bitmap

  - **Colour depth**
    the number of bits (information) used to save each pixels

Image Dimensions

- The size of Web images is measured in pixels, for example 100px by 150px.

- An image's pixel dimensions determine its on-screen size.

- Print image resolution (usually measured in dots per inch or dpi) is not relevant to Web browsers.

- A Web browser will display an image at its pixel dimensions irrespective of the image resolution.
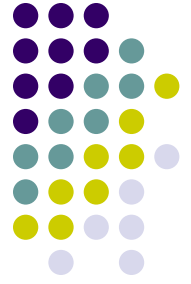
Colour Depth

- **GIF, JPEG and PNG differ in the amount of information (bits) used to save each pixel**

- **More information per pixel means the number of colours available is increased. This is known as the colour depth:**

  - GIF uses 8 bits (1 byte) for each pixel. This results in GIF images having a maximum of 256 colours
  - JPEG uses 24 bits (3 bytes) per pixel and a maximum of 16.7 million colours
  - PNGs can be either 8 or 24-bit
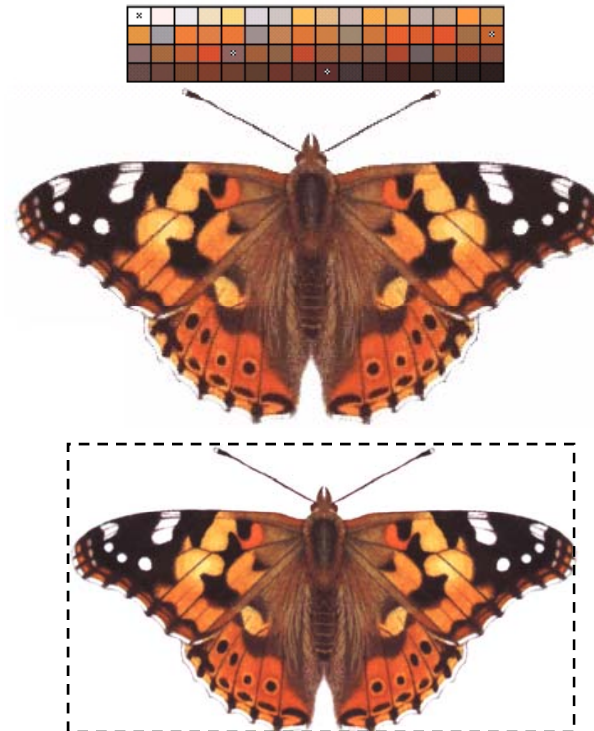
Files Size

- Therefore:
  - An 8-bit, 100 x 100px image will be 10k
  - An 8-bit, 200 x 200px image will be 40k

  - A 24-bit, 100 x 100px image will be 30k
  - A 24-bit, 200 x 200px image will be 120k

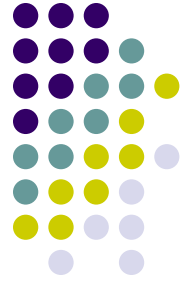# Image Optimisation

- File size (bytes) can be reduced by reducing:
  - Colour depth
    - Palette size
    - Dithering
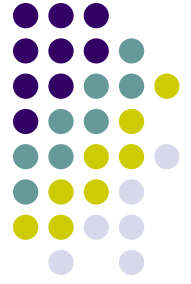
  - Image dimensions
    - Cropping

Images and HTML

- **Images can be incorporated into HTML using:** <img src="ian.gif">
- **Attributes:**
    - align="top", "bottom", "middle", "left", "right"
    - alt="text description of image"
    - border="n"
    - height="n" width="n"
    - hspace="n" vspace="n"
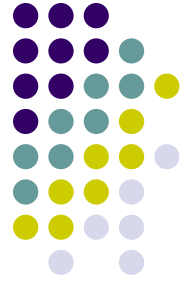   - n is a number, usually pixels

Images and HTML

align:-

- bottom - means that the bottom of the object should be vertically aligned with the current text baseline. This is the default value.

- middle - means that the centre of the object should be vertically aligned with the current text baseline.

- top - means that the top of the object should be vertically aligned with the top of the current text line.

- left - means the image will be aligned to the left of the page

- right - means the image will be aligned to the right of the page

Summary

- Images can increase the user experience
- Poorly used images can frustrate users
- Images can be in bitmap or vector format
- Bitmap formats include: GIF, JPEG and PNG
  - GIF is an 8-bit image
  - JPEG images are 24-bit
  - PNGs can be either 8-bit or 24-bit
- Image optimisation is required before images can be used on the Web

Meta Data

<head>

<meta name="keywords" content="list, of, keywords, separated, by, commas">

</head>