An Introduction to HTML

What Is HTML?

By

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Overview

Following is a brief introduction of HTML (Hyper Text Mark-up Language) used to create and maintain web pages. Though it must be emphasised, that many developers tend to use professional applications, namely, Dream-weaver 3, Flash 5, Fireworks 5 that make life much more simpler when creating and managing web sites.

Introduction

Web pages are written using HTML (hypertext Mark-up Language), which consists of plain text, with certain formatting and control commands embedded using LESS THAN and GREATER THAN symbols, eg. <hr> . A page can include text, links to graphics files in .gif or .jpeg format, links to other sections of the page, links to other web pages (your own or other people's) and links to other Internet resources, eg. e-mail. Therefore your text can be broken up with pictures and click-on links that take you automatically to other sections or pages, or load up the viewer's email software, with your email address automatically inserted.

Although HTML is an agreed standard, not all browser programs (Internet Explorer or Netscape) will behave in exactly the same way, when displaying your pages, so do expect some variation! For example, having bold and italic text is not included in the original standard. Some browsers will display the text as both bold and italic, whilst others will display one style and ignore the other. As new HTML standards appear, older browsers will not recognise all the enhanced features that are offered.

To create a page you need a text editor or HTML editor, an Internet browser such as Netscape or IE (Internet Explorer), to test the page and see what it will look like once developed.
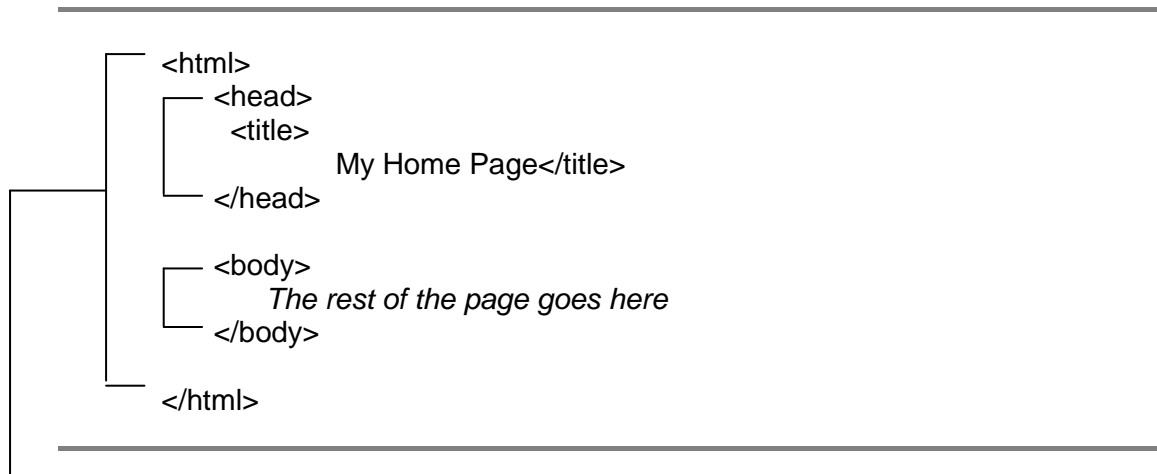
Software Required

A web page could be written using an ordinary text editor such as Windows Notepad or Microsoft Word. Though, a specialised HTML editor does make the task easier by helping you put in the formatting commands and linking with your browser to allow you to test your pages at the press of a button. Numerous applications are available to make your life easy when creating web pages, namely Front Page or even HTML Assistant that is available free of charge (shareware).

All your pages may be tested from your computer. If you develop your pages using a DOS based system, then your pages will have a .HTM filename extension. Once tested, and your ready to put this onto the WWW you will need to change the extension name to .HTML.

