

# Web Designing

## Introduction to HTML5



### Outline

- Introduction to HTML5
- Understanding Basic Structure of HTML5 Document
- Strict and Loose Type HTML5 Document
- Validating HTML Document
- Understanding DOCTYPE Element, Root Elements, Metadata Elements, Section Elements, Heading Elements
- Introduction to Flow Elements
- Introduction to Phrasing Elements
- Introduction to Embedded Elements
- Introduction to Interactive Elements.

## Introduction to HTML5

- HTML is the basic building block of your web development journey. Whatever you see in the browser either on desktop, tablet or mobile all the contents are encapsulated in any HTML element.
- HTML5 is the next major revision of the HTML standard superseding HTML 4.01, XHTML 1.0, and XHTML 1.1. HTML5 is a standard for structuring and presenting content on the World Wide Web.
- HTML5 is a cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).
- The new standard incorporates features like video playback and drag-and-drop that have been previously dependent on third-party browser plug-ins such as Adobe Flash, Microsoft Silverlight, and Google Gears.

3

## Introduction to HTML5

- It is to be noted that HTML a markup language, not a programming language and these 2 are very different things.
- HTML is not considered a programming language because in HTML:
  - There is no way to store value
  - There no logic creation
  - There is no control system
  - There are no ways to repeat a task
- HTML just enclose data and metadata within the elements and the elements tell the browser how to render or use the enclosed data.
- **Browser Support** : The latest versions of Apple Safari, Google Chrome, Edge, Mozilla Firefox, and Opera all support many HTML5 features and Internet Explorer 9.0 will also have support for some HTML5 functionality.
- The mobile web browsers that come pre-installed on iPhones, iPads, and Android phones all have excellent support for HTML5.

4

## Features of HTML5

- HTML5 introduces a number of new elements and attributes that can help you in building modern websites. Here is a set of some of the most prominent features introduced in HTML5.
- New Semantic Elements – These are like <header>, <footer>, and <section>.
- Forms 2.0 – Improvements to HTML web forms where new attributes have been introduced for <input> tag.
- Persistent Local Storage – To achieve without resorting to third-party plugins.
- WebSocket – A next-generation bidirectional communication technology for web applications.
- Server-Sent Events – HTML5 introduces events which flow from web server to the web browsers and they are called Server-Sent Events (SSE).

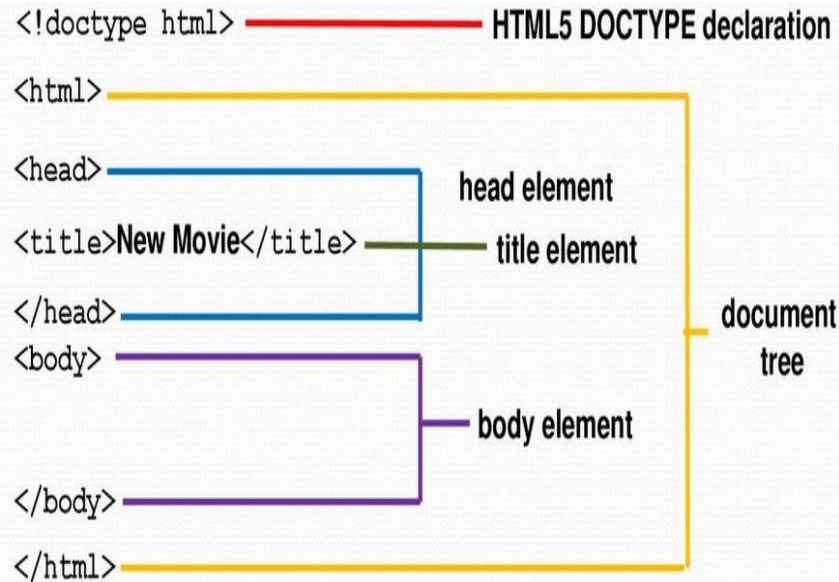
5

## Features of HTML5

- Canvas – This supports a two-dimensional drawing surface that you can program with JavaScript.
- Audio & Video – You can embed audio or video on your webpages without resorting to third-party plugins.
- Geolocation – Now visitors can choose to share their physical location with your web application.
- Microdata – This lets you create your own vocabularies beyond HTML5 and extend your web pages with custom semantics.
- Drag and drop – Drag and drop the items from one location to another location on the same webpage.
- Backward Compatibility : HTML5 is designed, as much as possible, to be backward compatible with existing web browsers. Its new features have been built on existing features and allow you to provide fallback content for older browsers.
- It is suggested to detect support for individual HTML5 features using a few lines of JavaScript.

6

## Basic Structure of HTML5 Document



## Basic Structure of HTML5 Document

- The HTML 5 language has a "custom" HTML syntax that is compatible with HTML 4 and XHTML1 documents published on the Web, but is not compatible with the more esoteric SGML features of HTML 4.
- HTML 5 does not have the same syntax rules as XHTML where we needed lower case tag names, quoting our attributes, an attribute had to have a value and to close all empty elements.
- HTML5 structure comes with a lot of flexibility and it supports the following features –
  - Uppercase tag names.
  - Quotes are optional for attributes.
  - Attribute values are optional.
  - Closing empty elements are optional.

## Basic Structure of HTML5 Document

- **The DOCTYPE** : DOCTYPEs in older versions of HTML were longer because the HTML language was SGML(Standard Generalized Markup Language) based and therefore required a reference to a DTD(document type definition )
  - HTML 5 authors would use simple syntax to specify DOCTYPE as follows –
  - `<!DOCTYPE html>` The above syntax is case-insensitive.
- **HTML5 Elements** : HTML5 elements are marked up using start tags and end tags. Tags are delimited using angle brackets with the tag name in between.
  - The difference between start tags and end tags is that the latter includes a slash before the tag name.

HTML Element  
`<tagname attribute1="value1" attribute2="value2" ...>Contents</tagname>`

Attributes: name=value pairs

Start Tag                      Contents                      End Tag

HTML Void Element (No contents and end-tag)  
`<tagname attribute1="value1" attribute2="value2" ...>`

9

## Basic Structure of HTML5 Document

- **HTML5 Attributes** : Elements may contain attributes that are used to set various properties of an element.
  - Some attributes are defined globally and can be used on any element, while others are defined for specific elements only.
  - All attributes have a name and a value and look like as shown below in the example. `<div class = "example">...</div>`
  - Attributes may only be specified within start tags and must never be used in end tags.
  - HTML5 attributes are case insensitive and may be written in all uppercase or mixed case, although the most common convention is **to stick with lowercase**.

