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### What Is HTML

* HTML is the standard markup language for Web pages.
* With HTML we can create websites.
* HTML is easy to learn.
* HTML can be learned with minimum tools like Notepad, web browser.

### Features

#### HTML is Not Case Sensitive

* HTML is a markup language

## **What is a Markup Language?**

A markup language is a computer language that uses tags to define elements within a document. They are easier to read. These languages are designed to create a structure, identify data or to present data rather than to execute an action or to perform an action. The text present in the tags is structured by the web browser accordingly.

HTML, XML, and XHTML are some common markup languages. [HTML](https://pediaa.com/what-is-the-difference-between-html-and-css/" \l "HTML)stands for HyperText Markup Language. It is used to create the structure of a web page. The file is divided into two sections called the head and the body. The head section contains the metadata, title etc. The body contains the visible elements of the page. There are tags for tables, forms, paragraphs, headings and many more.

## **What is a Programming Language**

A programming language is a formal language that contains a set of commands and syntax to create software programs. These programs can perform a specific task. Programming languages are mainly divided into two sections. They are high-level languages and low-level languages.High-level language uses syntax similar to the English language. Therefore, those languages are easier to read and are understandable by the programmer. These programs are also called the source code. The source code is converted into machine-understandable machine code using a compiler or an interpreter. C, C++, Java, Python are some examples of high-level programming languages. There are used to develop web, desktop, mobile applications, etc.

### Editors

|  |  |  |  |
| --- | --- | --- | --- |
| ***Editor*** | ***Advantage*** | ***Points to remember*** | ***Additional info*** |
| Notepad | Faster than any other editor, very light weight | Need to open file by file explorer, no autocomplete/suggestions, will need to remember each and every useful tag | ile URL sample (Ubuntu system):  [file:///home/user2/IdeaProjects/UserInterface/htmlOnly/Styling.html](../IdeaProjects/UserInterface/htmlOnly/Styling.html)  pattern will be different in Windows/other OS |
| Notepad++ | for autocomplete features | Need to open file by file explorer | File URL sample (Ubuntu system):  file:///home/user2/IdeaProjects/UserInterface/htmlOnly/Styling.html  pattern will be different in Windows/other OS |
| IntelliJ/any IDE | for autocomplete features,  documentation notes,  run from IDE | Run by right clicking on html file | File URL sample:  http://localhost:63342/UIPractise/htmlOnly/Styling.html?\_ijt=pc67f1a2h9ubv45bpl3e35fn7b |
| Online editor | No autocomplete, only for trying |  | Cannot save, only for testing quickly  https://www.w3schools.com/html/tryit.asp?filename=tryhtml\_basic\_document |

### The HTML DOM (Document Object Model)

When a web page is loaded, the browser creates a Document Object Model of the page.

The HTML DOM model is constructed as a tree of Objects.

### The HTML DOM Tree of Objects



With the object model, JavaScript gets all the power it needs to create dynamic HTML:

* JavaScript can change all the HTML elements in the page
* JavaScript can change all the HTML attributes in the page
* JavaScript can change all the CSS styles in the page
* JavaScript can remove existing HTML elements and attributes
* JavaScript can add new HTML elements and attributes
* JavaScript can react to all existing HTML events in the page
* JavaScript can create new HTML events in the page

### **What is the DOM?**

The DOM is a W3C (World Wide Web Consortium) standard.

The DOM defines a standard for accessing documents:

"The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."

### **What is the HTML DOM?**

The HTML DOM is a standard object model and programming interface for HTML. It defines:

* The HTML elements as objects (html, body, div, span)
* The properties of all HTML elements (src, style, href)
* The methods to access all HTML elements (document.getElementByID, document.getElementByClass)
* The events for all HTML elements (onmouseover, onclick)

In other words: The HTML DOM is a standard for how to get, change, add, or delete HTML elements.

