Creating HTML web pages – the bare minimum

HTML is the acronym for the HyperText Markup Language. It is a technique which inserts “tags” into a document to indicate how the information in that document should be displayed. The basic idea is to insert these tags as part of the “markup” procedure. A high level peek at a basic html page will reveal the following structure:

```html
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
 "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
...
</head>
<body>
...
</body>
</html>
```

where the dots are simply placeholders to represent the location of the contents of the head and body of the document. Tags are enclosed in “<” and “>” symbols. These are consumed by your web browser and will not appear in the image the browser produces. The tags you see used here are the <html>, <head> and <body> tags which occur in pairs to mark the beginning and the end of the “head” and “body” of the document and the boundaries of the entire document. A web browser will only pay attention to the content between the <html> and </html> tags.

The first line is a DOCTYPE declaration which tells identifies a Document Type Definition (DTD) that tells a browser with version of HTML is used in that document. In the above example, the document uses the HTML 4.01 Transitional DTD, which allows the use of features from previous HTML versions that W3C expects to phase out over time (“deprecated” features).

You can find the entire formal definition of HTML Version 4.01 at http://www.w3.org/TR/html401/ on the W3C consortium's web site. It is tough reading, but it is the ultimate authority for answering questions or settling disputes.

In the head of the html document, you will usually find the document title enclosed between <title> and </title> tags. This title appears on the banner of the browser window when the page is displayed. A number of other tags can be found in the headers of html documents, including <script>..., <style>, <meta> and others. The <script> tag is one we will work with later when we embed Visual Basic programs in a web page.

The content of the web page is defined between the <body> and </body> tags, although dynamic content can be created in other ways (such as by executing scripts). It's probably best restrict the content of your first web page to text. This text can, however, be embellished with tags to format it and enhance its appearance. Here are a few of the tags you can use to adorn your text-only web pages.

- `<em>` ... `</em>` to indicate emphasis
- `<strong>` ... `</strong>` to indicate stronger emphasis
- `<b>` ... `</b>` for bold-faced font
- `<u>` ... `</u>` for underlined font (deprecated)
- `<i>` ... `</i>` for an italic font
- `<abbr>` ... `</abbr>` to specify that something is an abbreviation
- `<cite>` ... `</cite>` to identify a citation
- `<q>` ... `</q>` to delimit a brief quotation
<blockquote> ... </blockquote> to delimit a lengthy quotation
<p> to identify the beginning of a new paragraph
<br> to cause a line break
<pre> ... </pre> for preformatted text (which you want displayed exactly as typed)
<sub> ... </sub> for subscripts
<sup> ... </sup> for superscripts or exponents

In addition, there are html tags to create and display lists, tables, images and hyperlinks to other web pages.
<ul> ... </ul> to delimit an unordered list of items
<li> ... </li> to delimit an item in a list
<ol> ... </ol> to delimit an ordered list of items
<table> ... </table> to delimit the beginning and end of a table
<tr> ... </tr> to delimit the beginning and end of a table row
<td> ... </td> to delimit the beginning and end of a table data item (in a row)
<th> ... </th> to delimit the beginning and end of a table header (similar to <td>)
<a ...> ... </a> to delimit a chunk of text to which a hyperlink is attached
<img ... > to identify an image to be inserted at this point in the document

An easy way to see examples of these tags in action is make your browser display the source for the web page it is displaying. With Internet Explorer, this is one of the choices under the View menu.

Exercises:
1. Start with the outline of a web page (doctype statement, head and body enclosed in the html tags). Type a message of your choice between <title> and </title> tags in the head of the page. Type anything you want in the body of the page. Experiment with different amounts of whitespace between words, throw in some blank lines. Then view the page in your favorite web browser. Notice how the white space you included in your html document is interpreted by the browser.
2. Add more text to your html document if you wish. Add some <p> tags to mark the beginnings of paragraphs (at the points where you would like anew paragraph to begin). Add some <b> and </b>, <em> and </em>, <strong and </strong> tags to display some of your page content in bold font. Try the <i> and </i> tags and the <u> and </u> tags also. View your page in your browser to see what you have created.
3. Add more text to your html document if you wish. Add some <sub> and </sub> tags to create subscripts. Try to produce superscripts as well if you are so inclined. Add some text surrounded by the <q> and </q> tags to see what quoted text looks like. View the results in your browser.
4. Add some new lines with words separated by sequences of blanks spaces and new lines according to your own taste. Prefix this chunk of text with a <pre> tag and conclude it with a </pre> tag. View the result in your browser.
5. Add a hyperlink to your html page. Prefix a portion of text with the tag <a href="http://www.microsoft.com"> and conclude it with a </a> tag. View the result. See what happens when you click on the text enclosed by the <a> and </a> tags.
6. Try out the <blockquote> and </blockquote> tags to see what they do to portions of your text. The blockquoted text should be indented on both right and left hand sides from the margins of your text document.
7. You can add html comments to your web page. This is often a handy thing to do. Start a comment by typing the characters “<!--” (without the quotation marks), then type anything you want and conclude it with the character “-->” (again, without the quotation marks). The enclosed text is an html comment.

More information about tables and lists and images is coming later. Then we'll move on to talk about forms, controls, and scripts.