



1. Please, please, please look at the style sheets job aid that I sent to you some time ago in conjunction with this document.
2. W3Schools has a lovely html tutorial here (it's worth the time):  
<http://www.w3schools.com/html/default.asp>
  - a. They've also got a great editor that allows you to play with tags and see what happens (on the same screen):  
[http://www.w3schools.com/html/html\\_examples.asp](http://www.w3schools.com/html/html_examples.asp)
3. **Okay, getting started**—for our purposes, you can think of “tag” and “element” as the same thing. Remember, you want to think of tags as *invisible boxes or containers*—they are a way to say to a browser, “Here’s a certain kind of invisible box in an html page. Whenever you see this box, make what’s inside of it look a certain way.”
4. HTML elements can have four parts:
  - a. A *start tag*, which marks the beginning of an element. For example: `<a>`, `<strong>`, `<h1>`, `<table>`, and `<emphasis>` are all start tags. Tags are **always** inside of `<>`
  - b. One or more *attributes*, which is a way of describing the tag. Attributes for a human being might be things like: height, weight, eye color, age, IQ, etc. So, attributes are ways of “explaining” a

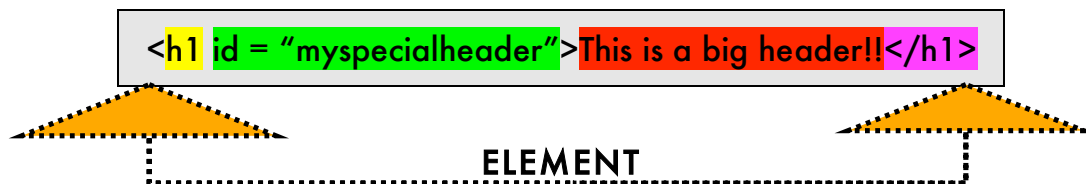
tag more fully with an accompanying value. Examples of attributes include (in red):

- i. `<td id = "example1">`
- ii. `<h1 class = "example2">`
- iii. `<table border = "0">`
- iv. `<label for "example3">`

In all of the examples above, you see a start tag and an attribute followed by a value. Two things to learn here: 1) attributes always come in start tags; and 2) attributes are always followed by a value in quotation marks

- c. *Content*: this is what goes INSIDE of the element. Remember, the element is a box—the content is what goes inside and looks a certain way because of the kind of box that it's in (elements, by the way, do not have to have content inside of them...)
- d. Finally, the *end tag*—this closes the element out. So, to close up the elements that we began in letter (a) above, we would use the following: `</a>`, `</strong>`, `</h1>`, `</table>`, `</emphasis>`

5. Let's look at an element diagrammatically:



- a. `<h1>` is the *start tag*
- b. `id = "myspecialheader"` is the *attribute*
- c. `This is a big header` is the *content*
- d. `</h1>` is the *end tag*

These are ALL part of the element. The "invisible container" starts and ends with the `<h1>` and `</h1>` tags—the content will look a certain way (in this case, bold and larger than the regular body type) because the browser will make that tag look a certain way.

If you're working in Dreamweaver and decide that you want to cut an element from one place (in the code view area) and paste it to another,

you need to highlight from the start tag to the end tag in order to move the whole element. If you miss any pieces of it, you have turned it into something that is not an element and therefore unreadable by the browser.

6. Okay, continuing on. Take a look at the screenshot below:

```
1 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3 <html xmlns="http://www.w3.org/1999/xhtml">
4 <head>
5 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
6 <title>Untitled Document</title>
7 </head>
8 <body>
9 </body>
10 </html>
11
```

This is what you will see in the code area every time that you create a new html page in Dreamweaver (try it now and look up in the code while you're in Split mode within Dreamweaver). It looks like gobbledygook, but the part that we're concerned with for now is the DOCTYPE line, in red above.

The DOCTYPE line is a *document type definition* (or DTD), which is basically just a way of describing the acceptable grammar and syntax for your web page.

Sorry if the following gets a little messy: HTML (or, specifically, XHTML, or Extensible Hypertext Markup Language) is an application of a larger metalanguage called SGML, or Standard Generalized Markup Language, which is an international standard for the electronic markup of text—in other words, how text should be displayed on computer screens.

The DTD is used by an SGML application (in our case, HTML) in order to determine how elements are defined—that is, what they look like and what they can do. That's how a browser "knows" what the content of a <p> tag looks like, what the content of an <h1> tag looks like, and how they are different.

In the red box above, the part inside of the quotation marks is called an FPI, or *Formal Public Identifier*. That indicates the version of the markup language to which your html document is trying to conform: in this case, it's XHTML 1.0 Transitional.

**For our purposes, all that you really need to know here is that the browser will know how to make elements (remember: invisible containers) look on your html page because it can look to the document type definition.**

## 7. Types of elements:

- a. *Block-level elements*: these always appear on their own new line in an html page. Examples include all of the <h> tags (h1–h7), the <p> tag, the <table> tag, and the <div> tag (like other elements, this is also an invisible container, but it doesn't look a particular way)
- b. *In-line elements*: these are "smaller" elements that can appear on the same line as other elements. For example, the <a> tag (which creates hyperlinks), the <img> tag, the <strong> (for boldface) tag, and the <em> (for italics, or *emphasis*) tag can all appear on the same line together

## 8. Boxes within boxes:

Remember that html pages are all about boxes (elements) within boxes.