### **The <!DOCTYPE> Declaration**

* The <!DOCTYPE> declaration represents the document type, and helps browsers to display web pages correctly.
* It must only appear once, at the top of the page (before any HTML tags).
* The <!DOCTYPE> declaration is not case sensitive.
* The <!DOCTYPE> declaration for HTML5 is:

<!DOCTYPE html>

### HTML Element

The HTML element is everything from the start tag to the end tag:

<tagname>Content goes here...</tagname>

* HTML elements (<html>, <body>, <h1> and <p>).
* HTML headings are defined with the <h1> to <h6> tags.
* HTML paragraphs are defined with the <p> tag:
* HTML links are defined with the <a> tag:
* Example
  + <a href="https://www.google.com">Link example</a>
* HTML images are defined with the <img> tag. The source file (src), alternative text (alt), width, and height are provided as attributes:
* Example

<img src="w3schools.jpg" alt="W3Schools.com" width="104" height="142">

* **Nested HTML Elements**
  + HTML elements can be nested (this means that elements can contain other elements).
  + All HTML documents consist of nested HTML elements.

### **How to View HTML Source?**

Right-click in an HTML page and select "View Page Source" (in Chrome) or "View Source" (in Edge), or similar in other browsers. This will open a window containing the HTML source code of the page.

### **Inspect an HTML Element:**

Right-click on an element (or a blank area), and choose "Inspect" or "Inspect Element" to see what elements are made up of (you will see both the HTML and the CSS). You can also edit the HTML or CSS on-the-fly in the Elements or Styles panel that opens.

## **Empty HTML Elements**

HTML elements with no content are called empty elements.

The <br> tag defines a line break, and is an empty element without a closing tag:

**Element List**

|  |  |
| --- | --- |
| [<!--...-->](https://www.w3schools.com/tags/tag_comment.asp) | Defines a comment |
| [<!DOCTYPE>](https://www.w3schools.com/tags/tag_doctype.asp) | Defines the document type |
| [<a>](https://www.w3schools.com/tags/tag_a.asp) | Defines a hyperlink |
| [<abbr>](https://www.w3schools.com/tags/tag_abbr.asp) | Defines an abbreviation or an acronym |
| [<acronym>](https://www.w3schools.com/tags/tag_acronym.asp) | Not supported in HTML5. Use [<abbr>](https://www.w3schools.com/tags/tag_abbr.asp) instead. Defines an acronym |
| [<address>](https://www.w3schools.com/tags/tag_address.asp) | Defines contact information for the author/owner of a document |
| [<applet>](https://www.w3schools.com/tags/tag_applet.asp) | Not supported in HTML5. Use [<embed>](https://www.w3schools.com/tags/tag_embed.asp) or [<object>](https://www.w3schools.com/tags/tag_object.asp) instead. Defines an embedded applet |
| [<area>](https://www.w3schools.com/tags/tag_area.asp) | Defines an area inside an image map |
| [<article>](https://www.w3schools.com/tags/tag_article.asp) | Defines an article |
| [<aside>](https://www.w3schools.com/tags/tag_aside.asp) | Defines content aside from the page content |
| [<audio>](https://www.w3schools.com/tags/tag_audio.asp) | Defines embedded sound content |
| [<b>](https://www.w3schools.com/tags/tag_b.asp) | Defines bold text |
| [<base>](https://www.w3schools.com/tags/tag_base.asp) | Specifies the base URL/target for all relative URLs in a document |
| [<basefont>](https://www.w3schools.com/tags/tag_basefont.asp) | Not supported in HTML5. Use CSS instead. Specifies a default color, size, and font for all text in a document |
| [<bdi>](https://www.w3schools.com/tags/tag_bdi.asp) | Isolates a part of text that might be formatted in a different direction from other text outside it |
| [<bdo>](https://www.w3schools.com/tags/tag_bdo.asp) | Overrides the current text direction |
| [<big>](https://www.w3schools.com/tags/tag_big.asp) | Not supported in HTML5. Use CSS instead. Defines big text |
| [<blockquote>](https://www.w3schools.com/tags/tag_blockquote.asp) | Defines a section that is quoted from another source |
| [<body>](https://www.w3schools.com/tags/tag_body.asp) | Defines the document's body |
| [<br>](https://www.w3schools.com/tags/tag_br.asp) | Defines a single line break |
| [<button>](https://www.w3schools.com/tags/tag_button.asp) | Defines a clickable button |
| [<canvas>](https://www.w3schools.com/tags/tag_canvas.asp) | Used to draw graphics, on the fly, via scripting (usually JavaScript) |
| [<caption>](https://www.w3schools.com/tags/tag_caption.asp) | Defines a table caption |
| [<center>](https://www.w3schools.com/tags/tag_center.asp) | Not supported in HTML5. Use CSS instead. Defines centered text |
| [<cite>](https://www.w3schools.com/tags/tag_cite.asp) | Defines the title of a work |
| [<code>](https://www.w3schools.com/tags/tag_code.asp) | Defines a piece of computer code |
| [<col>](https://www.w3schools.com/tags/tag_col.asp) | Specifies column properties for each column within a <colgroup> element |
| [<colgroup>](https://www.w3schools.com/tags/tag_colgroup.asp) | Specifies a group of one or more columns in a table for formatting |
| [<data>](https://www.w3schools.com/tags/tag_data.asp) | Adds a machine-readable translation of a given content |
| [<datalist>](https://www.w3schools.com/tags/tag_datalist.asp) | Specifies a list of pre-defined options for input controls |
| [<dd>](https://www.w3schools.com/tags/tag_dd.asp) | Defines a description/value of a term in a description list |
| [<del>](https://www.w3schools.com/tags/tag_del.asp) | Defines text that has been deleted from a document |
| [<details>](https://www.w3schools.com/tags/tag_details.asp) | Defines additional details that the user can view or hide |
| [<dfn>](https://www.w3schools.com/tags/tag_dfn.asp) | Specifies a term that is going to be defined within the content |
| [<dialog>](https://www.w3schools.com/tags/tag_dialog.asp) | Defines a dialog box or window |
| [<dir>](https://www.w3schools.com/tags/tag_dir.asp) | Not supported in HTML5. Use [<ul>](https://www.w3schools.com/tags/tag_ul.asp) instead. Defines a directory list |