HTML Element  
`<tagname attribute1="value1" attribute2="value2" ...>Contents</tagname>`

Attributes: name=value pairs

Start Tag                      Contents                      End Tag

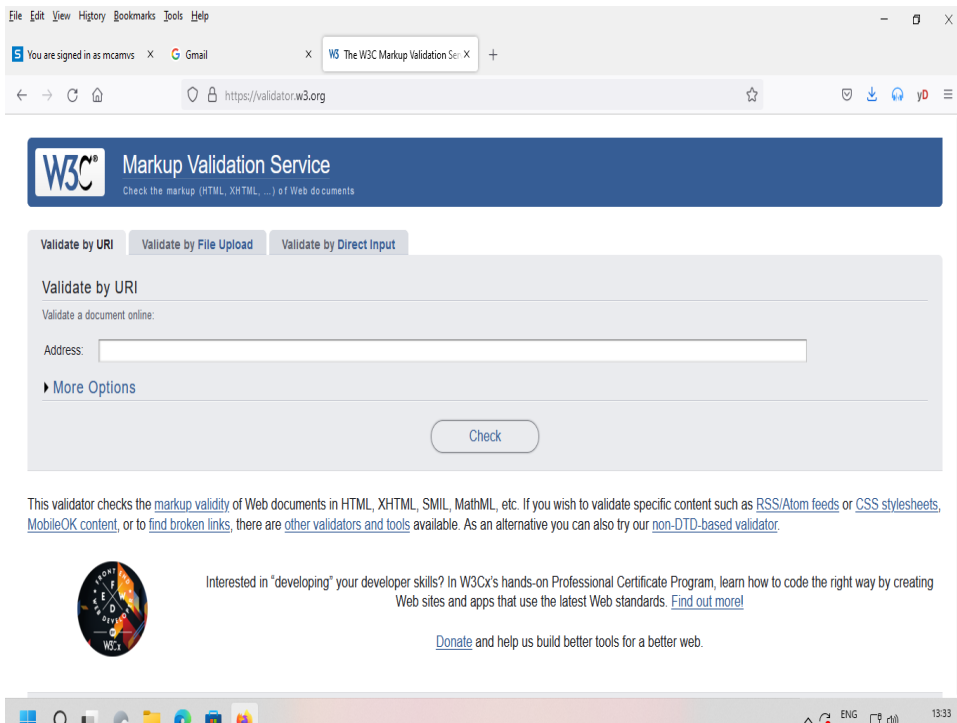
HTML Void Element (No contents and end-tag)  
`<tagname attribute1="value1" attribute2="value2" ...>`

9

## Validating HTML5 Document

- There are only few validators available on the net.
- But following two validators are very authentic and can be used –
- (1) <http://validator.w3.org/> (2) <http://validator.whatwg.org/>
- The W3C Markup Validator [https://validator.w3.org/#validate\_by\_uri+with\_options] checks the markup validity of Web documents in HTML, XHTML, SMIL, MathML, etc. This validator is part of Unicorn, W3C's unified validator service.
- To use this validator for HTML5, you need to use More Options and select Document Type as HTML5 (experimental) as shown below.


11



File Edit View History Bookmarks Tools Help

You are signed in as mcavms X Gmail X The W3C Markup Validation Service X +

← → ↻ 🏠 🔒 https://validator.w3.org/#validate\_by\_upload ☆ 🔒 📶 📶 📶 📶



## Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI Validate by File Upload Validate by Direct Input

### Validate by File Upload

Upload a document for validation:


File:  No file selected.

► More Options

Check

**Note:** file upload may not work with Internet Explorer on some versions of Windows XP Service Pack 2, see our [information page](#) on the W3C QA Website.

This validator checks the [markup validity](#) of Web documents in HTML, XHTML, SMIL, MathML, etc. If you wish to validate specific content such as [RSS/Atom feeds](#) or [CSS stylesheets](#), [MobileOK content](#), or to [find broken links](#), there are [other validators and tools](#) available. As an alternative you can also try our [non-DTD-based validator](#).



Interested in "developing" your developer skills? In W3C's hands-on Professional Certificate Program, learn how to code the right way by creating Web sites and apps that use the latest Web standards. [Find out more!](#)


[Donate](#) and help us build better tools for a better web.

Windows taskbar: 1335 01-08-2022

File Edit View History Bookmarks Tools Help

You are signed in as mcavms X Gmail X The W3C Markup Validation Service X +

← → ↻ 🏠 🔒 https://validator.w3.org/#validate\_by\_upload ☆ 🔒 📶 📶 📶 📶



## Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI Validate by File Upload Validate by Direct Input

### Validate by File Upload

Upload a document for validation:


File:  p1.html

► More Options

Check

**Note:** file upload may not work with Internet Explorer on some versions of Windows XP Service Pack 2, see our [information page](#) on the W3C QA Website.

