

DOCTYPE

- <!DOCTYPE> defines the document type declaration(DTD)
- 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).
- This simply informs the browser about the version of the HTML or XHTML document. There is no content inside this tag and there is no closing tag also. It is not case sensitive.

For HTML4.01 strict

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">
```

For HTML5 it is

```
<!DOCTYPE html>
```

HTML vs XHTML

- XHTML is a stricter, more XML-based version of HTML.
- XHTML was a mixture of HTML4.01 and XML which began in 2004 by W3C as a separate language. It is not used much nowadays and it is not developed separately

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

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.

NOTE:- While **XHTML** was designed to be a **better** version of HTML4 by incorporating some features of XML, HTML5 turned out to be far **better** than the both and is by far the most widely used markup language today because of the addition of many essential features

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"

For example(src, width and height are attributes)

```

```

Style Attribute

What is **CSS**?

- Cascading Style Sheets (CSS) is used to format the layout of a webpage.
- With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more!

CSS can be added to HTML documents in 3 ways:

- Inline - by using the style attribute inside HTML elements

```
<h1 style="color:blue;">A Blue Heading</h1>
```
- Internal - by using a <style> element in the <head> section
- External - by using a <link> element to link to an external CSS file

```
<!DOCTYPE html>
<html>

<head>
  <style>
    body {
```

```

        background-color: powderblue;
    }

    h1 {
        color: blue;
    }

    p {
        color: red;
    }
</style>
</head>

<body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
</body>

</html>

```

Block and Inline Elements

Block Elements

- In HTML block-level elements is given within <body>..</body> tag
- Block-level elements always start with the new line.

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

Inline Elements

- In HTML inline elements is also given within <body>..</body> tag and Inline elements come within block level elements
- Inline elements will not start in a new line

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

Grouping tags div and span

The most commonly used tags to group other HTML tags are <div> tag and tag

<div> Tag

- This is the most important tag used while grouping other tags in HTML. CSS can be applied in <div> tag. This tags also used to create a layout of web page.
- The <div> tag is used in Block level elements.

```
<div style ="border:2px solid crimson; background:pink; color:slateblue;">
```

 Tag

- The tag is used in inline elements.

```
<span style="font-size:1.5em; font-family:Trebuchet MS">Tutorial</span>
```

URL Encoding

URL - Uniform Resource Locator

- Web browsers request pages from web servers by using a URL.
- A Uniform Resource Locator (URL) is used to address a document (or other data) on the web.









URL encoding

- URLs can only be sent over the Internet using the ASCII character-set. If a URL contains characters outside the ASCII set, the URL has to be converted.

- URL encoding converts non-ASCII characters into a format that can be transmitted over the Internet.
- URL encoding replaces non-ASCII characters with a "%" followed by hexadecimal digits.
- URLs cannot contain spaces. URL encoding normally replaces a space with a plus (+) sign, or %20.

HTML colors

- Colors are displayed combining RED, GREEN, and BLUE light.
- Color Values HTML colors are defined using a hexadecimal notation (HEX) for the combination of Red, Green, and Blue color values (RGB).
- The lowest value that can be given to one of the light sources is 0 (in HEX: 00). The highest value is 255 (in HEX: FF).
- HEX values are specified as 3 pairs of two-digit numbers, starting with a # sign.

Color	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#FF0000	rgb(255,0,0)
	#00FF00	rgb(0,255,0)
	#0000FF	rgb(0,0,255)
	#FFFF00	rgb(255,255,0)
	#00FFFF	rgb(0,255,255)
	#FF00FF	rgb(255,0,255)
	#C0C0C0	rgb(192,192,192)
	#FFFFFF	rgb(255,255,255)

16 Million Different Colors