

## HTML Tags

HTML is made up of opening and closing tags. These tags are called **elements**...

<code>&lt;p&gt;This is some text&lt;/p&gt;</code>	Paragraph Tag
<code>&lt;textarea&gt;Enter your comment here&lt;/textarea&gt;</code>	Textarea Tag
<code>&lt;input type="checkbox" /&gt;</code>	Input tag

For most tags, they can store content between the opening and closing tag.

```
<a href="url">My Link</a>
```

```
<p>This is a paragraph</p>
```

Some tags do nothing if you put content between the opening and the closing:

```
<input type="text">This is nothing</input>
```

Therefore, for elements like **input**, you can close them within the opening tag:

```
<input type="text" />
```

Remember that **all openings must have a closing!**

Opening and Closing tag	Single tags
<code>&lt;a href="..."&gt;Link&lt;/a&gt;</code>	<code>&lt;input type="submit" /&gt;</code> Input Item
<code>&lt;p&gt;Paragraph&lt;/p&gt;</code>	<code>&lt;hr/&gt;</code> Horizontal Rule
<code>&lt;strong&gt;Bold text&lt;/strong&gt;</code>	<code>&lt;br/&gt;</code> Line Break
<code>&lt;h1&gt;Main page headline&lt;/h1&gt;</code>	<code>&lt;img src="url" /&gt;</code>

Elements can have **attributes**, which are specified from within the element's starting tag.

<code>&lt;a href="url"&gt;This is text&lt;/a&gt;</code>	href is an attribute
<code>&lt;input type="submit"/&gt;</code>	type is an attribute
<code>&lt;span style="color:#ff0000;"&gt;Text&lt;/span&gt;</code>	style is an attribute
<code>&lt;p class="highlight"&gt;Look!&lt;/p&gt;</code>	class is an attribute

## XHTML Standard

With the XHTML standard, HTML has more strict rules on usage, but in the long run it makes HTML easier to parse and keep standard across everybody's websites.

### XHTML Required Tags

XHTML pages must have certain tags in every webpage...

```
<!DOCTYPE html>
<html>
  <head>
    <title></title>
  </head>

  <body>
  </body>
</html>
```

The **doctype** is required in every webpage, on the very first line. The DOCTYPE does not have a closing tag, because this is not part of the XML. The DOCTYPE helps identify what standard of HTML your page is following – HTML5, XHTML 1, or older. Keep in mind that HTML5 includes the XHTML standard.

The **head** is an “invisible” section of the webpage. Items contained within <head></head> are not rendered to the page. The head must contain a **title tag**, which sets the titlebar text in your web browser, and tells search engines what the name of the page is. The head may also include metadata (for search engines), links (to JavaScript and CSS files), and more.

The **body** tag is where all of our webpage's contents are stored.

### XHTML Rules

XHTML also adds some usage rules...

**Proper Nesting:** Every opening tag must have a closing tag (or be closed inside of the opening tag). You can nest tags within each other, but they must be closed in reverse order. For example:

Good	Bad
<p><a href="url">MyLink</a></p>	<p><a href="url">MyLink</p></a>

**All elements must be closed**, as mentioned earlier.

**All elements and attributes must be written in lower-case.** Therefore, <A HREF="URL"> is not allowed. It would be <a href="url">.

**Element attribute key-value pairs must contain the values in double-quotes.** Example: `<a href=url>` is not valid, but `<a href="url">` is.

## Deprecated HTML

### ***Deprecated Tags***

These tags are deprecated and should never be used:

<code>&lt;frame&gt;</code>	<code>&lt;center&gt;</code>	<code>&lt;font&gt;</code>
<code>&lt;strike&gt;</code>	<code>&lt;b&gt;</code>	<code>&lt;i&gt;</code>
<code>&lt;u&gt;</code>	<code>&lt;embed&gt;</code>	

Center, font, strike, b, u, and i are all styling tags. These are now handled in CSS.

### ***Deprecated Attributes***

These attributes are deprecated and should never be used:

width	height	border
align	alink	background
bgcolor	clear	link

Never use these as attributes in HTML! These can now be defined in CSS.

## Tag identifiers

Elements can be identified by their **element type** (p, span, input, etc...), a user-given **class name**, an **id**, and a **name**.

**The name** attribute is purely for sending data to the server. The name of an element becomes the key in the key-value pair. If you're not sure what this means, think of a Dictionary in Python, and a Map in C++.

The **id** attribute is not used for server data. It is used to **uniquely identify** an element on the page. There should never be any duplicated **ids** among elements on one page!

## Elements to know

Make sure you know how to use these elements:

- h1, h2, h3
- img
- a
- doctype
- head
- body
- header
- footer
- div
- span
- form
- input
- textarea
- hr
- br
- p
- table, thead, tbody, tr, th, td