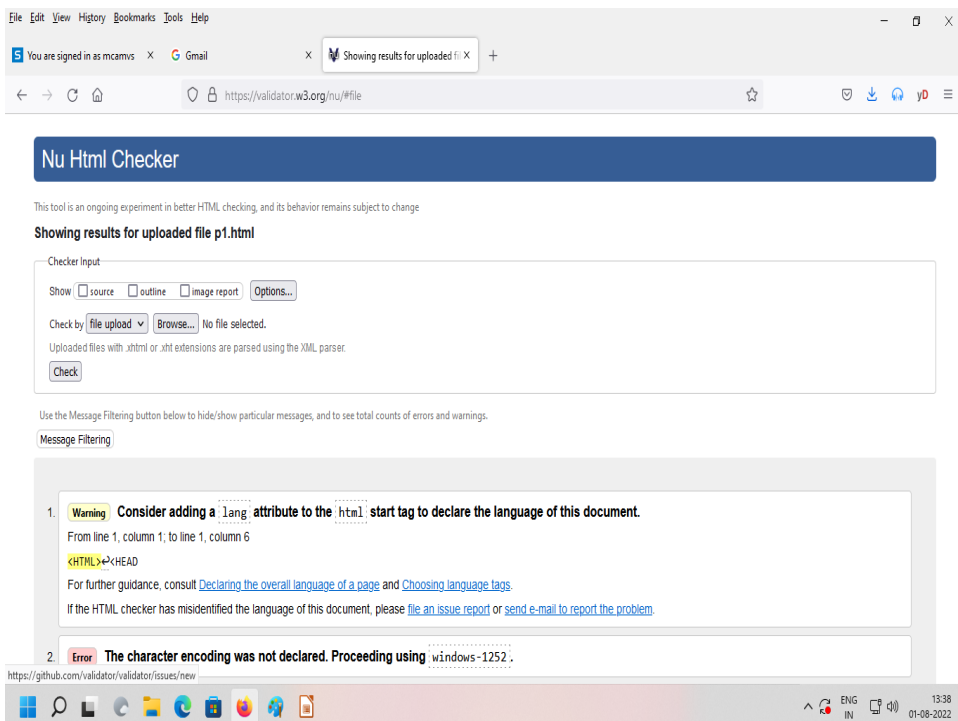
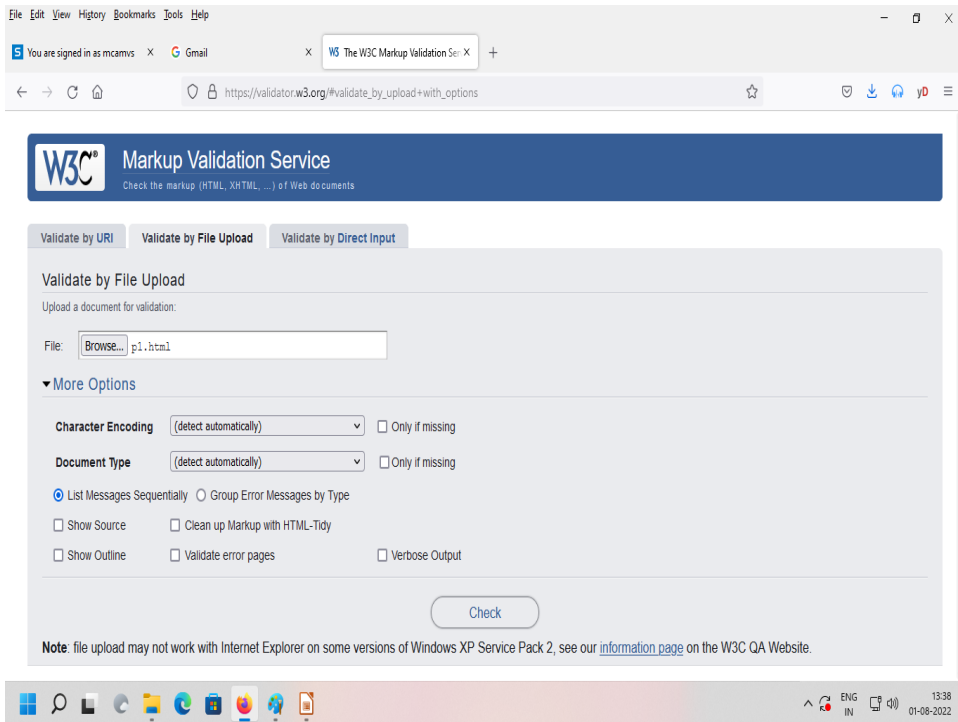
This validator checks the [markup validity](#) of Web documents in HTML, XHTML, SMIL, MathML, etc. If you wish to validate specific content such as [RSS/Atom feeds](#) or [CSS stylesheets](#), [MobileOK content](#), or to [find broken links](#), there are [other validators and tools](#) available. As an alternative you can also try our [non-DTD-based validator](#).



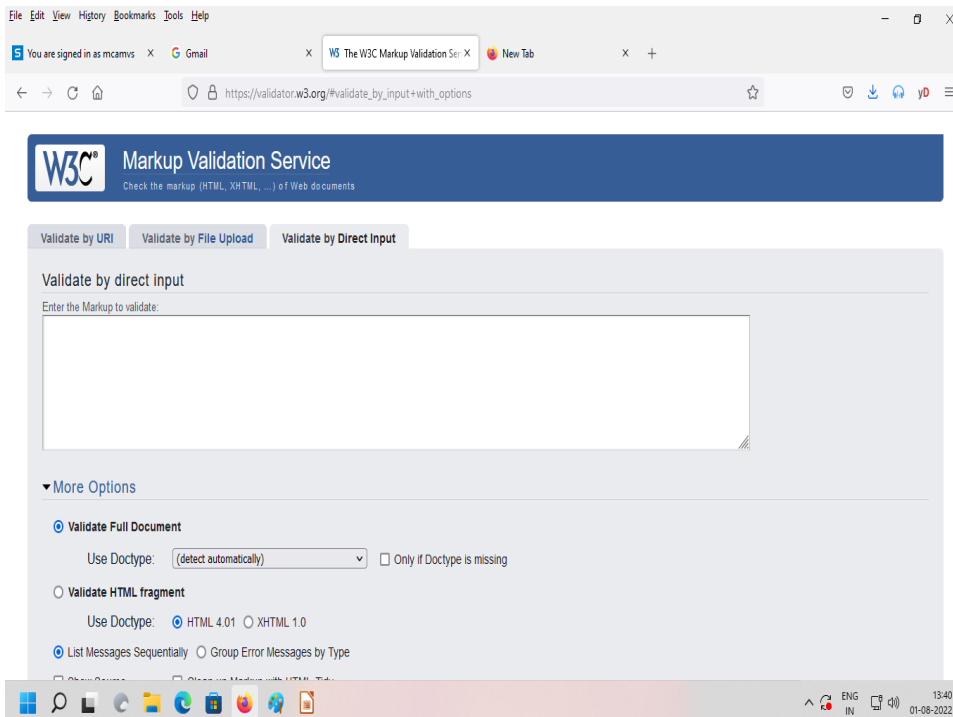
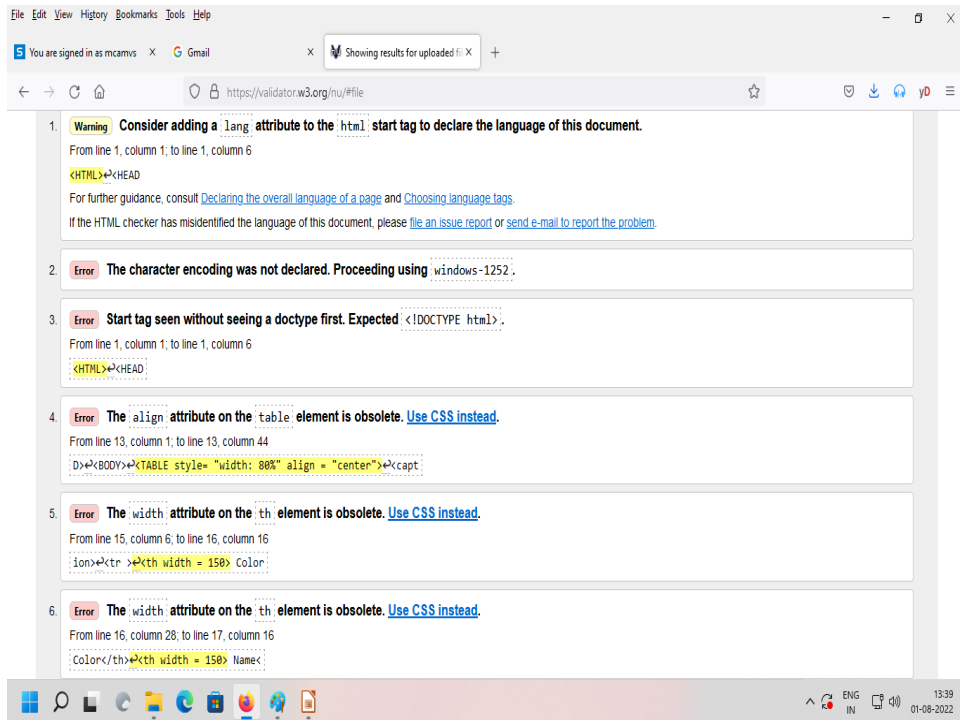
Interested in "developing" your developer skills? In W3C's hands-on Professional Certificate Program, learn how to code the right way by creating Web sites and apps that use the latest Web standards. [Find out more!](#)

