

# More HTML

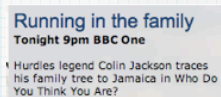
## Images and links

## Tables and lists



```
<h1>Running in the family</h1>
<h2>Tonight 9pm BBC One</h2>

<p>Hurdles legend Colin Jackson
traces his family tree to Jamaica in
Who Do You Think You Are?</p>
```



## So what about images and links to other pages



## So what about images and links to other pages



## Tools required to create Images

### An image editor

- Simple free software - Paint, Image editor
- Professional expensive packages – Coral Draw, Fireworks
- Lots of other choices

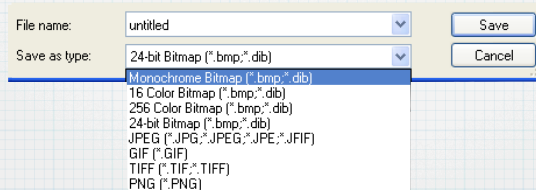
## Paint

- Available on almost all Windows PCs

Example – creating a simple image with text

## Saving and file formats

- Choices about how to save the file
- Various file formats or types



Microsoft Word produces 'Word' format files



Microsoft Excel produces 'Excel' format files



Microsoft Access produces 'Access' format files



Microsoft Paint produces

'GIF' format files  
'JPG' format files  
'BMP' format files





## Microsoft Word produces 'Word' format files

- Word files have hidden content that indicate special formatting and characters
- Not very good at producing plain text files
- Do NOT produce text/HTML files in Word

File name: Doc1.htm  
Save as type: Web Page (\*.htm; \*.html)  
Page title:

## Filenames

- When saving a file, choose a sensible name  
`myfilename.doc`
- 'extension' (after the .) indicates the type of the file
- Added by the software (but may be hidden)
- For the moment – do not put spaces in filenames (why?)

## Saving and file formats

- Choices about how to save the file
- Various image file formats
- What distinguishes them?

## image file characteristics

### Compression



- Lossy (lose information)
- Lossless (keep everything)

### Animation



### Transparency



### Cost - do patents apply?

- Is it possible that we may have to pay to use it

## Saving and file formats

	BMP	GIF	JPEG	PNG
Compression	✗	✓	✓	✓
Patents apply	✗	✗	✓*	✗
Animation	✗	✓	✗	✓
Transparency	✗	✓	✗	✓
Works in Internet Explorer 7+	✓	✓	✓	✓

\* rejected by United States Patent and Trademark Office May 26, 2006

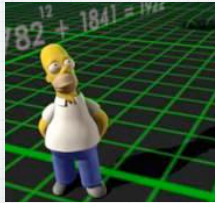
## Most popular formats - GIF, JPEG, PNG

- GIF (graphics interchange format)
- Good at compressing limited ranges of colours
- Best used for cartoons, logos



## JPEG

- JPEG (Joint Photographic Experts Group)
- Good at compressing fuller ranges of colours
- Best used for photos/ images with lots of colours



## PNG - Portable Network Graphics

- Offers many of the features of GIF and JPEG



- Developed to ensure a free graphics format
- Problem - poor support in IE versions prior to IE7

## Example

- Creating and saving a simple image in three formats
- Examining the file name and size

How do we measure sizes in computing?



## KB Kilobytes

- One byte can be interpreted as one letter or character in size

Hello there

↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔

## KB Kilobytes

- One byte can be interpreted as one letter or character in size

Hello there

↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔ ↔

- Would be 11 bytes in size (why not 10?)
- In computing kilo is 1024 (rather than 1000)

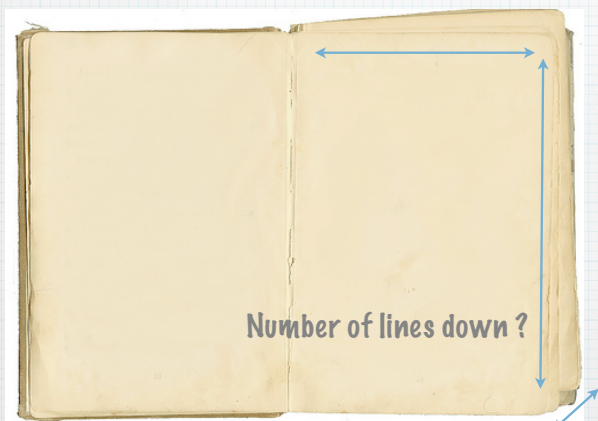
## Exercise



- How many KBs would be required to store an average paperback book?