| [<div>](https://www.w3schools.com/tags/tag_div.asp) | Defines a section in a document |
| [<dl>](https://www.w3schools.com/tags/tag_dl.asp) | Defines a description list |
| [<dt>](https://www.w3schools.com/tags/tag_dt.asp) | Defines a term/name in a description list |
| [<em>](https://www.w3schools.com/tags/tag_em.asp) | Defines emphasized text |
| [<embed>](https://www.w3schools.com/tags/tag_embed.asp) | Defines a container for an external application |
| [<fieldset>](https://www.w3schools.com/tags/tag_fieldset.asp) | Groups related elements in a form |
| [<figcaption>](https://www.w3schools.com/tags/tag_figcaption.asp) | Defines a caption for a <figure> element |
| [<figure>](https://www.w3schools.com/tags/tag_figure.asp) | Specifies self-contained content |
| [<font>](https://www.w3schools.com/tags/tag_font.asp) | Not supported in HTML5. Use CSS instead. Defines font, color, and size for text |
| [<footer>](https://www.w3schools.com/tags/tag_footer.asp) | Defines a footer for a document or section |
| [<form>](https://www.w3schools.com/tags/tag_form.asp) | Defines an HTML form for user input |
| [<frame>](https://www.w3schools.com/tags/tag_frame.asp) | Not supported in HTML5. Defines a window (a frame) in a frameset |
| [<frameset>](https://www.w3schools.com/tags/tag_frameset.asp) | Not supported in HTML5. Defines a set of frames |
| [<h1> to <h6>](https://www.w3schools.com/tags/tag_hn.asp) | Defines HTML headings |
| [<head>](https://www.w3schools.com/tags/tag_head.asp) | Contains metadata/information for the document |
| [<header>](https://www.w3schools.com/tags/tag_header.asp) | Defines a header for a document or section |
| [<hr>](https://www.w3schools.com/tags/tag_hr.asp) | Defines a thematic change in the content |
| [<html>](https://www.w3schools.com/tags/tag_html.asp) | Defines the root of an HTML document |
| [<i>](https://www.w3schools.com/tags/tag_i.asp) | Defines a part of text in an alternate voice or mood |
| [<iframe>](https://www.w3schools.com/tags/tag_iframe.asp) | Defines an inline frame |
| [<img>](https://www.w3schools.com/tags/tag_img.asp) | Defines an image |
| [<input>](https://www.w3schools.com/tags/tag_input.asp) | Defines an input control |
| [<ins>](https://www.w3schools.com/tags/tag_ins.asp) | Defines a text that has been inserted into a document |
| [<kbd>](https://www.w3schools.com/tags/tag_kbd.asp) | Defines keyboard input |
| [<label>](https://www.w3schools.com/tags/tag_label.asp) | Defines a label for an <input> element |
| [<legend>](https://www.w3schools.com/tags/tag_legend.asp) | Defines a caption for a <fieldset> element |
| [<li>](https://www.w3schools.com/tags/tag_li.asp) | Defines a list item |
| [<link>](https://www.w3schools.com/tags/tag_link.asp) | Defines the relationship between a document and an external resource (most used to link to style sheets) |
| [<main>](https://www.w3schools.com/tags/tag_main.asp) | Specifies the main content of a document |
| [<map>](https://www.w3schools.com/tags/tag_map.asp) | Defines an image map |
| [<mark>](https://www.w3schools.com/tags/tag_mark.asp) | Defines marked/highlighted text |
| [<meta>](https://www.w3schools.com/tags/tag_meta.asp) | Defines metadata about an HTML document |
| [<meter>](https://www.w3schools.com/tags/tag_meter.asp) | Defines a scalar measurement within a known range (a gauge) |
| [<nav>](https://www.w3schools.com/tags/tag_nav.asp) | Defines navigation links |
| [<noframes>](https://www.w3schools.com/tags/tag_noframes.asp) | Not supported in HTML5. Defines an alternate content for users that do not support frames |
| [<noscript>](https://www.w3schools.com/tags/tag_noscript.asp) | Defines an alternate content for users that do not support client-side scripts |
| [<object>](https://www.w3schools.com/tags/tag_object.asp) | Defines a container for an external application |
| [<ol>](https://www.w3schools.com/tags/tag_ol.asp) | Defines an ordered list |
| [<optgroup>](https://www.w3schools.com/tags/tag_optgroup.asp) | Defines a group of related options in a drop-down list |
| [<option>](https://www.w3schools.com/tags/tag_option.asp) | Defines an option in a drop-down list |
| [<output>](https://www.w3schools.com/tags/tag_output.asp) | Defines the result of a calculation |
| [<p>](https://www.w3schools.com/tags/tag_p.asp) | Defines a paragraph |
