

# Element

# XHTML

## Chapter - 3

- An **element** or a tag in XHTML describes each individual piece of a web page.
- They are the building blocks of XHTML document.
- Elements are having 3 parts
  - Opening tag
  - Contents element
  - Closing tag

Eg: `<title> Welcome to Web Programming </title>`

### \*Empty Elements

- Elements that does not have a content is known as empty tag . Empty elements do not have an end tag!.
- Eg: `<br>`  
`<hr>`  
`<img>`  
`<meta>`  
`<list>`  
`<break>`

# \*\* Preserving White spaces- <pre>

- **<pre> tag** is used to define a block of pre text formats in which white spaces and line breaks should be preserved exactly as they appear in the source code.

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

<h1>The pre element</h1>

<pre>
Book                Price
-----
WP                250
SP                150
CR                300
</pre>

</body>
</html>
```

## The pre element

Book Price ----- WP 250 SP 150 CR 300

## The pre element

Book	Price
WP	250
SP	150
CR	300

## \*Block Quotation

- The **<blockquote>** tag is used to display the long quotations .It is used to define long quotations like paragraph.
- It contains both opening and closing tags.
- In blockquote tag, we can use elements like **heading, list, paragraph**, etc.

### Syntax:

<blockquote> Contents... </blockquote>

# Output

## The use of blockquote element

```
<html>
<body>
  <h1>The use of blockquote element</h1>

  <p>WEB PROGRAMMING</p>

  <blockquote>
    Web programming, also known as web development, is the creation of
    dynamic web applications.
  </blockquote>
  <p>HTML</p>
  <blockquote>
    HTML stands for HyperText Markup Language. It
    is used to design web pages using a markup language.
  </blockquote>
  <p>XHTML</p>
  <blockquote>
    XHTML stands for EXtensible HyperText Markup Language.
    XHTML was developed by World Wide Web Consortium (W3C)
  </blockquote>
</body>
</html>
```

WEB PROGRAMMING

Web programming, also known as web development, is the creation of dynamic web applications.

HTML

HTML stands for HyperText Markup Language. It is used to design web pages using a markup language.

XHTML

XHTML stands for EXtensible HyperText Markup Language. XHTML was developed by World Wide Web Consortium (W3C)

## **\*\*Presentational Elements**

- It is also known as formatting tags.
- Formatting elements were designed to display special types of text.
- XHTML provides different methods for text-formatting

- <b> - Bold text
- <i> - Italic text
- <u> - underline
- <s> or <del> - Deleted text or strike the text
- <tt>- teletype
- <mark> - Marked text
- <big> - Bigger text
- <small> - Smaller text
- <ins> - Inserted text
- <sub> - Subscript text
- <sup> - Superscript text

## <b> ,<i> ,<u>,<s>

- <b> - The XHTML <b> element defines bold text.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><b>This text is bold.</b></p>
```

**This text is bold.**

```
<p>This text is normal.</p>
```

```
<p><i>This text is italics text.</i></p>
```

This text is normal.

*This text is italics text.*

- <u> - The element defines an underlined text.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><u>This text is UNDERLINED text.</u></p>
```

This text is UNDERLINED text.

- <s> or <del>

- The <s> or <del> element defines a striked through text.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><s>This text is STRIKE THROUGH text.</s></p>
```

~~This text is STRIKE THROUGH text.~~

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><del>This tag is used to strike the text.</del></p>
```

~~This tag is used to strike the text.~~

## **\*\*<tt>** - teletype

- The <tt> tag is used to define teletype text.
- The purpose of <tt> is to be displayed on a fixed-width display such as a teletype or a typewriter, line printer.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><tt>This text is TELETYPE text.</tt></p>
```

This text is TELETYPE text.

## **<mark>** Element

- The **<mark>** element defines text that should be marked or highlighted.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><mark>This text is HIGHLIGHTED text.</mark></p>
```

This text is HIGHLIGHTED text.

- **<big>** - tag was used to increase the text font size one level **bigger** than the normal size.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><big>This text is a BIG text.</big></p>
```

This text is a BIG text.

**<small>** - tag is used to decrease the text font size one level **smaller** than the normal size.

```
<p>This text is normal.</p>
```

This text is normal.

```
<p><small>This text is a SMALL text.</small></p>
```

This text is a SMALL text.