There are three "document," or "root" elements for an html page. These are the really big elements that all html pages must have:

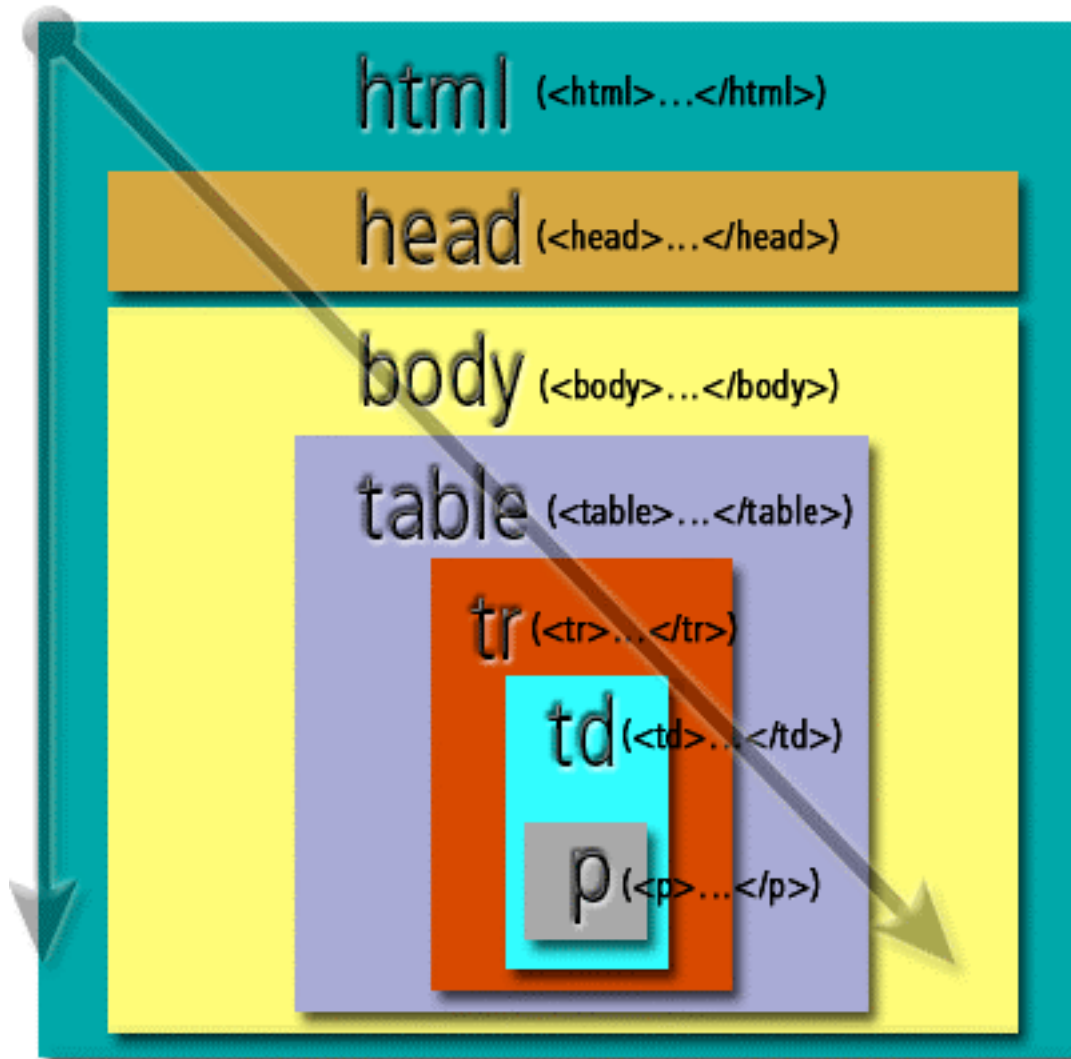
- **<html>...</html>**: this is the biggest one of them all, as it's the box that contains everything else. If you look at our screenshot again, you'll note that these are the outermost tags:

```
1  <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
2  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
3  <html xmlns="http://www.w3.org/1999/xhtml">
4  <head>
5  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
6  <title>Untitled Document</title>
7  </head>
8  <body>
9  </body>
10 </html>
11
```

- **<head>...</head>**: this is the header section of every html page. It doesn't show up, but it contains all of the metadata (descriptive data) for the html page
- **<body>...</body>**: This is all of the content that will appear on your html page

The only elements that can be inside of the `<html>` tags are the `<head>` and `<body>` tags (the only exception is frames, which we're not going to discuss in this class). Every other element in your code must either be inside of your `<head>` or `<body>` tags.