| [<param>](https://www.w3schools.com/tags/tag_param.asp) | Defines a parameter for an object |
| [<picture>](https://www.w3schools.com/tags/tag_picture.asp) | Defines a container for multiple image resources |
| [<pre>](https://www.w3schools.com/tags/tag_pre.asp) | Defines preformatted text |
| [<progress>](https://www.w3schools.com/tags/tag_progress.asp) | Represents the progress of a task |
| [<q>](https://www.w3schools.com/tags/tag_q.asp) | Defines a short quotation |
| [<rp>](https://www.w3schools.com/tags/tag_rp.asp) | Defines what to show in browsers that do not support ruby annotations |
| [<rt>](https://www.w3schools.com/tags/tag_rt.asp) | Defines an explanation/pronunciation of characters (for East Asian typography) |
| [<ruby>](https://www.w3schools.com/tags/tag_ruby.asp) | Defines a ruby annotation (for East Asian typography) |
| [<s>](https://www.w3schools.com/tags/tag_s.asp) | Defines text that is no longer correct |
| [<samp>](https://www.w3schools.com/tags/tag_samp.asp) | Defines sample output from a computer program |
| [<script>](https://www.w3schools.com/tags/tag_script.asp) | Defines a client-side script |
| [<section>](https://www.w3schools.com/tags/tag_section.asp) | Defines a section in a document |
| [<select>](https://www.w3schools.com/tags/tag_select.asp) | Defines a drop-down list |
| [<small>](https://www.w3schools.com/tags/tag_small.asp) | Defines smaller text |
| [<source>](https://www.w3schools.com/tags/tag_source.asp) | Defines multiple media resources for media elements (<video> and <audio>) |
| [<span>](https://www.w3schools.com/tags/tag_span.asp) | Defines a section in a document |
| [<strike>](https://www.w3schools.com/tags/tag_strike.asp) | Not supported in HTML5. Use [<del>](https://www.w3schools.com/tags/tag_del.asp) or [<s>](https://www.w3schools.com/tags/tag_s.asp) instead. Defines strikethrough text |
| [<strong>](https://www.w3schools.com/tags/tag_strong.asp) | Defines important text |
| [<style>](https://www.w3schools.com/tags/tag_style.asp) | Defines style information for a document |
| [<sub>](https://www.w3schools.com/tags/tag_sub.asp) | Defines subscripted text |
| [<summary>](https://www.w3schools.com/tags/tag_summary.asp) | Defines a visible heading for a <details> element |
| [<sup>](https://www.w3schools.com/tags/tag_sup.asp) | Defines superscripted text |
| [<svg>](https://www.w3schools.com/tags/tag_svg.asp) | Defines a container for SVG graphics |
| [<table>](https://www.w3schools.com/tags/tag_table.asp) | Defines a table |
| [<tbody>](https://www.w3schools.com/tags/tag_tbody.asp) | Groups the body content in a table |
| [<td>](https://www.w3schools.com/tags/tag_td.asp) | Defines a cell in a table |
| [<template>](https://www.w3schools.com/tags/tag_template.asp) | Defines a container for content that should be hidden when the page loads |
| [<textarea>](https://www.w3schools.com/tags/tag_textarea.asp) | Defines a multiline input control (text area) |
| [<tfoot>](https://www.w3schools.com/tags/tag_tfoot.asp) | Groups the footer content in a table |
| [<th>](https://www.w3schools.com/tags/tag_th.asp) | Defines a header cell in a table |
| [<thead>](https://www.w3schools.com/tags/tag_thead.asp) | Groups the header content in a table |
| [<time>](https://www.w3schools.com/tags/tag_time.asp) | Defines a specific time (or datetime) |
| [<title>](https://www.w3schools.com/tags/tag_title.asp) | Defines a title for the document |
| [<tr>](https://www.w3schools.com/tags/tag_tr.asp) | Defines a row in a table |
| [<track>](https://www.w3schools.com/tags/tag_track.asp) | Defines text tracks for media elements (<video> and <audio>) |
| [<tt>](https://www.w3schools.com/tags/tag_tt.asp) | Not supported in HTML5. Use CSS instead. Defines teletype text |
| [<u>](https://www.w3schools.com/tags/tag_u.asp) | Defines some text that is unarticulated and styled differently from normal text |
| [<ul>](https://www.w3schools.com/tags/tag_ul.asp) | Defines an unordered list |
| [<var>](https://www.w3schools.com/tags/tag_var.asp) | Defines a variable |
| [<video>](https://www.w3schools.com/tags/tag_video.asp) | Defines embedded video content |
| [<wbr>](https://www.w3schools.com/tags/tag_wbr.asp) | Defines a possible line-break |