HTML An Introduction

Basic Page Structure

The page is enclosed with *html* tags, with the *head* tags defining the headings and the *body* tags marking the rest of your page, something like this:

```
<html>
   <head>
      <title>
              My Home Page</title>
   </head>

   <body>
         The rest of the page goes here
   </body>

</html>
```

Tags allow the page to be divided into sections, such as header information and main body. Sections always start as *<tag name>* and end with *</tag name>*. The HTML page starts with *<html>* and ends with *</html>*.
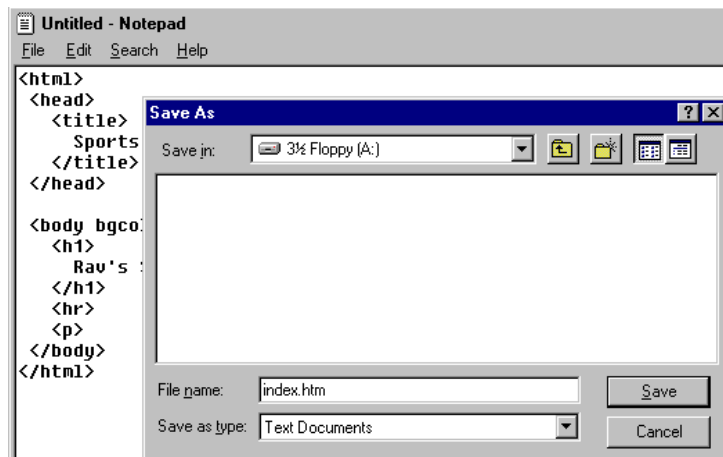
Your home page (the first page that is loaded when people visit your area) must be called index.html. This often acts as a menu, with a list of options linking to your other pages.

Type the following example in Notepad ; Note the indentation for better readability.

```
<html>
 <head>
   <title>
     Sports Cars
   </title>
 </head>

 <body bgcolor=#FFFFF0>
   <h1>
     Rav's Sports Car Arena
   </h1>
   <p>
   <hr>
 </body>
</html>
```

Save the document as Index.htm

Now close Notepad, and check if the file has been saved. What you will see is an icon identical to;

Double Click on to this icon, what happens?

The IE (Internet Explorer) loads the file index.htm, identical to that shown below;

```
<html>
  <head>
    <title>
      Sports Cars
    </title>
  </head>

  <body bgcolor=#FFFFF0>
    <h1>
      Rav's Sports Car Arena
    </h1>
    <p>
    <hr>
  </body>
</html>
```

The *title* tags enclose the page's title, but this does not appear on your page. It is displayed on the title bar of the viewer's browser and search programs elsewhere use it, to determine what your page is about, so it should contain key words that are indicative of the contents.

The *p* command is one of the few that is used without a corresponding */p* tag. It is used to mark the end of a paragraph. *hr* is another, it stands for *horizontal rule* and produces a line across the page, to rule off between sections.

Multiple spaces and normal line breaks are stripped out by Internet browsers, although they can be used when you write your HTML files, to make them more readable during the construction process. You can force a line break by using *
* .

The *h1* tag specifies the type of heading. There are six levels of headings, **h1** to **h6**. Headings are usually shown in bold with **h1** having the largest font size and **h6** the smallest.

The *head* tags clearly specify the page headings. The <body bgcolor=#FFFFF0> specifies the background colour as cream. The first 2 characters (FF) control the amount of red, the next 2 (FF) the amount of green and the last 2 (F0) the amount of blue.
An alternative way of specifying a colour would be to type the name;

<body bgcolor=orange>

Specifying the colour name as opposed to the hexadecimal number does have limitations in terms of the number of colours available.

The F represents 15 in hexadecimal, hexadecimal digits being 0,1,2,3,4,5,6,7,8,9,A,B,C,D,E and F. (Hexadecimal a number system using base 16, where decimal is a number system using base 10 and binary is a number system using base 2.)

Alternatively, if you want to create your own background pattern, you can do this by creating a .gif file in the same directory as the page. Suppose you had a background design called *backimage.gif* ; you will need to replace the following line;

<body bgcolor=#FFFFF0>

With   <body background=backimage.gif>

Your design will then be tiled across the page.

Content Page Based on Ferrari

Here is an example contents paragraph, type this into notepad and save it as a htm file, what are the results;

```
<h2>Contents</h2><p>
<ul>
<h3><a href="#Company"><li>Company Information</a></h3>
<h3><a href="#History"><li>History</a></h3>
  <ul>
  <h4><a href="#1940s"><li>1940s</a> (Classical 1940 Ferraris)</h4>
  <h4><a href="#1990s"><li>1990s</a> (Current Models)</h4>
  </ul>
<h3><a href="#Future"><li>Future of Ferrari</a></h3>
<h3><a href="#Rav"><li>Author's Background</a></h3>
</ul><p>
<hr>
```

In this particular example specific tags have been excluded, what are they? What would happen had you included them?