## Exercise





Number of letters across ?



Number of  
pages ?

## Bytes – a standard measure

- In fact all sizes in computing use Bytes
- Used to measure all filesizes

Word, Excel	
Images	
Web pages	
Music	
Video	

## Bytes – a standard measure

- Megabytes (roughly a million bytes)
- Gigabytes (roughly a thousand million bytes)
- Examples – 2MB, 5MB, 20GB



## Example - Flash Pen drives



- How many paperback books would fit on here?

## Flash Pen drives

- Universal Serial Bus now a common slot on PCs
- Plugs into a slot called a USB port



- Plug in cameras, printers, memory, MP3 players

## Flash Pen drives

- Completely replaced floppy disks (could only fit 1.44MB on these)
- Various sizes and prices



## Flash Pen drives

	2006	2007	2009	2010	2011	2012	2013
128MB	£3.00	-					
256MB	£4.00	-					
512MB	£5.00	-					
1GB	£10	£7					
2GB	£15	£11					
4GB	£56	£22	£6	£6	£4	£4	£4
8GB	-	£41	£10	£10	£6	£5	£5
16GB	-	£88	£18	£17	£10	£7	£7
32GB	-	-	£46	£42	£15	£13	£13
64GB	-	-	£120	£90	£59	£25	£24
128GB	-	-	£280	£140	£140	£60-90	£46
256GB	-	-	-	-	£199	£290	£180
512GB							£538

## BEWARE !!!

- Hard disks, Flash memory can ALL lose data
- Make sure you backup your work (i.e. keep it in two places) - perhaps use the 3-2-1 system (3 backups on 2 different media types in more than one location)
- We don't accept 'my hard disk crashed' as an excuse for a late assignment

## Using images in web pages

- Keep the image and the HTML page in the same location (save to the same place) for the moment

Use the `<img>` tag to point to the image

To change the way a tag behaves when displayed, we need to set the **attributes** of the tag

## Example

- Including a banner called banner.gif

```

```

- This will include (and display) the image where the **<img>** tag is placed
- the **<img>** tag is an example of an element that doesn't require a separate end tag - called an empty element
- Close the tag with **/>**

## Example - imageexample.html

```
<html>
<head>
<title>Text with an image</title>
</head>
<body>
Here is an added image

With some text here

</body>
</html>
```

## Attributes

- Are always added in this style

```
<tag attribute="value" ..>
```

- Some tags need many attributes separated by at least 1 space

```
<tag attribute="value" attribute="value" ..>
```

- The attributes used by a tag vary



## Attributes

- To find them out, use a reference

### On-line

[http://www.w3schools.com/tags/tag\\_img.asp](http://www.w3schools.com/tags/tag_img.asp)

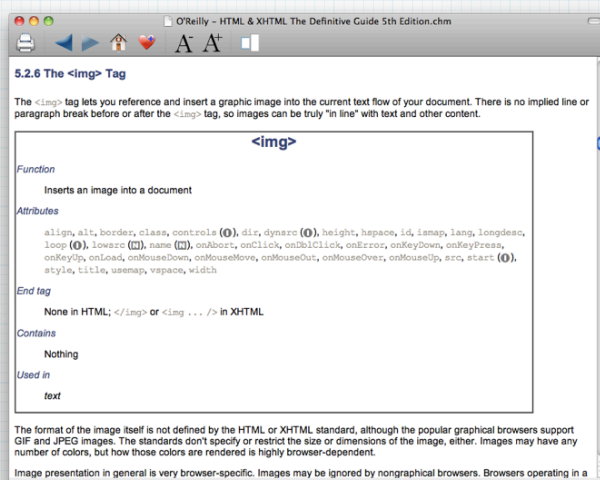
### Book



## Important point

- No-one remembers all these
- New skill required "I don't know, but I know where to look!"