[Donate](#) and help us build better tools for a better web.

Windows taskbar: 1337 01-08-2022







File Edit View History Bookmarks Tools Help

You are signed in as mcams x Gmail x The W3C Markup Validation Service x New Tab x +

https://validator.w3.org/#validate\_by\_input

## W3C<sup>®</sup> Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI Validate by File Upload **Validate by Direct Input**

### Validate by direct input

Enter the Markup to validate:

```
<HTML>
<HEAD>
<TITLE>
HTML Table Design
</TITLE>
<style>
table, th, td {
border: 1px solid black;
}
</style>
</HEAD>
<BODY>
```

More Options

Check

This validator checks the [markup validity](#) of Web documents in HTML, XHTML, SMIL, MathML, etc. If you wish to validate specific content such as [RSS/Atom feeds](#) or [CSS stylesheets](#), [MobileOK content](#), or to [find broken links](#), there are [other validators and tools](#) available. As an alternative you can also try our [non-DTD-based validator](#).

Interested in understanding what new technologies are coming out of W3C? Follow [@w3cdevs](#) on Twitter to keep track of what the future looks like!

13:42 01-08-2022

File Edit View History Bookmarks Tools Help

You are signed in as mcams x Gmail x Showing results for contents of x New Tab x +

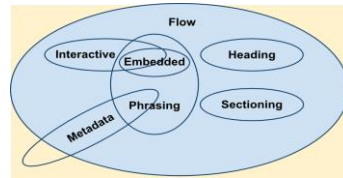
https://validator.w3.org/nu/#textarea

- Warning** Consider adding a `lang` attribute to the `html` start tag to declare the language of this document.  
From line 1, column 1 to line 1, column 6  
`<HTML><HEAD`  
For further guidance, consult [Declaring the overall language of a page](#) and [Choosing language tags](#).  
If the HTML checker has misidentified the language of this document, please [file an issue report](#) or [send e-mail to report the problem](#).
- Error** Start tag seen without seeing a doctype first. Expected `<!DOCTYPE html>`.  
From line 1, column 1 to line 1, column 6  
`<HTML><HEAD`
- Error** The `align` attribute on the `table` element is obsolete. [Use CSS instead](#).  
From line 13, column 1 to line 13, column 44  
`<table style="width: 88%" align = "center"><caption`
- Error** The `width` attribute on the `th` element is obsolete. [Use CSS instead](#).  
From line 16, column 6 to line 16, column 16  
`<tr><th width = 150> Color`
- Error** The `width` attribute on the `th` element is obsolete. [Use CSS instead](#).  
From line 16, column 28 to line 17, column 16  
`<td><th width = 150> Name<`

13:43 01-08-2022

## Categories of HTML5 tag

- HTML Root Tags
- HTML Metadata Tags
- HTML Section Tags
- HTML Head and Heading Tags
- HTML Flow Tags
- HTML Phrasing Tags
- HTML Embedded Tags
- HTML Interactive Tags



21

## HTML Root tag

- HTML Root Tags represent the main or the starting tag that should be present in all the HTML documents.
- The HTML tag is the first tag that comes after the <!DOCTYPE> tag and within which other HTML tags are specified.
- This tag allows the browser to identify the document type.

Attribute	Value	Description	New in HTML5
class	class-name	Specifies the class for an element in an HTML document	N
id	unique-id	Specifies a unique alphanumeric identifier for an element	N
dir	<b>ltr</b> - left to right <b>rtl</b> - right to left	Specifies the direction of the text for the content in an element	N
lang	language-code	Specifies the base language used for an element	N
xmlns	<a href="http://www.w3.org/1999/xhtml">http://www.w3.org/1999/xhtml</a>	Declares a namespace for tags used in an HTML document	N

## HTML Root tag

Attribute	Value	Description	New in HTML5
xml:lang	language-code	Specifies the base language used for an element in the eXtensible HyperText Markup Language (XHTML) documents	N
hidden	hidden	Declares an element as a hidden element. Hidden element are not displayed in the document	N
manifest	Universal Resource Locator (URL)	Defines a URL containing the document's cache information	Y
contextmenu	menu-id	Specifies the context menu for an element	Y
contenteditable	true, false	Specifies whether or not you can edit the content in the document	Y
accesskey	character	Specifies a keyboard shortcut to access an element	N
draggable	true, false, auto	Specifies whether or not you can drag an element	Y

