

05 Using Tables in HTML

Tables in HTML are intended to be used in much the same way that you'd use a table in a word-processor. ie. to layout text or graphics in an organised tabular format in your HTML document.

1 Table Tag

HTML tables always begin and end with a table tag. E.g.

```
<TABLE>    </TABLE>
```

The table tag itself may include certain attributes that control how the whole table will appear. These attributes are listed below:

ALIGN=	This specifies the horizontal alignment of the table. The possible values are left, center and right, with left being the default. The alignment attribute is sometimes left out in favour of aligning the table by enclosing it in a <DIV> or <CENTER> tag but using the ALIGN attribute is preferable.
BGCOLOR=	Sets the background colour for the table, using either a colour name (eg black), or by using a hexadecimal colour code (eg #FF00FF). Introduced with Netscape Navigator version 3, older browsers will ignore this attribute.
BORDER=	Controls the thickness of the line around the table and its cells. Setting this attribute to 0 can hide the border. Most browsers will default to a border width of 0, though some older browsers will default to a thin border appearing. Borders will not appear around empty cells unless there is a non-breaking space (blank space) in the cell. I.e.
CELLPADDING=	The amount of blank space between the cell contents and the edge of the cell.
CELLSPACING=	The amount of blank space between cells in the table. In most word-processor or desktop publishing programs, table cells share borders with their neighbours. In HTML they are each separated by a small space.
WIDTH=	The width of the table can be specified by stating the number of pixels (eg 500 pixels wide) or by specifying how much of the available space will be taken up by the table (eg 80%)

An example of a table tag with attributes:

```
<TABLE ALIGN="left" BGCOLOR="yellow" BORDER="0" CELLPADDING="1"
CELLSPACING="2" WIDTH="80%">
```

In this instance, our table will be aligned to the left, it will have a background colour of yellow, it will have no visible border, it will have a small amount of blank space between each cell, a small amount of blank space around the outside of each cell and it will take up 80% of the available width.

Within the table itself there are 3 sections. The table caption, the table rows and the table cells.

The caption tag, usually placed after the opening table tag, provides a caption to be displayed above or below the table. It is not commonly used and is often left out. The only attribute of the caption tag is `ALIGN=` which determines if the caption will be displayed at the “top” or “bottom” of the table. Eg

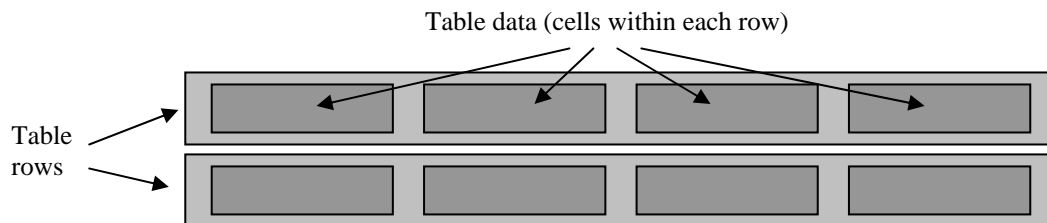
1.1 Caption Tag

```
<CAPTION ALIGN="top">Type the table's caption here</CAPTION>
```

Note It is essential to close your table with a `</TABLE>` tag. Leaving this out will mean that your table won't appear in some browsers (eg some versions of Navigator).

Apart from the table caption, the other elements of a table that need to be defined are the rows and the cells within each row.

E.g.



1.2 Table Row Tag

Rows are defined using the table row `<TR>` tag. The closing `</TR>` tag may be omitted since a new `<TD>` tag implies that the previous row has ended, though it is usually included. It has two attributes:

`ALIGN=` Sets the default horizontal alignment for contents of the cells within the row (`left`, `center` or `right`)

`VALIGN=` Sets the default vertical alignment for contents of the cells in the row (`top`, `middle` or `bottom`)

1.3 Table Data Tag

Within each row, the cells need to be specified with the table data `<TD>` tag. Like the table row tag, the closing tag for table data can be left off. The following attributes may be used:

<code>ALIGN=</code>	Sets the horizontal alignment for the contents of the cell (<code>left</code> , <code>center</code> or <code>right</code>). Left is the default.
<code>BGCOLOR=</code>	Sets the colour of the cell's background (overrides the table background colour)
<code>COLSPAN=</code>	Makes the cell span the specified number of columns. This is similar to merging the cell with the cells to the right. Eg <code>COLSPAN=3</code> means that this cell will be merged with the next 2 cells. You won't need to put in <code><TD></code> tags for the merged cells.
<code>HEIGHT=</code>	Specifies the height (in pixels) for the cell. Other cells in the same row will use the same height. Be careful not to specify different heights for different cells in the same row.
<code>NOWRAP</code>	Prevents the text in a cell from wrapping on to a new line when there is insufficient space.
<code>ROWSPAN=</code>	Merges the cell with the cells below with the value representing the number of rows spanned. Similar to the <code>COLSPAN</code> attribute.
<code>VALIGN=</code>	Sets the vertical alignment for the contents of the cell (<code>top</code> , <code>middle</code> or <code>bottom</code>). Middle is the default.
<code>WIDTH=</code>	Sets the width of the cell in pixels or % of the table's width. Other cells in the same column will take on the same width. Be careful not to specify different widths for different cells in the same column. It is also a bad idea to have a row of cells with widths that add up to a different amount than the table width. A good idea is to leave the width for the last cell blank so it can use whatever space is leftover from the width specified in the <code><TABLE></code> tag.