The *h2*,*h3* and *h4* tags are specifying different levels of heading, to give different sizes of text. There are six headings, *h1* to *h6*. The *ul (UL)* tags, as used above, set up two, nested, unordered lists. The inner list is indented, showing the structure of the page. The *a* tags (anchors) specify links to other net resources, in this case to other sections of the same page. The text between the *li* and */a* tags appears in a highlight colour and the viewer's cursor will change as it passes over it, to show that it contains a link.

When a viewer clicks on the first item in the contents list, their browser will jump to the place in the text where the name *Ferrari* is embedded, as shown below:

<h3>Company Information</h3>

Ferrari – the legend goes on and on...(more text)...
The *li* tag, used within an unordered list, will produce a bullet character, to create a bulleted list.

The content paragraph shown above would appear as:

Contents

- **Company Information**
- **History**
    - o **1940s (Classical 1940 Ferrari's)**
    - o **1990s (Current Models)**
- **Future of Ferrari**
- **Author's Background**

Note this particular example will not let the browser jump to any other text (as no links have yet been included in the HTML). This area is covered later on under Creating Hyperlinks in Word.

How could you improve the layout of the code (Maybe indentation?)

Text Styles

The standard text styles can be switched on and off by surrounding the text with the appropriate <> and </> pair. Type the following and see what the outcome is, remember to save the file as a htm;

```
<b>This would be seen in bold</b> <br>
<i>This would be seen in italics</i>
<u>This would be seen underlined</u>
```

The result should be like;

This would be seen in bold
*This would be seen in italics*This would be seen underlined

Note: Not all browsers support underlining.   The <br> tag creates a line break.

Including Graphics

The example below would insert the graphics file *logo.gif*, into a page, type this, save it and see what happens?

```
<center>
<img align=middle src="logo.gif" ALT="Ravs Logo">Graphics caption here<p>
</center>
```

The *src=* section specifies the name of the graphics file to be inserted into the page. This file must be in .gif format and must be stored in the same directory as the page which refers to it.
The *align=* section specifies that the text *Graphics caption here* will be lined up with the middle of the graphic. Alternatively you can use *top* or *bottom*.
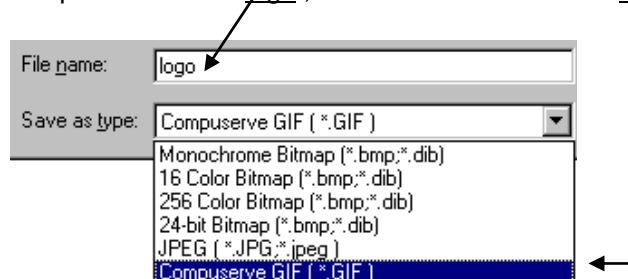The *ALT=* section specifies the text that will be shown if a browser is unable to show the graphic.
The *center* tags place the text and graphics that come between them, in the middle of the page. Note the American spelling of centre.

The end result would look like this:

Graphics caption here

Only the caption is displayed, why is that? The answer to that is, that no picture called logo.gif is present. Try creating a picture in paint and call it logo ; remember to save it as a GIF file.

File name:	logo
Save as type:	Compuserve GIF (*.GIF)

Monochrome Bitmap (*.bmp;*.dib)
16 Color Bitmap (*.bmp;*.dib)
256 Color Bitmap (*.bmp;*.dib)
24-bit Bitmap (*.bmp;*.dib)
JPEG (*.JPG;*.jpeg)
Compuserve GIF (*.GIF)

You should now be able to view your GIF file (picture) from the Internet Explorer, if you click on the *htm* file where reference is made to it.

Exercise

Create an image or download it from the Internet; Make sure the format is gif or jpeg. Subsequently include this in your HTML code, and see what the outcome is?

Links to Your Home Pages

So far web pages that have no links. Following is a basic insight in constructing links. Links basically allow you to click on specific areas of a page, which subsequently display another page or jump to a specific part of a page.