- **<ins>** - tag is used to specify a block of inserted text. The inserted text is rendered as underlined text.

```
<html>
<body>

<h1>The use of ins element</h1>

<p>My favorite color is <del>BLUE</del>
<ins> RED</ins>!!!!!!!</p>

</body>
</html>
```

## The use of ins element

My favorite color is BLUE-RED!!!!!!!

**<sub>** -The <sub> tag defines subscript text. Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font.

**<sup>** - The <sup> tag defines superscript text.

```
<html>
<body>

<h1>The use of sub and sup elements</h1>

<p>This text is an example for Subscript like H <sub>2</sub> O.</p>
<p>This text is an example for Superscript like (a+b) <sup>2</sup> </p>

</body>
</html>
```

## The use of sub and sup elements

This text is an example for Subscript like H<sub>2</sub>O.

This text is an example for Superscript like (a+b)<sup>2</sup>

## **\*\*Phrase Elements**

- The phrase tags are special purpose tags, which defines the structural meaning of a block of text.
- Types
- # Emphasis Tag
- # Strong Tag
- # Abbreviation Tag
- # Acronym Tag
- # Address Tag

### Emphasis Tag - <em>

- This tag is used to emphasize the text, and displayed the text in **italic** form. The text written between **<em>** and **</em>** tag will italicized the text.

```
<html>
<body>
  <h2>Example of emphasized tag</h2>

  <p>HTMLstands for <em>Hypertext Markup Language </em>.</p>
</body>
</html>
```

### Example of emphasized tag

HTMLstands for *Hypertext Markup Language*.

## Strong element - <strong>

- The **strong** tag is used to show important words in a sentence. The content written within **<strong>** and **</strong>** tag will display as important word.

```
<html>
<head>
  </head>
<body>
  <h2>Example of strong tag</h2>
  <p><p>HTML is recommended to use <strong> lowercase letters</strong>
</p>
</body>
</html>
```

### Example of strong tag

HTML is recommended to use **lowercase letters**

## \*\* Abbreviation Tag-<abbr>

- Abbreviation Tag **<abbr>** is used for giving an abbreviation(shortened form ) to any word written within the opening and closing tag.The attribute for <abbr> is **title**.

```
<html>
<head>
  </head>
<body>
  <h2> USE OF ABBREVIATION TAG </h2>
  <p> The  <abbr title = "Hypertext Markup language"> HTML </abbr>
    language is used to create web pages.
  </p>
</body>
</html>
```

### USE OF ABBREVIATION TAG

The HTML language is used to create web pages.

## Acronym tag- <acronym>

- The **<acronym>** element allows you to indicate that the text between **<acronym>** and **</acronym>** tags is an acronym.
- This element and **title** attribute was used to associate a full-text explanation with an acronym. **The <acronym> element has been deprecated in HTML5**

<acronym title="WWW"> WORLD WIDE WEB </acronym> is only a component of the Internet.

## Address Tag <address>

- Address Tag is used for specifying as well as emphasize a set of text is an address format.

```
<html>
<head>
  </head>
<body>
  <h1>Address Tag</h1>
  <address> #15, Ashoka Nagar <br>
    Maruthi Layout<br>
    New Delhi
  </address>
</body>
</html>
```

### Address Tag

#15, Ashoka Nagar  
Maruthi Layout  
New Delhi

## \*\*Character Entities

- Some characters are **reserved** in HTML and they have special meaning when used in HTML/XHTML document.
- If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with **tags**.
- Character entities** are used to display reserved characters in HTML/XHTML.

## Character Entities

Symbol	Description	Entity Name
"	quotation mark	&quot;
'	apostrophe	&apos;
&	ampersand	&amp;
<	less-than	&lt;
>	greater-than	&gt;

## \*\*<Meta> Tag

- The metadata means **information about data**. The <meta> tag in HTML provides information about HTML Document or in simple words, it provides important information about a document.
- That means a <meta> tag is used to provide **additional important information** about a document in a variety of ways.
- <meta> tag is an example for **Empty Tag**.
- <meta> is used within the <head> tag.

### Syntax

<meta attribute-name="value">



- The **attributes for the meta tag** are:

1. **Name:** It describe the name of the property . It can include **keywords , description , author, revision , redirect etc..**

→ **keywords** : Certain reserved words & Is used to describe a web page.

Eg: `<meta name = "keywords" content = "HTML,CSS,JS"/>`

→ **revision** : This is used to provide the information about when is the last time the document is updated.