You can optionally specify headings for the table columns using the `<TH>` tag. This is placed in a table row at the top of the table and can be used with the same attributes as the `<TD>` tag. Using the `<TH>` tag for the cells in the first row of the table will normally mean they will be shown in a different font. It also makes it easier for speech-based browsers to read the table for sight-impaired visitors to your site. Unlike `<TD>`, the default alignment for a `<TH>` tag is centre.

Note: Some browsers allow you to specify a background graphic in your <code><TABLE></code> tag or <code><TD></code> tag as you would in your <code><BODY></code> tag. However this is not a part of the W3C HTML specification and is unsupported in many older browsers.
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2 Sample Table

An example of a table is shown below along with the HTML that would be used to create the table. Note the use of indentation. Many people like to use indentation such as this to make the HTML easier to read and to make it easy to match up starting and ending tags.

The table has a regular border, a small amount of cellpadding, is 80% of the page width and is centre aligned (with US spelling of course!). All row content has been aligned to the top using the TR attributes. Each column is 25% of the table width.

Table Heading Cell Spanning 4 Columns			
Normal cell	Cell spanning 2 columns		Normal cell
Cell spanning 3 rows with a gray (US spelling) background	Normal cell	Normal cell	Normal cell
	Normal cell	Cell spanning 2 rows and 2 columns	
	Normal cell		

```

<TABLE CELLPADDING="2" ALIGN="center" WIDTH="80%">
  <TR VALIGN="top">
    <TH COLSPAN="4">Table Heading Cell Spanning 4 Columns</TH>
  </TR>
  <TR VALIGN="top">
    <TD WIDTH="25%">Normal cell</TD>
    <TD COLSPAN="2">Cell spanning 2 columns</TD>
    <TD WIDTH="25%">Normal cell</TD>
  </TR>
  <TR VALIGN="top">
    <TD ROWSPAN="3" BGCOLOR="gray">Cell spanning 3 rows with a
    gray (US spelling) background</TD>
    <TD WIDTH="25%">Normal cell</TD>
    <TD WIDTH="25%">Normal cell</TD>
    <TD>Normal cell</TD>
  </TR>
  <TR VALIGN="top">
    <TD>Normal cell</TD>
    <TD COLSPAN="2" ROWSPAN="2">Cell spanning 2 rows and 2
    columns</TD>
  </TR>
  <TR VALIGN="top">
    <TD>Normal cell</TD>
  </TR>
</TABLE>

```

1 cell in each column used to set the column width

columns</TD>

Exercise 1**Creating a basic table**

We will use what has been covered so far to create a basic table

- 1 Start your HTML editor if it is not already running and open the file table1.html
- 2 In the body section of the document (between the <BODY> and </BODY> tags), enter the following HTML. As you enter the HTML, think about what you are typing and try to picture how each bit of HTML will affect the table. You can leave out the comment tags <!--! --> if you like. They are only there to identify the sections of the table.

```
<TABLE CELLPADDING="2" CELLSPACING="1" WIDTH="70%" BORDER="1" ALIGN="center">
```

```
<!--Caption for the table-->
```

```
<CAPTION ALIGN="top"><FONT SIZE="5"><B>Price list</B></FONT></CAPTION>
```

```
<!--this row contain our headings with a grey background-->
```

```
<TR>
```

```
<TH BGCOLOR="#C8C8C8" WIDTH="100" ALIGN="left">Name</TH>
```

```
<TH BGCOLOR="#C8C8C8" ALIGN="left">Description</TH>
```

```
<TH BGCOLOR="#C8C8C8" ALIGN="right" WIDTH="50">Price</TH>
```

```
</TR>
```

```
<!--first row-->
```

```
<TR>
```

```
<TD BGCOLOR="#FFFFFFC8">Item 1</TD>
```

```
<TD BGCOLOR="#FFFFFFC8">Description of item 1</TD>
```

```
<TD BGCOLOR="#FFFFFFC8" ALIGN="right">$80</TD>
```

```
</TR>
```

```
<!--second row-->
```

```
<TR>
```

```
<TD BGCOLOR="#FFFFFFC8">Item 2</TD>
```

```
<TD BGCOLOR="#FFFFFFC8">Description of item 2</TD>
```

```
<TD BGCOLOR="#FFFFFFC8" ALIGN="right">$150</TD>
```

```
</TR>
```

```
<!--third row-->
```

```
<TR>
```

```
<TD BGCOLOR="#FFFFFFC8">Item 3</TD>
```

```
<TD BGCOLOR="#FFFFFFC8">Description of item 3</TD>
```

```
<TD BGCOLOR="#FFFFFFC8" ALIGN="right">$30</TD>
```

```
</TR>
```

```
</TABLE>
```

These sections
are all similar.
You can save
time by copying
& pasting.