Links to home pages are easy to achieve. If you are linking to one of your own pages, then make sure it is in the same directory as the calling page and use an anchor like the one below, where Ferrari*.htm* is the file name of the page that needs be to link to.
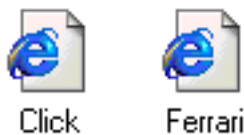
```
<a href="Ferrari.htm">Click here to jump to a page about Ferrari's...</a>
```

Note the use of .HTM file name extension. Once on an Internet server, it would be a necessity to use the four-letter extension (HTML).
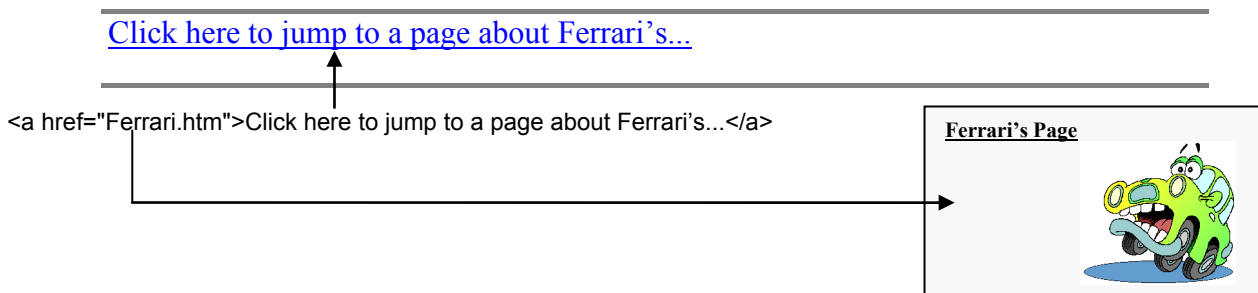
Save this as **Click.htm**

Now create another web page similar to that shown below (Ferrari's Page), the graphics need not be the same in actual fact you can type any thing you like. Save this as **Ferrari.htm**

You should have two files; Click.htm and Ferrari.htm;

Click   Ferrari

Subsequently, double click on the file called click. What happens?

This would appear as:

Click here to jump to a page about Ferrari's...

Click here to jump to a page about Ferrari's...

Ferrari's Page

Clicking on the hyperlink will automatically take you to the Ferrari page. Try including additional pages and link them to your CLICK.htm file.
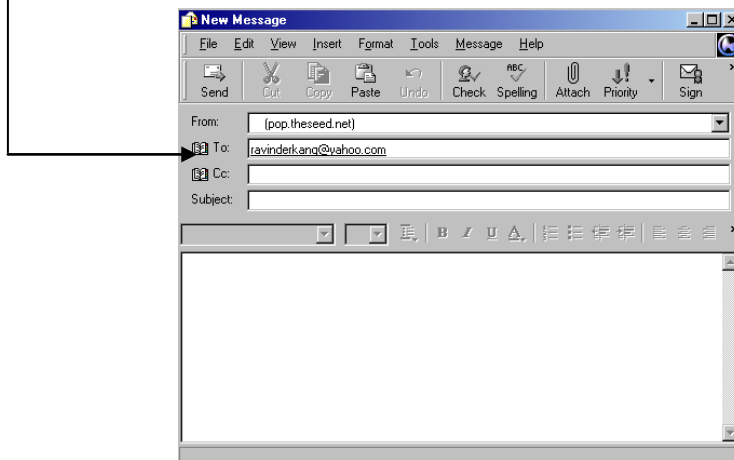
Links to Other Pages and E-Mail

To link to **other web pages**, must include the full web path name (better known as its URL, or Universal Resource Locator), e.g. the following URL is used to link to a very good introductory HTML guide.

Create a htm web page with the following content; what happens?

```
<a href="http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html">
A Beginners Guide to HTML</a>
```

How would you include a link to www.yahoo.com?

Have you ever wondered when you click on email at some sites, it automatically loads the email program, along with that persons email address?

The *mailto* anchor is used to call up the viewer's **e-mail** program and specified email address. The enclosed text *Rav* will appear in a highlighted colour and the cursor will changes as it passes over this text, to indicate that it is a link. Following example demonstrates this;

```
This page was created by
<a
href="mailto:ravinderkang@yahoo.com">Rav</a>
```

href refers to "Hypertext Reference" or the location of file to be loaded

This will appear to look like:

This page was created by Rav

Clicking on Rav will display a New Message window, similar to that shown above.