3

## HTML Root tag

Attribute	Value	Description	New in HTML5
tabindex	number	Specifies the tab order index of an element	N
spellcheck	true, false	Specifies whether an element should be checked for spelling and grammar or not	Y
style	style-definition	Specifies an inline style in the HTML document by using the <style> element	N
title	text	Specifies the title of an HTML document	N

## HTML Root tag Example

```
<!DOCTYPE HTML>
<html>
<head>
  <title>HTML Root Tag Example</title>
  <style>
    #top{ color:red; }
    #middle{ color:blue; }
    .para{ color:green; }
  </style>
</head>
<body>
  <h1 id="top">HTML Root Tag (top)</h1>
  <p class="para">HTML Root Tag (para)</p>
  <h2 id="middle">HTML Root Tag (middle)</h2>
  <p class="para">HTML Root Tag (para)</p>
</body>
</html>
```



25

## HTML Meta tag

- The metadata tags are used to set the presentation or the behaviour of the remaining content of the document.
- Metadata tags can also be used to set a relationship of a document with other documents.
- You can use metadata tags to provide additional information about an HTML document.
- Following are the list of metadata tags :
  - TITLE
  - BASE
  - LINK
  - COMMAND
  - META
  - SCRIPT
  - NOSCRIPT
  - STYLE

26

## HTML section tag

- The SECTION tag is used to represent the generic section of an HTML document.
- Example

```
<SECTION>
  <H1>HTML5</H1>
  <P>Example of SECTION tag.</P>
</SECTION>
```
- In SECTION tag, you will learn about tags given below:
  - NAV
  - ARTICLE
  - ASIDE
  - HEADER
  - FOOTER
  - ADDRESS

27

## NAV section tag

- The NAV tag is used to navigate from one HTML page to the another. This tag displays a group of links on a HTML document.
- Example

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
  <title>HTML Tag Example</title>
</head>
<body>

<section>
  <h1>HTML Tag</h1>
  <p>This is HTML Tag tutorial.</p>
</section>
<nav>
  <h1>Navigation</h1>
  <ul>
    <li><a href="/html/html-root-elements.htm">HTML Root Tags</a></li>
    <li><a href="/html/html-metadata-elements.htm">HTML Metadata Tags</a></li>
    <li><a href="/html/html-section-elements.htm">HTML Section Tags</a></li>
  </ul>
</nav>
</BODY>
</HTML>
```



## Article tag

- The ARTICLE tag is used to represent a section that contains the information about an HTML page, such as its title and the date of its creation. You can display the information in this tag in various formats, such as a new article, or a blog post, or user's comments section.

- Example

```
<ARTICLE>  
  <HEADER>  
    Some heading content  
  </HEADER>  
  <P>Some article content</P>  
</ARTICLE>
```

29

## Aside tag

- The ASIDE tag allows us to create a section that is used to display information about the content of the other tags, such as time and date, current news, and weather report.
- This tag can also be used to insert typographical effects in a document, such as sidebars for the advertisements, notes, links, and tips.

- Example

```
<body>  
  <header>  
    <h1>Article Heading</h1>  
    <p>Article content</p>  
  </header>  
  <aside>  
    Enter some content related to the aside article  
  </aside>  
</body>
```

30

## Header tag

- The HEADER tag is used to provide the introductory content on an HTML page.
- The HEADER tag can contain headings, paragraphs, links, and other content.
- Example

```
<header>
  <h1>Level 1 Heading</h1>
  <a href="http://codescracker.com/html/html-section-
    elements.htm#sections">HTML Section Tags</a></dd>
  <nav>
    <ul>
      <li><a href="/news">News</a>
      <li><a href="/article">Article</a>
    </ul>
  </nav>
</header>
```

31

## Footer tag

- The FOOTER tag is used to represent the footer, which contains various types of information, such as links and copyright data related to a document or a section of the document.
- Example

```
<footer>
  <ul>
    <li>Home</li>
    <li>News</li>
    <li>Links</li>
    <li>Article</li>
    <li>About</li>
  </ul>
</footer>
```

32



## Address tag

- The ADDRESS tag is normally defined at the header or the footer of the HTML page and is used to display the contact information for a document, such as name of the document's owner, maintainers, e-mail address for feedback, postal address, and phone number.
- The content of the ADDRESS tag appears in italics on the Web browser.

33

## Address tag Example

```
<!DOCTYPE html>
<html>
<head>
  <title>HTML Section Tag Example</title>
</head>
<body>

<p>The HTML address tag defines contact information (author/owner) of a document or article.</p>
<address>
  Written by codescracker.com<br>
  Visit us at:<br>
  http://codescracker.com
</address>

</body>
</html>
```



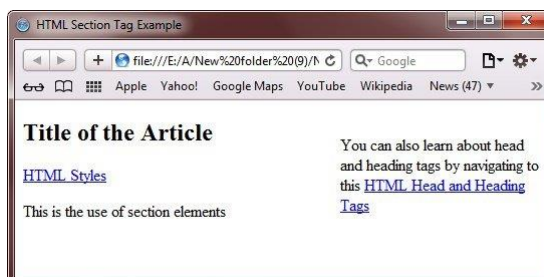
34

## Section tag example

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
  <title>HTML Section Tag Example</title>
</head>
<body>

<aside style="float:right;width:200px;">
  <p>You can also learn about head and heading tags by navigating to this
  <a href="http://codescracker.com/html/html-heading-elements.htm">HTML Head and Heading Tags</a>
</aside>
<article>
  <header>
    <h1>Title of the Article</h1>
    <a href="http://codescracker.com/html/html-styles.htm">HTML Styles</a>
  </header>
  <p>This is the use of section elements</p>
</article>

</BODY>
</HTML>
```



## header and footer tag example

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
  <TITLE>HTML SECTION Tags Example</TITLE>
</HEAD>
<BODY>

<header>
  <h1>Heading</h1>
  <a href="http://codescracker.com/html/html-section-elements.htm">HTML Section Tags</a></dd>
  <nav>
    <ul>
      <li><a href="articles.html">Articles</a></li>
      <li><a href="news.html">News</a></li>
      <li><a href="discussion.html">Discussion</a></li>
      <li><a href="download.html">Download</a></li>
    </ul>
  </nav>
</header>
The body content of the HTML document
<footer>
  <nav>
    <p><a href="credits.html">Credits</a> -
    <a href="terms.html">Terms of Service</a> -
    <a href="contact.html">Contact Us</a></p>
  </nav>
  <p>Copyright @ 2011</p>
</footer>