Eg: `<meta name = "revision" content = "12-jan-2006"/>`

- **Refresh:** It is used to specify when **we want to refresh our document** or **the duration of our document to be refreshed.**

Eg: `<meta http:equiv = " refresh" content = " 1 min"/>`

- **Redirect:** This is used to **redirect the current page** to another web page.

Eg: `<meta http:equiv=" redirect" url = " http:\\www.yahoo.com"/>`

- **Author** : It is used to mention the author of a particular document.

Eg: `<meta name="author" content = " William Shakespeare"/>`

- **Description** : It is used to provide a short description about the page.

Eg: `<meta name="description" content = " learning more about meta tags />`

2. **Content:** Content is used to specify the **properties values** . It contains the detailed information about the **name** property.

eg: `<meta name = "revision" content = "12-jan-2006"/>`

3. **Scheme** :Scheme is used to specify the **format** of a particular content which is declared in the document.

Eg: `<meta name="date" content="2009-01-02" scheme="YYYY-MM-DD">`

4. **http:equiv** : It is specifically used **for internet applications http request messages**. It can be used with refresh, redirect etc.

## Attributes in XHTML/HTML

- Attributes are the properties that describes an XHTML element.
- It provide additional information about the elements.
- Attributes are always specified in the start tag
- Eg: **<a href="value">**
- Attributes consists of a name and a value separated by "=" symbol like: **name="value"**.
- The name parameter takes the name of the property we would like to assign to the element and the value takes the properties value.
- **Any element can have more than one attributes.**
- Attributes are added to a tag to provide additional information about how a tag should behave.

### Syntax:

**<element attribute\_name="attribute\_value">**

### \*Various attributes in XHTML/HTML

- **The href Attribute:** The <a> tag defines a hyperlink. The href attribute specifies the URL /hypertext reference of the page the link goes to.
- Eg:  
**<a href="https://sindhicollege.com">Click the Link</a>**
- **The src Attribute:** If we want to insert an image into a webpage, then we need to use the **<img> tag** and **the src** attribute. We will need to specify the address of the image as the attribute's value inside the double quote.  
Example  
**<img src = "C:\Users\priya\Desktop\flower.jpg">**
- **The alt Attribute:** alt attribute is used with the **<img> tag** which specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to slow connection, or an error in the src attribute, or if the user uses a screen reader.

# Example

```
<html>
<body>

<h2>The alt Attribute</h2>



</body>
</html>
```

## The alt Attribute



```
<html>
<body>

<h2>The alt Attribute</h2>



</body>
</html>
```

## The alt Attribute



- **The width and height Attribute** : This attribute is used to adjust the width and height of an image.

```
<html>
<body>

<h2>Width and Height Attributes</h2>



</body>
</html>
```

## Width and Height Attributes



- **The lang attribute** : The language of the document is declared with the **lang** attribute.  
Eg: `<html lang="en-US">`
- **The dir attribute** : This attribute allows to indicate the browser the direction in which the text should flow.
  - ltr – left to right
  - rtl – right to leftEg: `<p dir="rtl">Write this text right-to-left!</p>`

## **\*\*CORE ATTRIBUTES IN XHTML**

**The Main attributes are: id, title, class &and style.**

### **1. The style Attribute:**

- The style attribute is used to add styles to an element, such as color, font, size, and more.
- This attribute is used to provide various CSS(Cascading Style Sheets) effects to the HTML/XHTML elements

```
<html>
<body>

<h2>The style Attribute</h2>

<p style="color:red;">This is a red paragraph.<br>
The contents of this paragraph will appear as red text. </p>

</body>
</html>
```

### **The style Attribute**

This is a red paragraph.  
The contents of this paragraph will appear as red text.

- 2. id attribute:** This attribute is used to provide a unique identification to an element. Situations may arise when we will need to access a particular element which may have a similar name as the others. In that case, we provide different ids to various elements so that they can be uniquely accessed.

- **Eg:**

```
<p id = "italic paragraph">this is italics paragraph <br>
<p id = "bold paragraph"> this is bold paragraph <br>
```

- 3. The title Attribute :** The title attribute is used to specify extra information about the element. When the mouse moves over the element then it shows the information.

```
<html>
<head>
  </head>
<body>
  <h2> USE OF ABBREVIATION TAG </h2>
  <p> The <abbr title = "Hypertext Markup language"> HTML </abbr>
    language is used to create web pages.
  </p>
</body>
</html>
```

### **USE OF ABBREVIATION TAG**

The HTML language is used to create web pages.