- 3 Save the file and preview it in your browser

The table should look similar to the one below

3 Page Layout with Tables

Home
Profile
Services
Clients
Feedback
Contact Us
Links

We have learned that HTML tables are intended to be used for laying out text in a tabular format. In reality, tables are often used for more than just simple text layout. As you have begun learning HTML, you may have recognised some of its limitations. One of these is in the area of page layout. In a word-processor or desktop publishing package, it is a fairly simple matter to arrange text and graphics on your page in complex layouts. In HTML it's not so easy. Web designers have often turned to tables as a solution. The way tables are used in page layout is to use the cells (squares) in a table to position text and graphics where you want them to go. Much of the page layout you see on the World Wide Web is accomplished using tables.

To the left you can see an example of how various graphics can be arranged together using a table. Each individual graphic is contained in a single cell. Because the table has a border width of 0, the table itself can't be seen (the dotted lines are shown so you can see where the table borders would be). Each of these graphics could then have a hyperlink leading to a different destination. `CELLPADDING` and `CELLSPACING` are also set to 0 to ensure the graphics fit together with no gaps in between.

A common way to use this method of page layout is to use a single row, borderless table with two cells, to split the page into two sections. One section for a graphical navigation bar, and another section for the main page content. Within the navigation cells, another small table such as the one above could be used to arrange the graphics in the navigation bar. The diagram below shows how the resulting layout may look.

<table border="1"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>								Page content here

Tip

Drawing a diagram like this of how your table will look can make it a lot easier to design complex table structures – especially if there will be merged cells. Remember that golden rule from the HTML Introduction course:

The first thing you should do when you're going to do something on the computer is turn off the computer!

Plan it on a piece of paper before you start on the HTML until you're comfortable with what you'll be doing.

4 Advantages and Disadvantages

Before you go using tables to layout all of your pages, there are a few issues you should consider. Ask yourself if the benefits of using tables outweigh the drawbacks. Some of these pros and cons are listed below.

Advantages

Tables are a convenient way to layout information on your page.

Tables can be used to selectively add coloured backgrounds to parts of your page.

Disadvantages

As with much of the HTML you can use, not all features of tables are supported in all browsers.

With complex table layouts, it can be difficult to edit and keep track of the underlying HTML code.

When loading a table, browsers often have difficulty determining things such as how much space it will take up. This means that tables often make the page load more slowly.

You may find that the layout you are after can be achieved in another way that requires a lot less HTML.

Often, the content of a table will not appear in the browser until most of the page has loaded. This is an obvious drawback when the entire page is in tables.

Don't be put off by the fact that the list of drawbacks is longer. Those benefits are big enough to make it worthwhile to use tables for page layout in many instances. Just keep in mind that it is not necessary to use tables when the same layout can be achieved without tables. E.g. In the earlier exercises, we created a page with a graphical navigation bar along the top as shown below. The graphics in this navigation bar were arranged quite adequately without the use of tables. So even though we hadn't covered tables, we were able to come up with a similar effect.



Tip:

Because tables can involve some pretty complex HTML, many editors, such as Homesite, make it easy for you to generate the HTML automatically by specifying information about your table in a wizard or dialog box.

Exercise 2**Complex page layout with tables**

- 1 In this exercise, we will use tables to set up a layout for our page similar to the one illustrated on page 6. We will continue to work on the Cannington Cougars Football club website that was introduced in the earlier exercises. The graphics that will be used in the navbar are shown below.