Numbered Lists

To produce a numbered list, you use the ordered list *ol* tags, together with the *li* tag for each numbered item, as below:

```
A Ferrari for every decade:<p>
<ol>
  <li>1930s
  <li>1940s
  <li>1950s
  <li>1960s
</ol>
<p>
```

This would appear as:

A Ferrari for every decade:

1. 1930s
2. 1940s
3. 1950s
4. 1960s

Special Characters

The characters that are used to embed HTML commands (<,>,&, and ")cannot be used directly, to appear on screen along with the rest of your text. If you want to use them you must use special sets of characters, called escape sequences.

For < use the sequence: <
For > use the sequence: >
For & use the sequence: &
For " use the sequence: "

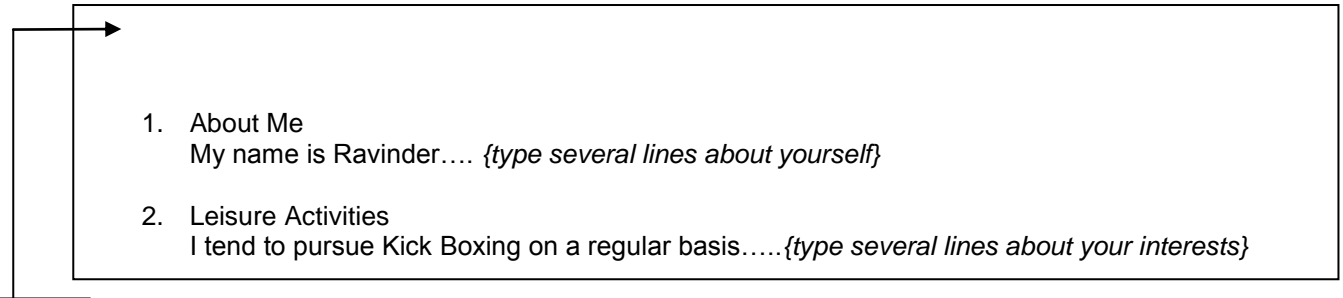Don't forget to include the semi-colon at the end of each sequence.

So to produce this:

<center>

You will be required to enter;

<center>
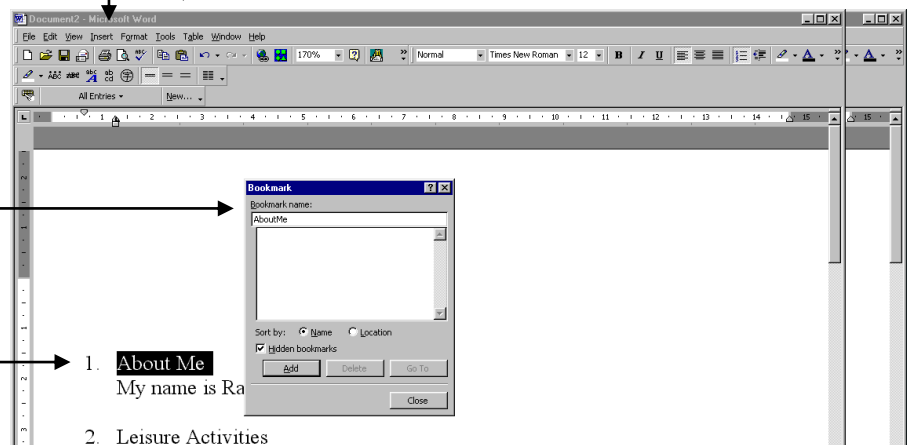
Creating Hyperlinks in Word

Coloured and underlined text or a graphic that you click to go to a file, a location in a file, an HTML page on the World Wide Web, or an HTML page on an intranet. Word has a feature, which allows you to create hyperlinks simply and quickly.