</BODY>
</HTML>
```



## Heading tag

- The HTML Heading tags are used to create headlines of a text. HTML provides the following six levels of heading:
  - <H1>
  - <H2>
  - <H3>
  - <H4>
  - <H5>
  - <H6>
- The first level heading i.e. <H1> is the most important heading, and the last level heading i.e. <H6> is the least important heading.
- The HTML <h1> to <h6> tag also supports the following additional attributes

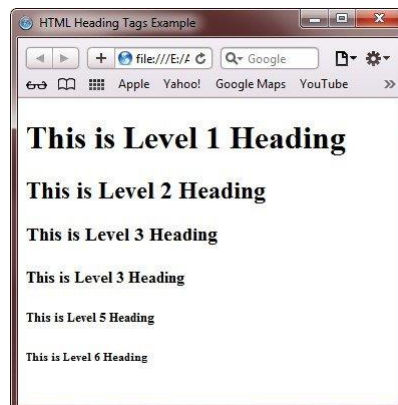
Attribute	Value	Description
align	left right center justify	<i>Deprecated</i> – Specifies the alignment of the content enclosed.

## Heading tag Example

```
<!DOCTYPE html>
<html>
<head>
  <title>HTML Heading Tags Example</title>
</head>
<body>

<h1>This is Level 1 Heading</h1>
<h2>This is Level 2 Heading</h2>
<h3>This is Level 3 Heading</h3>
<h4>This is Level 3 Heading</h4>
<h5>This is Level 5 Heading</h5>
<h6>This is Level 6 Heading</h6>

</body>
</html>
```



## Flow tag

- The HTML flow tags are used in the body of the HTML documents.
- The body of the HTML document contains almost all the tags of the HTML that are used to display the different types of the content, such as plain text, links, and images in the HTML document.

Tag	Description
<a>	Specifies an anchor
<abbr>	Specifies an abbreviation
<address>	Specifies an address element
<area>	Specifies an area inside an image map
<article>	New Tag: Specifies an independent piece of content of a document, such as a blog entry or newspaper article
<aside>	New Tag: Specifies a piece of content that is only slightly related to the rest of the page.
<audio>	New Tag: Specifies an audio file.

39

## Flow tag

Tag	Description
<b>	Represents the bold text.
<bdo>	Specifies the direction of text display
<blockquote>	Specifies a long quotation
 	Inserts a single line break
<button>	Specifies a push button
<canvas>	New Tag: This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games.
<cite>	Specifies a citation
<code>	Specifies computer code text
<command>	New Tag: Specifies a command the user can invoke.
<datalist>	New Tag: Together with the a new list attribute for input can be used to make comboboxes
<dfn>	Specifies a definition term

## Flow tag

Tag	Description
<del>	Specifies deleted text
<details>	New Tag:Specifies additional information or controls which the user can obtain on demand.
<dl>	Specifies a definition list
<div>	Specifies a section in a document
<embed>	New Tag:Defines external interactive content or plugin.
<footer>	New Tag:Specifies a footer for a section and can contain information about the author, copyright information, et cetera.
<em>	Specifies emphasized text
<fieldset>	Specifies a fieldset
<figure>	New Tag:Specifies a piece of self-contained flow content, typically referenced as a single unit from the main flow of the document.
<form>	Specifies a form

41

## Flow tag

Tag	Description
<h1> to <h6>	Specifies header 1 to header 6
<header>	New Tag:Specifies a group of introductory or navigational aids.
<hgroup>	New Tag:Specifies the header of a section.
<hr>	Specifies a horizontal rule
<i>	Specifies italic text
<iframe>	Specifies an inline sub window (frame)
<img>	Specifies an image
<input>	Specifies an input field
<ins>	Specifies inserted text
<keygen>	New Tag:Specifies control for key pair generation.
<kbd>	Specifies keyboard text
<label>	Specifies a label for a form control
<map>	Specifies an image map

## Flow tag

Tag	Description
<mark>	New Tag:Specifies a run of text in one document marked or highlighted for reference purposes, due to its relevance in another context.
<menu>	Deprecated: Specifies a menu list
<math>	Defines math expressions
<meter>	New Tag:Specifies a measurement, such as disk usage.
<nav>	New Tag:Specifies a section of the document intended for navigation.
<noscript>	Specifies a noscript section
<object>	Specifies an embedded object
<ol>	Specifies an ordered list
<output>	New Tag: Specifies some type of output, such as from a calculation done through scripting.
<p>	Specifies a paragraph

## Flow tag

Tag	Description
<pre>	Specifies preformatted text
<progress>	New Tag:Specifies a completion of a task, such as downloading or when performing a series of expensive operations.
<q>	Specifies a short quotation
<ruby>	New Tag:Together with <rt> and <rp> allow for marking up ruby annotations.
<script>	Specifies a script
<samp>	Specifies sample computer code
<small>	Specifies small text
<section>	New Tag:Represents a generic document or application section.
<select>	Specifies a selectable list
<strong>	Specifies strong text
<span>	Specifies a section in a document

## Flow tag

Tag	Description
<style>	Specifies a style definition
<sub>	Specifies subscripted text
<sup>	Specifies superscripted text
<svg>	Defines graphics in XHTML documents
<table>	Specifies a table
<textarea>	Specifies a text area
<time>	New Tag:Specifies a date and/or time.
<var>	Specifies a variable
<ul>	Specifies an unordered list
<video>	New Tag:Specifies a video file.
<wbr>	New Tag:Specifies a line break opportunity.
<text>	Represents text in an HTML document

43

## Phrasing tag

- Phrasing tags are used to represent the text of the HTML document.
- These tags are also used to mark up the HTML document text within the paragraphs of the document.
- You can organize the text of your HTML document by using the HTML Phrasing tags.

Tag	Description
<a>	Specifies an anchor
<abbr>	Specifies an abbreviation
<audio>	New Tag:Specifies an audio file.
<area>	Specifies an area inside an image map
<b>	Represents the bold text.
<bdo>	Specifies the direction of text display
 	Inserts a single line break

46

## Phrasing tag

Tag	Description
<button>	Specifies a push button
<canvas>	New Tag:This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games.
<cite>	Specifies a citation
<code>	Specifies computer code text
<command>	New Tag:Specifies a command the user can invoke.
<datalist>	New Tag:Together with the a new list attribute for input can be used to make comboboxes
<dfn>	Specifies a definition term
<del>	Specifies deleted text
<embed>	New Tag:Defines external interactive content or plugin.
<em>	Specifies emphasized text
<i>	Specifies italic text

## Phrasing tag

Tag	Description
<iframe>	Specifies an inline sub window (frame)
<img>	Specifies an image
<input>	Specifies an input field
<ins>	Specifies inserted text
<keygen>	New Tag:Specifies control for key pair generation.
<kbd>	Specifies keyboard text
<label>	Specifies a label for a form control
<map>	Specifies an image map
<mark>	New Tag:Specifies a run of text in one document marked or highlighted for reference purposes, due to its relevance in another context.
<math>	Defines math expressions
<meter>	New Tag:Specifies a measurement, such as disk usage.



## Phrasing tag

Tag	Description
<noscript>	Specifies a noscript section
<object>	Specifies an embedded object
<output>	New Tag:Specifies some type of output, such as from a calculation done through scripting.
<progress>	New Tag:Specifies a completion of a task, such as downloading or when performing a series of expensive operations.
<q>	Specifies a short quotation
<ruby>	New Tag:Together with <rt> and <rp> allow for marking up ruby annotations.
<script>	Specifies a script
<samp>	Specifies sample computer code
<small>	Specifies small text
<section>	New Tag:Represents a generic document or application section.
<select>	Specifies a selectable list

## Phrasing tag

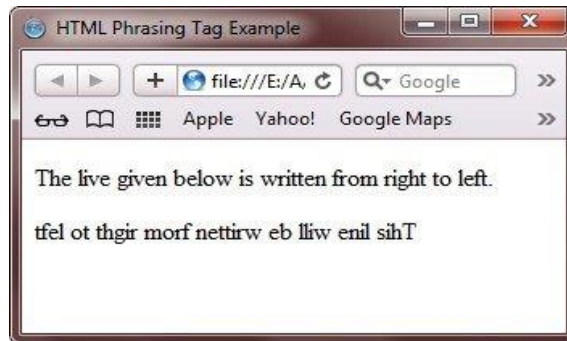
Tag	Description
<strong>	Specifies strong text
<span>	Specifies a section in a document
<sub>	Specifies subscripted text
<sup>	Specifies superscripted text
<svg>	Defines graphics in XHTML documents
<textarea>	Specifies a text area
<time>	New Tag:Specifies a date and/or time.
<var>	Specifies a variable
<video>	New Tag:Specifies a video file.
<wbr>	New Tag:Specifies a line break opportunity.
<text>	Represents text in an HTML document

## Phrasing tag Example