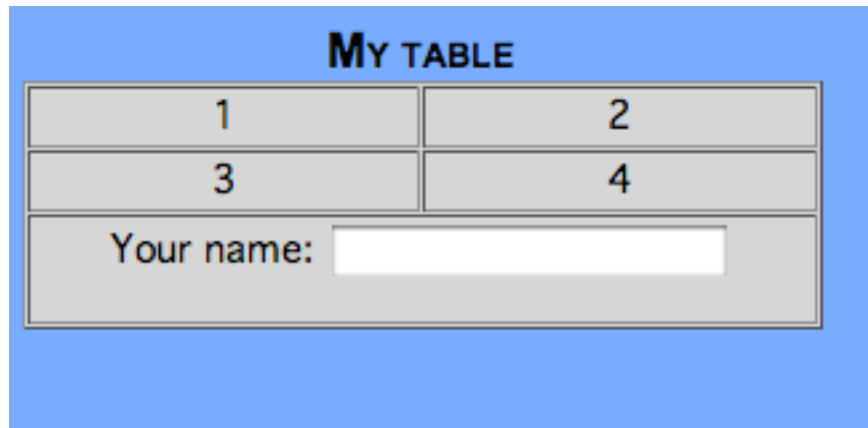
From the perspective of boxes, your html page might be depicted diagrammatically like the image below. Think of it as, you guessed it, "boxes inside of boxes."



9. As one last piece, let's analyze some code from an html page. The first screenshot is the code from Dreamweaver:

```
1. <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
2. <html xmlns="http://www.w3.org/1999/xhtml">
   <head>
3. <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
4. <title>Sample Page</title>
   <style type="text/css">
     <!--
     body {
       font-family: Geneva, Arial, Helvetica, sans-serif;
       font-size: 14px;
       background-color: #6699FF;
     }
     table {
       background-color: #CCCCCC;
       text-align: center;
     }
     caption {
       font-size: 125%;
       font-weight: bold;
       font-variant: small-caps;
     }
     -->
   </style>
 </head>
5. <body>
6. <table width="300" border="1" cellspacing="1" cellpadding="1">
7. <caption>
8. <tr>
   <td>1</td>
   <td>2</td>
 </tr>
   <tr>
9. <td>3</td>
   <td>4</td>
 </tr>
   <tr>
10. <td colspan="2"><form id="form1" name="form1" method="post" action=
   "">
11. <label for="name">Your name:</label>
   <input type="text" name="name" id="name" />
   </form>
 </td>
 </tr>
 </table>
 </body>
 </html>
```

The screenshot below is how the page would look (this is obviously shrunk) in a browser:



Let's look at the numbers:

1. That's the DTD (document type definition), which tells the browser which language it should use in order to make elements render a certain way on the page. Because the browser knows the rules for HTML, it knows how to make things like `<a>` and `<table>` appear on a page.
2. That's the `<html>` start tag, the first BIG BOX (or root element)—everything else on your web page will go inside of this. Notice that the very last line of code is the end tag, `</html>`. If you were going to cut and paste this page by hand, you would need to copy from start tag to end tag (`<html>...</html>`) in order to get everything. **Remember, an element is everything between the start tag and the end tag.**
3. That's the `<head>` tag, the next root element. That contains data about this page, even though it isn't actually rendered anywhere on the visible page.
4. This is a `<style>` element, parked inside of the `<head>` tag because this internal style sheet defines what other elements will look like in the `<body>` tag. Look for the `</style>` end tag for the sheet—everything in between the start and end tags is part of the style sheet. If you wanted to cut this style sheet, you'd need to cut from `<style>...</style>` in order to get everything. Don't leave the end tag out!!!!
5. The `<body>` tag is the final root element—everything that is visible on your page will be inside of this tag. Look for the

`</body>` tag—that let's the browser know that you are done with the visible portion of the web page.

6. Think boxes!! The `<table>` element (or tag) is a box inside of the `<body>` box, which is in turn inside of the `<html>` box. If you wanted to move this table, you'd need to cut from the `<table>` tag to the `</table>` tag in order to get everything.
  - i. Notice the **attributes** inside of the green box for the table. Remember, attributes further define how an element will appear. In this case, we've defined the width, border, cellpadding, and cellspacing attributes for this table. Each has a value of "1"
7. Here's another element: the `<caption>`. Notice from the screenshot of the browser window that the `<caption>` element appears outside of the `<table>` element. It actually is a part of the table (think of it as a row without borders), but the browser makes this element look as if it has text that's outside of the table element.
8. Yet another box!! The `<tr>` element is the first row: no matter how many cells (`<td>`) you have in that row, you'd need to grab from the `<tr>` to the `</tr>` element in order to make sure you get the whole row.
9. More boxes!!!! The `<td>` is a cell element, within a row element, within a table element, within a body element, within an html element. What shows up as a "cell" is whatever shows up between `<td>` and `</td>`.
10. Here's a `<form>` element. Yet another box!! Even though you can't actually see a `<form>` element, you can see the elements that are inside of it, such as
11. The `<input>` element. Notice the type attribute (in the orange box). That tells the browser to make the `<input>` element look a very specific way: namely, a text box.

The BIG MESSAGE HERE: All elements are boxes that have a start tag and an end tag. Play with the tutorial in #2A on page 1 above in order to get comfortable with playing with tags.