



## Chapter Three: Your First Web Page

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At this point, you've prepared your computer to make your website development easier and more organized. Now it's time to start learning some HTML! In this chapter we will discuss the most important HTML symbols and describe the parts of a standard web page.

### Lesson One: Essential HTML Symbols

A web page contains a mixture of both data and HTML mark-up. The mark-up is identified by some special symbols and tags that you will learn to use.

#### Angle Brackets

The most important symbols in HTML coding are the less-than (<) and greater-than (>) signs. These symbols, when combined with words in between, tell the web browser how to display the data on the web page. The (<) and (>) signs are called **angle brackets**, or just “**brackets**” for short in HTML.

#### Tags

When angle brackets are used around a specific word, it is called a **tag**. Tags are used to mark the start and end of sections of a web page and will tell the browsers how to display those sections.

Imagine each bracket is the mouth of a crocodile. Crocodiles open their mouths to capture their prey. They are greedy creatures, so there are always two crocodiles for every prey. One grabs from the front, and the other from the back, like this: <PREY>. When the brackets are positioned this way around a word, it marks the start of the tag. In HTML, this is called the **opening tag**.



At some point, the tag needs to end, or stop. This is done by adding a **forward slash (/)** before the name of the tag, like this: </PREY>. The HTML term for this type of tag is the **closing tag**.

Let's go back to our crocodile example. Our crocodiles will hold on to their prey until a zookeeper comes with a big stick and pokes the first one in the mouth. The zookeeper doesn't want to stand on the

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crocodile's sharp teeth or in the water to stop the crocodiles, so he stands on top of the prey to get the right angle as he pokes at the first crocodile. If you can remember this scene, you will always know to use the forward slash (/) and not the backward slash (\) to begin a closing tag. Only the first crocodile needs to be poked and they both let go of their prey.

In an HTML web page your data is surrounded by an opening tag and then the closing tag:

```
<PREY>your data</PREY>
```

The tag word will tell the web browser exactly how to display your data. Now, <PREY> is not actually an HTML tag, so don't try to use it on your web site! You will learn some real HTML tags shortly.

### HTML Elements

When tags are put together with a start, middle and end they are called an **element**. An HTML element is everything from the start tag to the end tag, including the tags themselves and the data within.

Each element is like a container or box. Some are really large and some are very small. Have you ever played with those little wooden dolls that nest inside each other? To organize them correctly, you start with the largest doll and then place each smaller doll inside, until they are all stacked neatly inside the first doll. Web elements work in a similar way. The largest container (or element) is put down first and then all the others sit inside this container. You will be learning how many of these elements sit within and beside each other to make your web site work.

### Attributes and Values

Many tags can have extra pieces of information attached to them, called **attributes** and **values**. These extra pieces of information are located inside an opening HTML tag (before the end bracket >).

Attribute and value pairs are often used to define how the tag looks or behaves on your web page. These pairs can contain numbers, words, link locations, or other types of data. In your HTML code, an attribute name is followed by the equal sign and then a value surrounded by quotation marks.

```
<tag attribute="value">your data</tag>
```

You will learn more about specific attributes and values and how to use them later in this course.

In XHTML, the value must always be surrounded by double quotes. Make sure you use the straight double quotes (" "), and not two single quotes beside each other (' ') or those fancy curly quotes (“ ”). The value will only work correctly if you use straight double quotes.

Older HTML code did not care what type of quotation marks you used or even if you used any at all! It wasn't until XHTML came along that the rules became more rigid. However, these stricter rules actually allow different web browsers to better understand your web page.



**The new HTML5 standard allows some flexibility in the use of quotes and values. However, it is best to stick with the XHTML style until HTML5 is universally approved and accepted, which will take a few years!**

In the original version of HTML, it didn't matter if you used capital or lower case letters for your tag names. So, `<PREY>` and `<prey>` would do the same thing. In XHTML, however, only lower case letters are used for tags. For this course, make sure to use all lower case tag names to match the XHTML standard.

### Empty Elements


Most elements have a starting tag, content in the middle, and a closing tag. However, some tags will never have any data inside. One example is the line break element “**br**”. This tag is simply used to force the text in a web page to break and move to the next line. Instead of writing both closing and ending tags like “`<br></br>`”, you can use an “empty” or “self-closing” format.

With empty elements, the tag starts like usual, but instead of a separate closing tag, there is a space and a forward slash just before the end bracket. So our empty line break element “**br**” would be written like this:

```
<br />
```

The original rules for HTML were not very well defined. This allowed for lazy and sloppy web page code. Using the original HTML, if a web designer started a tag, and then forgot to close it, the web browser would try to figure out what was meant and display the web page as best it could. This made life easier for the web designers, but made a web browser's job much more difficult.

The XHTML standard changed things dramatically. XHTML requires all HTML tags to be closed either by using a closing tag or, for empty elements, adding a forward slash inside the start tag. Be sure to always close your starting tags with ending tags or use empty tags that are self-closed in your own HTML code!



**There is a debate about putting a space before the slash in an empty tag. When XHTML first came out, browsers didn't recognize `<br/>` as a shortcut for `<br></br>` and would ignore it. But if you added a space before the end bracket as in “`<br />`” the web browsers would process the element correctly. Since this is a common practice, our examples will follow that format.**