**Form**

The <form> tag is used to create an HTML form for user input.

The <form> element can contain one or more of the following form elements:

* [<input>](https://www.w3schools.com/tags/tag_input.asp)
* [<textarea>](https://www.w3schools.com/tags/tag_textarea.asp)
* [<button>](https://www.w3schools.com/tags/tag_button.asp)
* [<select>](https://www.w3schools.com/tags/tag_select.asp)
* [<option>](https://www.w3schools.com/tags/tag_option.asp)
* [<optgroup>](https://www.w3schools.com/tags/tag_optgroup.asp)
* [<fieldset>](https://www.w3schools.com/tags/tag_fieldset.asp)
* [<label>](https://www.w3schools.com/tags/tag_label.asp)
* [<output>](https://www.w3schools.com/tags/tag_output.asp)

<form action="HelloWorld.html" method="get">  
 <label for="fname">First name:</label>  
 <input type="text" id="fname" name="fname"><br><br>  
 <label for="lname">Last name:</label>  
 <input type="text" id="lname" name="lname"><br><br>  
 <input type="submit" value="Submit">  
</form>

### **HTML Attributes**

HTML attributes provide additional information about HTML elements.

* All HTML elements can have attributes
* Attributes provide additional information about elements
* Attributes are always specified in the start tag
* Attributes usually come in name/value pairs like: name="value"

Ex: href, src, id, name

## Single or Double Quotes?

Double quotes around attribute values are the most common in HTML, but single quotes can also be used.

In some situations, when the attribute value itself contains double quotes, it is necessary to use single quotes:

<p title='John "ShotGun" Nelson'>

Or vice versa:

<p title="John 'ShotGun' Nelson">

Text format

<b> - Bold text

* <strong> - Important text
* <i> - Italic text
* <em> - Emphasized text
* <mark> - Marked text
* <small> - Smaller text
* <del> - Deleted text
* <ins> - Inserted text
* <sub> - Subscript text
* <sup> - Superscript text

With comments you can place notifications and reminders in your HTML code:

### Example

<!-- This is a comment -->

Table

<table>  
 <tr>  
 <th>Company</th>  
 <th>Contact</th>  
 <th>Country</th>  
 </tr>  
 <tr>  
 <td>Alfreds Futterkiste</td>  
 <td>Maria Anders</td>  
 <td>Germany</td>  
 </tr>  
 <tr>  
 <td>Centro comercial Moctezuma</td>  
 <td>Francisco Chang</td>  
 <td>Mexico</td>  
 </tr>  
</table>

Style for table

<style>  
 th, td {  
 border-style:solid;  
 border-color: #96D4D4;  
 }  
</style>

Lists

Unordered List

<ul>  
 <li>Coffee</li>  
 <li>Tea</li>  
 <li>Milk</li>  
</ul>

Ordered List

<ol>  
 <li>Coffee</li>  
 <li>Tea</li>  
 <li>Milk</li>  
</ol>

### HTML Block and Inline Elements

### Block-level Elements

A block-level element always starts on a new line.

A block-level element always takes up the full width available (stretches out to the left and right as far as it can).

A block level element has a top and a bottom margin, whereas an inline element does not.

The <div> element is a block-level element.

Other example:

<address><article><aside><blockquote><canvas><dd><div><dl><dt><fieldset><figcaption><figure><footer><form><h1>-<h6><header><hr><li><main><nav><noscript><ol><p><pre><section><table><tfoot><ul><video>

#### **Inline Elements**

An inline element does not start on a new line.

An inline element only takes up as much width as necessary.

Example:

<a><abbr><acronym><b><bdo><big><br><button><cite><code><dfn><em><i><img><input><kbd><label><map><object><output><q><samp><script><select><small><span><strong><sub><sup><textarea><time><tt><var>

Note: An inline element cannot contain a block-level element!

### **HTML Class Attribute**

The HTML class attribute is used to specify a class for an HTML element.

Multiple HTML elements can share the same class.

### **HTML ID attribute**

The HTML id attribute is used to specify a unique id for an HTML element.

You cannot have more than one element with the same id in an HTML document.

<a href="#myHeader">Jump to my Header</a>

**Iframe**

The HTML <iframe> tag specifies an inline frame.