1. Create a word document similar to that shown below;

> 1. About Me
>   My name is Ravinder…. *{type several lines about yourself}*
>
> 2. Leisure Activities
>   I tend to pursue Kick Boxing on a regular basis…..*{type several lines about your interests}*

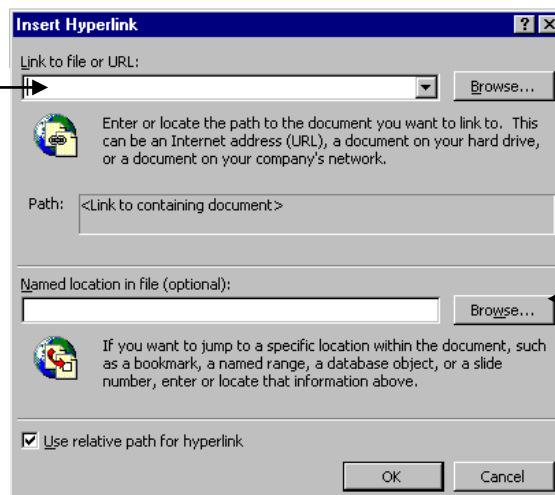2. Next insert a few blank lines at the start of your document.
3. Place the cursor next to "1.AboutMe"
   Next CLICK on Insert followed by Bookmark;
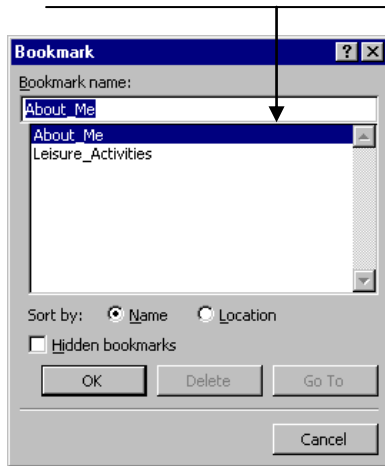   Type AboutMe followed by Add.

4. Remember you cannot type a bookmark name with a space! This can be over come by replacing spaces by an underscore "_".

5. Go to the start of your document, press CTRL+K. The following window will be displayed select Browse under Named location in file;
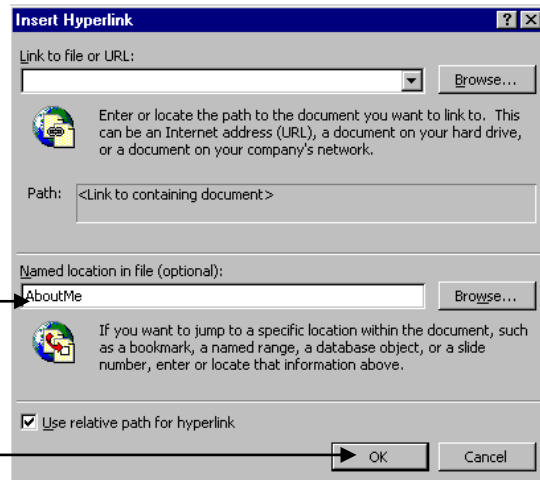
You may create a hyper link to another file using Link to file or URL (Uniform Resource Locator).
This feature allows you to link to other web pages, or web sites.

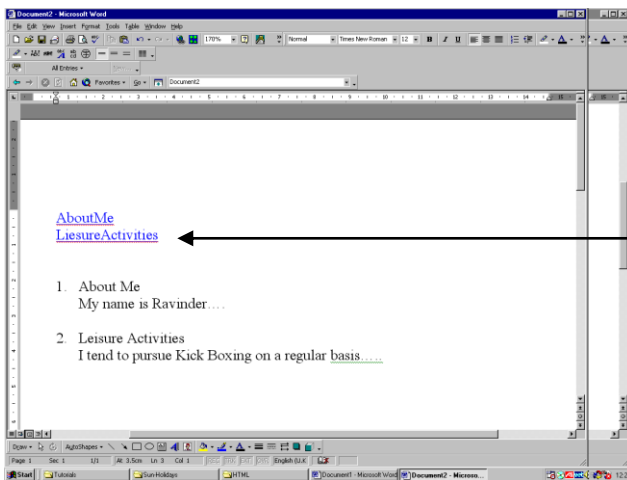6. Now select the named bookmark, in this case AboutMe. CLICK OK;