- 2 In your HTML editor, open the file table2.html
- 3 In the body section of the document, type the following HTML. The comments `<!-- -->` are there for your reference and don't need to be included.

```
<TABLE CELLSPACING="0" CELLPADDING="0" WIDTH="100%" BORDER="0">
<TR>
<TD VALIGN="top">

<!--Start of navbar-->
<TABLE CELLSPACING="0" CELLPADDING="0" WIDTH="100%" BORDER="0">
<TR>
<TD><IMG SRC="pics/nav_home.gif" ALT="Home" WIDTH="110" HEIGHT="25" BORDER="0"></TD>
</TR>

<TR>
<TD><IMG SRC="pics/nav_about.gif" ALT="About Us" WIDTH="110" HEIGHT="25"
BORDER="0"></TD>
</TR>

<TR>
<TD><IMG SRC="pics/nav_events.gif" ALT="Upcoming Events" WIDTH="110" HEIGHT="25"
BORDER="0"></TD>
</TR>

<TR>
<TD><IMG SRC="pics/nav_who.gif" ALT="Who's Who" WIDTH="110" HEIGHT="25"
BORDER="0"></TD>
</TR>

<TR>
<TD><IMG SRC="pics/nav_links.gif" ALT="Links" WIDTH="110" HEIGHT="25" BORDER="0"></TD>
</TR>
</TABLE>

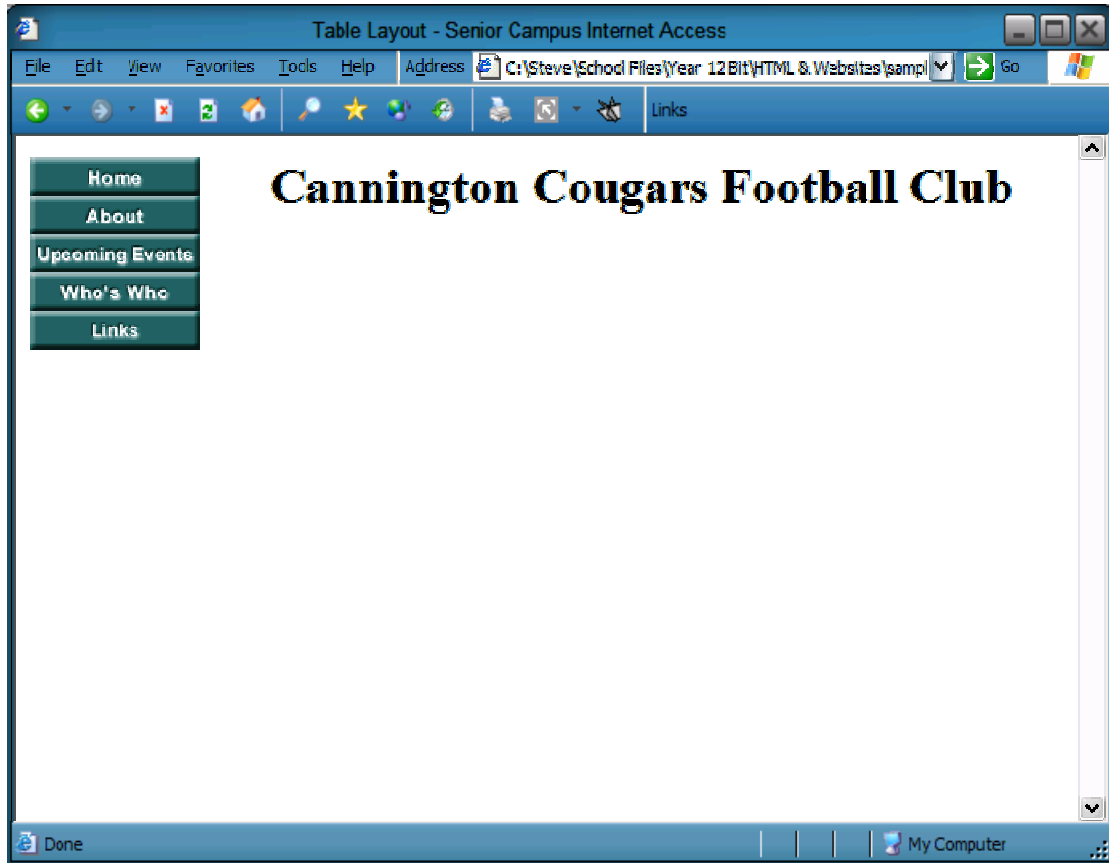
<!--End of navbar-->
</TD>

<TD VALIGN="top">
<!--Page content contained in this cell-->

<H1 ALIGN="center">Cannington Cougars Football Club</H1>

</TD>
</TR>
</TABLE>
```

- 4 When you are done, save the file and preview it in your browser. The following page shows an example of how it should look.



Chapter 2**Tables Revision Questions**

1. What are two ways that you can use tables in HTML?
2. How would you merge cells in a table?
3. What are some advantages of using tables for page layout?
4. What are some disadvantages of using tables for page layout?

Note

This section has focused on HTML tables as defined in the HTML 3.2 specification which is supported by most common browsers. The HTML 4.0 specification has added several useful tags for tables such as the **COLGROUP** and **TBODY** (groups similar sections of the table for similar formatting). These are only supported in the latest web browsers and will most likely become more widely used as more people begin using HTML 4.0 compatible browsers.¹

¹ You can view the latest specification at <http://www.w3.org/MarkUp/>