## O'Reilly HTML book, guide to <img> element



## Some of the other <img> tag attributes

- alt = "text"

Text displayed if the image cannot be displayed

- border = "value"

Width of the image around the border

- align = "value"

How the image is aligned in the page next to surrounding text – top, bottom, middle, left or right

## Imageexample2.html with extra attributes

```
<html>
<head>
<title>4GB flash drive</title>
</head>
<body>
Here is a picture of a flash drive

</body>
</html>
```

- Note the effect of changing the border number (to 0, 1, 2) and removing the image from the folder

## Links

- A key part of Hypertext documents
- Links to other documents
- Could be links to our own pages or links to other peoples documents
- Normally text, which when clicked, redirects the user to another page

## Using links in web pages

- **Decide on text that will be the link**

You may wish to look at  
the [next page](#) for  
further information.

## Using links in web pages

- **Decide on text that will be the link**

You may wish to look at  
the [next page](#) for  
further information.

## Using links in web pages

- **Use the anchor tag <a> to wrap the link**

You may wish to look at  
the [next page](#) for  
further information.



...but how do we indicate where to link to?

- Use the href attribute inside the <a> tag

You may wish to look at  
the `<a href="page2.html">next page</a>` for  
further information.

- Will appear on the page like this

You may wish to look at  
the next page for  
further information.

## Notes

- We can link to "our" pages i.e. pages in the same location just by specifying the name of the file
- To link to "outside" files use `http://` before the web address

You may wish to look at  
the `<a href="page2.html">next</a>` page for further  
information. Alternatively you can check the  
`<a href="http://www.bbc.co.uk">BBC web site</a>`

## Notes

Often Web addresses are called URLs

- Uniform Resource Locators

As with the `img` tag, other attributes are available.

## Tables - Attributes

### Recap

#### Table example

An example table showing UK newspapers, cost and their reported circulation

The Times    1.00 396,500  
The Guardian 1.40 193,800  
Daily Mirror  0.50 1,032,150

## Tables

Wrap the whole table in a `<table>` element

`<table>`

The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

`</table>`

## Tables

Wrap each whole row in a table row element `<tr>`

`<table>`

The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

`</table>`

## Tables

Wrap each whole row in a table row element `<tr>`

`<table>`

<code>&lt;tr&gt;</code>	The Times	1.00	396,500	<code>&lt;/tr&gt;</code>
<code>&lt;tr&gt;</code>	The Guardian	1.40	193,800	<code>&lt;/tr&gt;</code>
<code>&lt;tr&gt;</code>	Daily Mirror	0.50	1,032,150	<code>&lt;/tr&gt;</code>
<code>&lt;/table&gt;</code>				

## Tables

Wrap each data item in a table data element `<td>`

`<table>`

<code>&lt;tr&gt;</code>	The Times	1.00	396,500	<code>&lt;/tr&gt;</code>
<code>&lt;tr&gt;</code>	The Guardian	1.40	193,800	<code>&lt;/tr&gt;</code>
<code>&lt;tr&gt;</code>	Daily Mirror	0.50	1,032,150	<code>&lt;/tr&gt;</code>
<code>&lt;/table&gt;</code>				



## Tables

Wrap each data item in a table data element `<td>`

`<table>`

`<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>`

`<tr> <td> The Guardian</td> <td> 1.40 </td> <td> 193,800 </td> </tr>`

`<tr> <td> Daily Mirror</td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>`

`</table>`

## Tables

### Example

#### Table example

An example table showing UK newspapers, cost and their reported circulation

The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

## Tables

To add headings to each column, create a new row ...

`<table>`

`<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>`

`<tr> <td> The Guardian</td> <td> 1.40 </td> <td> 193,800 </td> </tr>`

`<tr> <td> Daily Mirror</td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>`

`</table>`

## Tables

...use table heading element `<th>` round each heading

`<table>`

```
<tr> <th> Name </th> <th> Cost </th> <th> Circ. </th> </tr>
<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>
<tr> <td> The Guardian </td> <td> 1.40 </td> <td> 193,800 </td> </tr>
<tr> <td> Daily Mirror </td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>
</table>
```

## Tables

Giving ..