7. Finally the Insert Hyperlink window will be displayed with the named location; CLICK OK to finish

8. Create a hyperlink for the Leisure Activities bookmark.
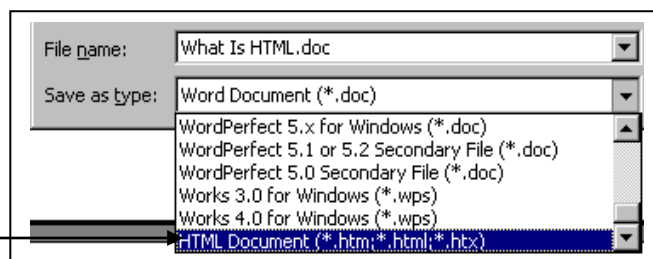
Your document should look like;

By clicking on AboutMe hyperlink will take you to that part of the bookmark. Try it?

 Finally, you will need to save the document as an HTML page. CLICK on File, select save as HTML give it a name, finally CLICK SAVE.

Alternatively you may select *File, Save as*… and subsequently type the filename and file type as a HTML document;
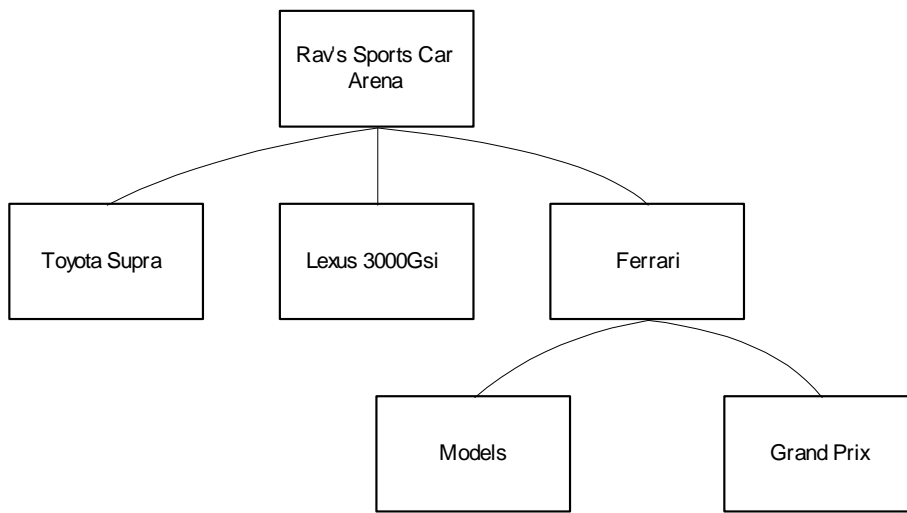
Web Page Design

Before you start designing your pages you will no doubt need to have a basic idea, what your site is going to be about. Think of some thing that may interest you, it could be anything, the following list shows some examples;
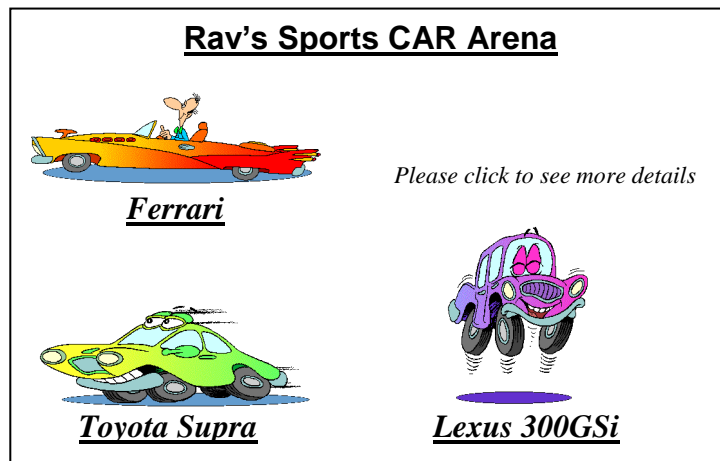
Hobbies   – You may have a specific interest; (Football, Dancing, Martial Arts etc)
About yourself – A site about any special interests, pictures of you or your family, and may be your CV.
Business Idea   – You may want to sell some thing over the Internet?

The list is enormous!

Having decided what your web site will be based on, you will next need to design the structure. This refers to the number of pages your site may have and possibly what content each page will focus on. The following example represents a basic structure of a web site based on cars.

