

Unit-3

Introduction to HTML5

Introduction to HTML5

- 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.

Introduction to HTML5

- **Browser Support**

- The latest versions of Apple Safari, Google Chrome, 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.

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.

Features of HTML5

- **Server-Sent Events** – HTML5 introduces events which flow from web server to the web browsers and they are called Server-Sent Events (SSE).
- **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.

Features of HTML5

- 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.
 - If you are not familiar with any previous version of HTML, I would recommend that you go through our **HTML Tutorial** before exploring the features of HTML5.

Basic Structure of HTML5

- 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.

Basic Structure of HTML5

- 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

- **The DOCTYPE**

- DOCTYPEs in older versions of HTML were longer because the HTML language was SGML based and therefore required a reference to a DTD.
- HTML 5 authors would use simple syntax to specify DOCTYPE as follows –
- `<!DOCTYPE html>` The above syntax is case-insensitive.

Basic Structure of HTML5

- **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.
- Following is the example of an HTML5 element –
 - `<p>...</p>` HTML5 tag names are case insensitive and may be written in all uppercase or mixed case, although the most common convention is to stick with lowercase.
 - Most of the elements contain some content like `<p>...</p>` contains a paragraph.
 - Some elements, however, are forbidden from containing any content at all and these are known as void elements. For example, **br**, **hr**, **link**, **meta**, etc.

Basic Structure of HTML5

- **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.
- Following is the example of an HTML5 attribute which illustrates how to mark up a div element with an attribute named class using a value of "example" –
<div class = "example">...</div>

Basic Structure of HTML5

- 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.


Validating HTML5 Document

- There are only few validators available on the net.
- But following two validators are very authentic and can be used –

(1) The W3C Markup Validator

- The [W3C Markup Validator](https://validator.w3.org/#validate_by_uri+with_options) [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.

Validating HTML5 Document

**Markup Validation Service**
Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI

Validate by File Upload

Validate by Direct Input

Validate by URI

Validate a document online

Address:

▼ More Options

Character Encoding

(detect automatically) ▼

☐ Only if missing

Document Type

HTML5 (experimental) ▼

☐ Only if missing

☒ List Messages Sequentially

☐ Group Error Messages by Type

☐ Show Source

☐ Clean up Markup with HTML Tidy

☐ Show Outline

☐ Validate error pages

☐ Verbose Output

Check

Validating HTML5 Document

(2) The Validator.nu (X)HTML5 Validator

- Here is the another currently known HTML5 validators: Henri's [Validator.nu \(X\)HTML5 Validator](https://html5.validator.nu/) [https://html5.validator.nu/] (Highly Experimental) –
- This validator has compatibility problem, so you can try it in lower versions of IE or Mozilla.

Section Elements

- The following tags have been introduced for better structure
- **Body** – It is use to define content of HTML page
- **section** – This tag represents a generic document or application section. It can be used together with h1-h6 to indicate the document structure.
- **article** – This tag represents an independent piece of content of a document, such as a blog entry or newspaper article.
- **aside** – This tag represents a piece of content that is only slightly related to the rest of the page.
- **header** – This tag represents the header of a section.

Section Elements

- **footer** – This tag represents a footer for a section and can contain information about the author, copyright information, et cetera.
- **nav** – This tag represents a section of the document intended for navigation.
- **dialog** – This tag can be used to mark up a conversation.
- **figure** – This tag can be used to associate a caption together with some embedded content, such as a graphic or video.
- **Address**- It is normally define at the haeder or footer of an HTML page and use to display information such as contact.

HTML5 Elements

- **Root Element**
 - `<HTML>` is the root element which comes after `<!DOCTYPE>` element and within which other HTML elements are specified.
- **Metadata Elements**
 - HTML metadata is data about the HTML document. Metadata is not displayed.
 - Metadata typically define the document title, character set, styles, scripts, and other meta information.
 - The `<head>` element is a container for metadata (data about data)
 - The `<head>` element is placed between the `<html>` tag and the `<body>` tag

HTML5 Elements

Following are the Meta elements:

- 1) Title
- 2) Base
- 3) Link
- 4) Command
- 5) Meta
- 6) Script
- 7) NoScript
- 8) Style

HTML5 Elements

- The **<title>** tag defines the title of the document. The title must be text-only, and it is shown in the browser's title bar or in the page's tab.
- The **<title>** tag is required in HTML documents!
 - The contents of a page title is very important for search engine optimization (SEO)! The page title is used by search engine algorithms to decide the order when listing pages in search results.
- The **<title>** element:
 - defines a title in the browser toolbar
 - provides a title for the page when it is added to favorites
 - displays a title for the page in search-engine results