An inline frame is used to embed another document within the current HTML document.

<iframe src="url" title="description"></iframe>

<iframe src="Styling.html" title="Google frame" style="height: 80%; width: 100%"></iframe>

### **HTML Layout Elements**

HTML has several semantic elements that define the different parts of a web page:

|  |  |
| --- | --- |
|  | * <header> - Defines a header for a document or a section * <nav> - Defines a set of navigation links * <section> - Defines a section in a document * <article> - Defines an independent, self-contained content * <aside> - Defines content aside from the content (like a sidebar) * <footer> - Defines a footer for a document or a section * <details> - Defines additional details that the user can open and close on demand * <summary> - Defines a heading for the <details> element |

### HTML Versus XHTML

XHTML is a stricter, more XML-based version of HTML.

What is XHTML?

* XHTML stands for EXtensible HyperText Markup Language
* XHTML is a stricter, more XML-based version of HTML
* XHTML is HTML defined as an XML application
* XHTML is supported by all major browsers

## Why XHTML?

XML is a markup language where all documents must be marked up correctly (be "well-formed").

XHTML was developed to make HTML more extensible and flexible to work with other data formats (such as XML). In addition, browsers ignore errors in HTML pages, and try to display the website even if it has some errors in the markup. So XHTML comes with a much stricter error handling.

If you want to study XML, please read our [XML Tutorial](https://www.w3schools.com/xml/default.asp).

## The Most Important Differences from HTML

* <!DOCTYPE> is mandatory
* The xmlns attribute in <html> is mandatory
* <html>, <head>, <title>, and <body> are mandatory
* Elements must always be properly nested
* Elements must always be closed
* Elements must always be in lowercase
* Attribute names must always be in lowercase
* Attribute values must always be quoted
* Attribute minimization is forbidden

## XHTML - <!DOCTYPE ....> Is Mandatory

An XHTML document must have an XHTML <!DOCTYPE> declaration.

The <html>, <head>, <title>, and <body> elements must also be present, and the xmlns attribute in <html> must specify the xml namespace for the document.

### Example

Here is an XHTML document with a minimum of required tags:

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"  
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">  
<html xmlns="http://www.w3.org/1999/xhtml">  
<head>  
  <title>Title of document</title>  
</head>  
<body>  
  
  some content here...  
  
</body>  
</html>

## XHTML Elements Must be Properly Nested

In XHTML, elements must always be properly nested within each other, like this:

### Correct:

<b><i>Some text</i></b>

### Wrong:

<b><i>Some text</b></i>

## XHTML Elements Must Always be Closed

In XHTML, elements must always be closed, like this:

### Correct:

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

### Wrong:

<p>This is a paragraph  
<p>This is another paragraph

## XHTML Empty Elements Must Always be Closed

In XHTML, empty elements must always be closed, like this:

### Correct:

A break: <br />  
A horizontal rule: <hr />  
An image: <img src="happy.gif" alt="Happy face" />

### Wrong:

A break: <br>  
A horizontal rule: <hr>  
An image: <img src="happy.gif" alt="Happy face">

## XHTML Elements Must be in Lowercase

In XHTML, element names must always be in lowercase, like this:

### Correct:

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

### Wrong:

<BODY>  
<P>This is a paragraph</P>  
</BODY>

## XHTML Attribute Names Must be in Lowercase

In XHTML, attribute names must always be in lowercase, like this:

### Correct:

<a href="https://www.w3schools.com/html/">Visit our HTML tutorial</a>

### Wrong:

<a HREF="https://www.w3schools.com/html/">Visit our HTML tutorial</a>

## XHTML Attribute Values Must be Quoted

In XHTML, attribute values must always be quoted, like this:

### Correct:

<a href="https://www.w3schools.com/html/">Visit our HTML tutorial</a>

### Wrong:

<a href=https://www.w3schools.com/html/>Visit our HTML tutorial</a>

### **References:**

* w3Schools
* javatpoint
* pediaa.com
* tutorialspoint