### Table example

An example table showing UK newspapers, cost and their reported circulation

Name	Cost	Circ.
The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

## Tables - Attributes

Use attributes to change the way the table is displayed

`<... width = "percentage">` To change a table or column width

`<... border = "value">` To see a border

## Tables

### To change the width of the whole table

`<table width="65%">`

```
<tr> <th> Name </th> <th> Cost </th> <th> Circ. </th> </tr>
<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>
<tr> <td> The Guardian</td> <td> 1.40 </td> <td> 193,800 </td> </tr>
<tr> <td> Daily Mirror</td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>
</table>
```

## Tables

### Table example

An example table showing UK newspapers, cost and their reported circulation

Name	Cost	Circ.
The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

### Table example

 **65% of browser width**

An example table showing UK newspapers, cost and their reported circulation

Name	Cost	Circ.
The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

## Tables

### To change the width of individual columns

`<table width="65%">`

```
<tr> <th width="50%"> Name </th> <th width="20%"> Cost </th> <th> .... </th> </tr>
<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>
<tr> <td> The Guardian</td> <td> 1.40 </td> <td> 193,800 </td> </tr>
<tr> <td> Daily Mirror</td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>
</table>
```



## Tables

### To add a border

```
<table width="65%" border="1pt">
<tr> <th width="50%"> Name </th> <th width="20%"> Cost </th> <th> ....
<tr> <td> The Times </td> <td> 1.00 </td> <td> 396,500 </td> </tr>
<tr> <td> The Guardian</td> <td> 1.40 </td> <td> 193,800 </td> </tr>
<tr> <td> Daily Mirror</td> <td> 0.50 </td> <td> 1,032,150 </td> </tr>
</table>
```

## Tables

### Table example

An example table showing UK newspapers, cost and their reported circulation

Name	Cost	Circ.
The Times	1.00	396,500
The Guardian	1.40	193,800
Daily Mirror	0.50	1,032,150

## Bullet point lists

### Unordered list (no order or number)

- Here is an example of two points
- Bullet points on the left

## Bullet point lists

### Ordered list (with number)

1. Here is an example of two points
2. Bullet points on the left

## Bullet point lists

### Ordered list (with letters)

- A. Here is an example of two points
- B. Bullet points on the left

## Bullet point lists

### Ordered list (with alternatives)

- i. Here is an example of two points
- ii. Bullet points on the left

## Unordered lists

Mark up the whole unordered list

- use `<ul>` and `</ul>`

```
<ul>  
Homer Simpson  
Bart Simpson  
Lisa Simpson  
</ul>
```

## Unordered lists

Now mark up each list item

- use `<li>` and `</li>`

```
<ul>  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ul>
```

## Unordered lists

Will give:

- Homer Simpson
- Bart Simpson
- Lisa Simpson

## Ordered lists

Change the `<ul>` elements for ordered list elements  
`<ol>` and `</ol>`

```
<ol>  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ol>
```

## Ordered lists

Will give:

1. Homer Simpson
2. Bart Simpson
3. Lisa Simpson

## Lots of options with Ordered lists

- Can change the starting number or the type of numbering used
- Use the `start` and `type` attributes in the `<ol>` tag



### Ordered lists with attributes

```
<ol start = "3">  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ol>
```

Will give:

3. Homer Simpson
4. Bart Simpson
5. Lisa Simpson

### Ordered lists with attributes

```
<ol type = "A">  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ol>
```

Will give:

- A. Homer Simpson
- B. Bart Simpson
- C. Lisa Simpson

### Ordered lists type values

- type=" " can be any of the following

type values as follows:

- |   |                           |
|---|---------------------------|
| A | Capital Letters           |
| a | Lower case letters        |
| I | Capital Roman Numerals    |
| i | Lowercase Roman Numerals  |
| 1 | Arabic Numerals (default) |

### Ordered lists with attributes

```
<ol type = "i">  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ol>
```

Will give:

- i. Homer Simpson
- ii. Bart Simpson
- iii. Lisa Simpson

### Ordered lists with attributes

```
<ol type = "a" start="5">  
<li>Homer Simpson</li>  
<li>Bart Simpson</li>  
<li>Lisa Simpson</li>  
</ol>
```

Will give:

- e. Homer Simpson
- f. Bart Simpson
- g. Lisa Simpson