```
<!DOCTYPE html>
<html>
<head>
  <title>HTML Phrasing Tag Example</title>
</head>
<body>

<p>The live given below is written from right to left.</p>
<bdo dir="rtl">This line will be written from right to left</bdo>

</body>
</html>
```



51

## Embedded tag

- Embedded elements are used to import content from other resources into the HTML document.
- For Ex: The EMBED element is used as an integration point to plug in the content from other sources into the HTML document.

Tag	Description
<audio>	New Tag:Specifies an audio file.
<canvas>	New Tag:This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games.
<embed>	New Tag:Defines external interactive content or plugin.
<iframe>	Specifies an inline sub window (frame)
<img>	Specifies an image
<math>	Defines math expressions
<object>	Specifies an embedded object
<svg>	Defines graphics in XHTML documents
<video>	New Tag:Specifies a video file.

## Interactive tag

- Interactive tags are specifically intended for user interaction, such as AUDIO (used to play the audio file on the HTML page), VIDEO, and IMG.

Tag	Description
<a>	Specifies an anchor
<audio>	New Tag:Specifies an audio file.
<button>	Specifies a push button
<details>	New Tag:Specifies additional information or controls which the user can obtain on demand.
<embed>	New Tag:Defines external interactive content or plugin.
<iframe>	Specifies an inline sub window (frame)
<img>	Specifies an image
<input>	Specifies an input field
<keygen>	Generate key information in a form

53

## Interactive tag

Tag	Description
<label>	Specifies a label for a form control
<menu>	Deprecated: Specifies a menu list
<object>	Specifies an embedded object
<select>	Specifies a selectable list
<textarea>	Specifies a text area
<video>	New Tag:Specifies a video file.

54

## HTML5 Elements

Tag	Description
<!--...-->	Specifies a comment
<!DOCTYPE>	Specifies the document type
<a>	Specifies an anchor
<abbr>	Specifies an abbreviation
<acronym>	Deprecated: Specifies an acronym
<address>	Specifies an address element
<applet>	Deprecated: Specifies an applet
<area>	Specifies an area inside an image map
<article>	New Tag: Specifies an independent piece of content of a document, such as a blog entry or newspaper article
<aside>	New Tag: Specifies a piece of content that is only slightly related to the rest of the page.
<audio>	New Tag: Specifies an audio file.

55

## HTML5 Elements

Tag	Description
<base>	Specifies a base URL for all the links in a page
<basefont>	Deprecated: Specifies a base font
<bdo>	Specifies the direction of text display
<bgsound>	Specifies the background music
<blink>	Specifies a text which blinks
<blockquote>	Specifies a long quotation
<body>	Specifies the body element
 	Inserts a single line break
<button>	Specifies a push button
<canvas>	New Tag: This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games.
<caption>	Specifies a table caption

56

## HTML5 Elements

Tag	Description
<center>	Deprecated: Specifies centered text
<col>	Specifies attributes for table columns
<colgroup>	Specifies groups of table columns
<command>	New Tag:Specifies a command the user can invoke.
<comment>	Puts a comment in the document
<datalist>	New Tag:Together with the a new list attribute for input can be used to make comboboxes
<dd>	Specifies a definition description
<del>	Specifies deleted text
<details>	New Tag:Specifies additional information or controls which the user can obtain on demand.
<dir>	Deprecated: Specifies a directory list
<div>	Specifies a section in a document

57

## HTML5 Elements

Tag	Description
<dl>	Specifies a definition list
<dt>	Specifies a definition term
<embed>	New Tag:Defines external interactive content or plugin.
<fieldset>	Specifies a fieldset
<figure>	New Tag:Specifies a piece of self-contained flow content, typically referenced as a single unit from the main flow of the document.
<b>	Specifies bold text
<big>	Deprecated:Specifies big text
<i>	Specifies italic text
<small>	Specifies small text
<tt>	Deprecated:Specifies teletype text
<font>	Deprecated: Specifies text font, size, and color

58

## HTML5 Elements

Tag	Description
<footer>	New Tag:Specifies a footer for a section and can contain information about the author, copyright information, et cetera.
<form>	Specifies a form
<frame>	Deprecated:Specifies a sub window (a frame)
<frameset>	Deprecated:Specifies a set of frames
<head>	Specifies information about the document
<header>	New Tag:Specifies a group of introductory or navigational aids.
<hgroup>	New Tag:Specifies the header of a section.
<h1> to <h6>	Specifies header 1 to header 6
<hr>	Specifies a horizontal rule
<html>	Specifies an html document
<isindex>	Deprecated: Specifies a single-line input field

59

## HTML5 Elements

Tag	Description
<iframe>	Specifies an inline sub window (frame)
<ilayer>	Specifies an inline layer
<img>	Specifies an image
<input>	Specifies an input field
<ins>	Specifies inserted text
<keygen>	New Tag:Specifies control for key pair generation.
<keygen>	Generate key information in a form
<label>	Specifies a label for a form control
<layer>	Specifies a layer
<legend>	Specifies a title in a fieldset
<li>	Specifies a list item

60

## HTML5 Elements

Tag	Description