**4. Class Attribute:** The class is an attribute which specifies one or more class names for an XHTML element.

- The class attribute is often used to point to a class name in a style sheet.
- The class name can be used by CSS and JavaScript to perform certain tasks for elements with the specified class name.

Eg:

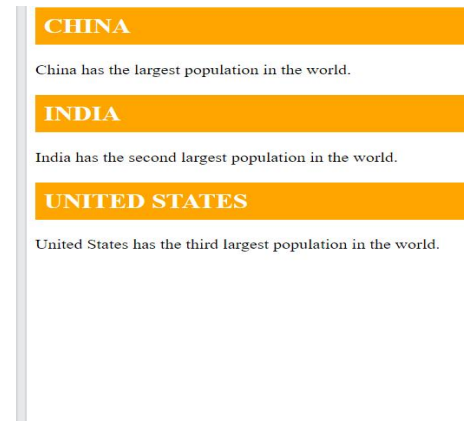
```
<html>
<head>
<style>
.country {
    background-color: orange;
    color: white;
    padding: 8px;
}
</style>
</head>
<body>

    <h2 class="country">CHINA</h2>
    <p>China has the largest population in the world.</p>

    <h2 class="country">INDIA</h2>
    <p>India has the second largest population in the world.</p>

    <h2 class="country">UNITED STATES</h2>
    <p>United States has the third largest population in the world.</p>

</body>
</html>
```



\* Images - <img>

- The <img> tag is used to add an image in an HTML page.
- The “img” tag is an **empty tag**, which means it can contain only a list of attributes and it has no closing tag.
- The <img> tag has two required attributes:
  - **src** - Specifies the path to the image
  - **alt** - Specifies an alternate text for the image, if the image for some reason cannot be displayed
- Every image has an **src** attribute which tells the browser where to find the image you want to display. The URL of the image provided points to the location where the image is stored.
- **Syntax**  

- Also, always specify the **width** and **height** of an image. If width and height are not specified, the page might flicker while the image loads.

### Sample Program

```
<html>
<head>
<title>IMAGES</title>
<head>
</head>
<body>

</body>
</html>
```

### \*Image Formats

Image Extension	Use	Explanation
JPG Joint Photographic Gallery	Photographs / Web / Digital Media	Best for Banner, Photographs
PNG Portable Network Graphics	Web / Digital media	Best for Logo, icons, where transparency is required
GIF Graphic Interchange Format	Web / Digital Media	Animated images for web and digital media
SVG Scalable Vector Graphics	Logo / icons / Charts	Vector based images, increasing image size will not pixelate image.

### \*\*HYPERLINKS

- A **hyperlink** is an element in an HTML document that links to either another portion of the document or to another document altogether. On web pages, hyperlinks are usually colored purple or blue and are underlined. [www.google.com](http://www.google.com)
- User can click on a link and jump to another document.
- Hypertext is text with **hyperlinks**.

# Syntax

- The HTML <a> **anchor** tag defines a hyperlink.

**<a href="url">link text</a>**

- The most important attribute of the <a> element is the **href** attribute, which indicates the link's destination.
- The *link text* is the part that will be visible to the user.
- Clicking on the link text, will send the user to the specified URL address.
- Eg:

**<a href="https://www.sindhicollege.com/"> click the link to visit sindhi college </a>**

## \*Types of URL links

- URL gives the address of files created for web pages .
- There are two types of URL:
- **Absolute URL- Absolute URL:** This type of URL contains both the domain name and directory/page path. An absolute URL gives complete location information. It begins with a protocol like "http://" and continues, including every detail.

### **syntax.**

protocol://domain/path

- Eg: <https://www.ebooks.org/computer-science-projects/>
- **Relative URL :** This type of URL contains the path excluding the domain name. Relative means "in relation to", and a relative URL tells a URL location on terms of the current location. Relative URL provides the shortest version of the URL.
- Eg: [www.ebooks.org](http://www.ebooks.org)

- There are four types of hyperlinks

- **Text hyperlink** – Uses a word or phrase to take users to another page, file or document.
- **Image hyperlink** – Uses an image to take users to another page, file or document.
- **Bookmark hyperlink** – Uses text or an image to take users to another part of a web page.
- **E-mail hyperlink** – Allows users to send an e-mail message to visit another page.