Following this the design of each page will need to be hand drawn. Following is an example of "Rav's Sports Car Arena" page (index.htm).

Remember pictures alone won't make your page informative, combination of pictures and text will need to be included. When you have designed your site structure and page designs, you will next need to bring all your information together (remember pictures and text!), so that you could start the actual development.

Note; all your files will need to have an extension of .HTM in order to be viewed through the Internet Explorer and HTML when transferred to a server.

Additional Features in HTML

Numerous references to HTML are available on the www; simply typing HTML at a search engine (yahoo.com) will display a string of sites where you could further develop your skills in HTML.
A number of other commands and tags are available to create more presentable web pages;

Horizontal Lines

Having used the <hr> tag (horizontal line); you could further improve the horizontal line, try typing the following and see what the outcome is;

```
Line with 50& width
<hr width=50%>
<hr width=50% size=10>
<hr width=50% size=10 align=right>
<hr width=50% size=10 align=right noshade>
```

Marquees

Marquees allow text to scroll across the page; following are a number of different forms of marquees. Type them and save the file as Marquee.htm, what happens when you view it in the browser? Can you distinguish which tags do what?

```
<marquee>A Marquee For Every Page</marquee>
<marquee bgcolor="Red"> A Marquee For Every Page </marquee>
<marquee width=200> A Marquee For Every Page </marquee>
<marquee behavior="alternate"> A Marquee For Every Page </marquee>
<marquee behavior="slide"> A Marquee For Every Page </marquee>
<marquee direction="right"> A Marquee For Every Page </marquee>
```

Different fonts could also be included using HTML; the following example illustrates the usage of the Comic San MS font, size 20; Other fonts could be included if required

```
<marquee>
<font face="Comic Sans MS" size=20 color="Red">
Comic San MS Font in RED </font>
</marquee>
```

Music

To make a music file play when clicked, you simply link it using the following tag, where "filename.mid" is the full name of the sound file you are using, for example, "bhangra.mid" or "soul.wav".
If your background music is a midi file, then you cannot get a foreground midi file to play when requested, as your midi player will be busy playing your background music. However, a foreground wav file can play over a background midi.

 Play Miles from Chicago!

Refers to the name of your mid or wav file (e.g. Bhangra.mid or soul.wav)

This will appear as;   Play Miles from Chicago!

Tag Overview

Name	Tag	Description
Body	**<BODY>**	*Defines the main portion of an HTML document. All material between the BODY tags is shown in the browser display window*
Boldface	**<B>**	*Causes text to appear as boldfaced.*
Header	**<HEAD>**	*Defines the header information for a document, such as the TITLE (required) and any other header elements.*
Headings	**<H1> - <H6>**	*Text, which is defined as a heading, is separated from other text and usually displayed in a different style so as to make its special status obvious. Section titles and even document names are the usual uses for headings.*
Horizontal Rule	**<HR>**	*Creates a line that runs the width of the browser window. The appearance of a horizontal rule varies by browser.*
HTML	**<HTML>**	*Defines an HTML document*
Image	**<IMG>**	*Causes an image to be placed in the HTML document at the point where the tag occurs. The graphic file's location is specified using the SRC attribute. Other commonly used attributes are ALIGN and ALT.*
Italics	**<I>**	*Causes text to appear as italic*
Line Break	**
**	*Forces the current line of text to be ended at the point where the tag occurs and any subsequent text or HTML elements to be displayed beginning at the beginning of the next line on screen.*
Ordered List	**<OL>**	*Defines a list of items which are automatically ordered; typically, this is a sequential numbering from one to the number of list items.*
Paragraph	**<P>**	*Defines a section of text as being a paragraph. The closing tag (</P>) is technically optional, but its use is strongly recommended.*
Title	**<TITLE>**	*Defines the title of the document, which will appear in the history list and any bookmarks, which are set.*
Underline	**<U>**	*Causes text to be underlined. Not supported by all browsers.*
Unordered List	**<UL>**	*Defines a list of items which are automatically marked with a "bullet"; typically, this is a solid disc or asterisk.*
Background colour	**Bgcolor={Color}**	*Allows background colour to be defined within the BODY tag*
Background image	**Backimage={image}**	*Back ground images/patterns defined within the BODY tag.*