<link>	Specifies a resource reference
<map>	Specifies an image map
<mark>	New Tag:Specifies a run of text in one document marked or highlighted for reference purposes, due to its relevance in another context.
<marquee>	Create a scrolling-text marquee
<menu>	Deprecated: Specifies a menu list
<meta>	Specifies meta information
<meter>	New Tag:Specifies a measurement, such as disk usage.
<multicol>	Specifies a multicolumn text flow
<nav>	New Tag:Specifies a section of the document intended for navigation.
<nobr>	No breaks allowed in the enclosed text
<noembed>	Specifies content to be presented by browsers that do not support the <embed>tag

61

## HTML5 Elements

Tag	Description
<noframes>	Deprecated:Specifies a noframe section
<noscript>	Specifies a noscript section
<object>	Specifies an embedded object
<ol>	Specifies an ordered list
<optgroup>	Specifies an option group
<option>	Specifies an option in a drop-down list
<output>	New Tag:Specifies some type of output, such as from a calculation done through scripting.
<p>	Specifies a paragraph
<param>	Specifies a parameter for an object
<cite>	Specifies a citation
<code>	Specifies computer code text
<dfn>	Specifies a definition term

62

## HTML5 Elements

Tag	Description
<em>	Specifies emphasized text
<kbd>	Specifies keyboard text
<samp>	Specifies sample computer code
<strong>	Specifies strong text
<var>	Specifies a variable
<plaintext>	Deprecated: Render the remainder of the document as preformatted plain text
<pre>	Specifies preformatted text
<progress>	New Tag: Specifies a completion of a task, such as downloading or when performing a series of expensive operations.
<q>	Specifies a short quotation
<ruby>	New Tag: Together with <rt> and <rp> allow for marking up ruby annotations.
<script>	Specifies a script

63

## HTML5 Elements

Tag	Description
<section>	New Tag: Represents a generic document or application section.
<select>	Specifies a selectable list
<spacer>	Specifies a white space
<span>	Specifies a section in a document
<s>	Deprecated: Specifies strikethrough text
<strike>	Deprecated: Specifies strikethrough text
<style>	Specifies a style definition
<sub>	Specifies subscripted text
<sup>	Specifies superscripted text
<table>	Specifies a table
<tbody>	Specifies a table body

64



## HTML5 Elements

Tag	Description
<td>	Specifies a table cell
<textarea>	Specifies a text area
<tfoot>	Specifies a table footer
<th>	Specifies a table header
<thead>	Specifies a table header
<time>	New Tag:Specifies a date and/or time.
<title>	Specifies the document title
<tr>	Specifies a table row
<u>	Deprecated: Specifies underlined text
<ul>	Specifies an unordered list

65

## HTML5 Elements

Tag	Description
<video>	New Tag:Specifies a video file.
<wbr>	New Tag:Specifies a line break opportunity.
<wbr>	Indicate a potential word break point within a <nobr> section
<xmp>	Deprecated: Specifies preformatted text

66

## HTML5 Attributes

- Standard Attributes : The attributes listed below are supported by almost all the HTML 5 tags.

Attribute	Options	Function
accesskey	User Defined	Specifies a keyboard shortcut to access an element.
align	right, left, center	Horizontally aligns tags
background	URL	Places a background image behind an element
bgcolor	numeric, hexadecimal, RGB values	Places a background color behind an element
class	User Defined	Classifies an element for use with Cascading Style Sheets.
contenteditable	true, false	Specifies if the user can edit the element's content or not.

67

## HTML5 Attributes

Attribute	Options	Function
contextmenu	Menu id	Specifies the context menu for an element.
data-XXXX	User Defined	Custom attributes. Authors of a HTML document can define their own attributes. Must start with "data-".
draggable	true,false, auto	Specifies whether or not a user is allowed to drag an element.
height	Numeric Value	Specifies the height of tables, images, or table cells.
hidden	hidden	Specifies whether element should be visible or not.
id	User Defined	Names an element for use with Cascading Style Sheets.
tem	List of elements	Used to group elements.
itemprop	List of items	Used to group items.
spellcheck	true, false	Specifies if the element must have it's spelling or grammar checked.

68

## HTML5 Attributes

Attribute	Options	Function
style	CSS Style sheet	Specifies an inline style for an element.
subject	User define id	Specifies the element's corresponding item.
tabindex	Tab number	Specifies the tab order of an element.
title	User Defined	"Pop-up" title for your elements.
valign	top, middle, bottom	Vertically aligns tags within an HTML element.
width	Numeric Value	Specifies the width of tables, images, or table cells.

69

## HTML5 Attributes

- Custom attribute : A new feature being introduced in HTML 5 is the addition of custom data attributes.
- A custom data attribute starts with data- and would be named based on your requirement. Here is a simple example –
- `<div class = "example" data-subject = "physics" data-level = "complex"> ... </div>`
- The above code will be perfectly valid HTML5 with two custom attributes called data subject and data-level.
- You would be able to get the values of these attributes using JavaScript APIs or CSS in similar way as you get for standard attributes.

70