HTML5 Elements

- Here are some tips for creating good **titles**:
 - Go for a longer, descriptive title (avoid one- or two-word titles)
 - Search engines will display about 50-60 characters of the title, so try not to have titles longer than that
 - Do not use just a list of words as the title (this may reduce the page's position in search results)
 - So, try to make the title as accurate and meaningful as possible!
- Attributes of the title element:
 - Class
 - Id
 - Lang
 - Style

HTML5 Elements

- Definition and Usage
 - The <base> tag specifies the base URL and/or target for all relative URLs in a document.
 - The <base> tag must have either an href or a target attribute present, or both.
 - There can only be one single <base> element in a document, and it must be inside the <head> element.

Attribute	Value	Description
href	<i>URL</i>	Specifies the base URL for all relative URLs in the page
target	<i>_blank</i> <i>_parent</i> <i>_self</i> <i>_top</i>	Specifies the default target for all hyperlinks and forms in the page

HTML5 Elements

- Definition and Usage
 - The <link> tag defines the relationship between the current document and an external resource.
 - The <link> tag is most often used to link to external style sheets.
 - The <link> element is an empty element, it contains attributes only.

<head>

<link rel="stylesheet" href="styles.css">

</head>

HTML5 Elements

Link Attribute	Value	Description
crossorigin	anonymous use-credentials	Specifies how the element handles cross-origin requests
<u>href</u>	<i>URL</i>	Specifies the location of the linked document
<u>hreflang</u>	<i>language_code</i>	Specifies the language of the text in the linked document
<u>media</u>	<i>media_query</i>	Specifies on what device the linked document will be displayed
referrerpolicy	no-referrer no-referrer-when-downgrade origin origin-when-cross-origin unsafe-url	Specifies which referrer to use when fetching the resource

HTML5 Elements

Link Attribute	Value	Description
rel	Alternate, author, dns-prefetch, help, icon, license, next, pingback, preconnect, prefetch, preload, prerender, prev, search, stylesheet,	Required. Specifies the relationship between the current document and the linked document
sizes	<i>HeightxWidth</i> any	Specifies the size of the linked resource. Only for rel="icon"
title		Defines a preferred or an alternate stylesheet
type	<i>media_type</i>	Specifies the media type of the linked document

HTML5 Elements

- **Definition and Usage <meta> tag**
- The <meta> tag defines metadata about an HTML document. Metadata is data (information) about data.
- <meta> tags always go inside the <head> element, and are typically used to specify character set, page description, keywords, author of the document, and viewport settings.
- Metadata will not be displayed on the page, but is machine parsable.
- Metadata is used by browsers (how to display content or reload page), search engines (keywords), and other web services.
- There is a method to let web designers take control over the viewport (the user's visible area of a web page), through the <meta> tag (See "Setting The Viewport" example below).

HTML5 Elements

Meta Attribute	Value	Description
<u>charset</u>	<i>character_set</i>	Specifies the character encoding for the HTML document
<u>content</u>	<i>text</i>	Specifies the value associated with the http-equiv or name attribute
<u>http-equiv</u>	content-security-policy content-type default-style refresh	Provides an HTTP header for the information/value of the content attribute
<u>name</u>	application-name author description generator keywords viewport	Specifies a name for the metadata

HTML5 Elements

- **Define keywords for search engines:**

```
<meta name="keywords" content="HTML, CSS, JavaScript">
```

- **Define a description of your web page:**

```
<meta name="description" content="Free Web tutorials for HTML  
and CSS">
```

- **Define the author of a page:**

```
<meta name="author" content="John Doe">
```

- **Refresh document every 30 seconds:**

```
<meta http-equiv="refresh" content="30">
```

- **Setting the viewport to make your website look good on all devices:**

```
<meta name="viewport" content="width=device-width, initial-  
scale=1.0">
```

HTML5 Elements

- **Definition and Usage HTML <command>**
 - The type attribute specifies the type of command.

- Syntax

<command type="command|checkbox|radio">

Ex:

<menu>

<command type="command" label="Save" onclick="save()">

Save </command> </menu>

Value	Description
command	Default. Specifies a normal command with an action
checkbox	Specifies a command that can be toggled using a checkbox
radio	Specifies a command that can be toggled using a radio button

HTML5 Elements

- **Definition and Usage <noscript>**

- The <noscript> tag defines an alternate content to be displayed to users that have disabled scripts in their browser or have a browser that doesn't support script.
- The <noscript> element can be used in both <head> and <body>. When used inside <head>, the <noscript> element could only contain <link>, <style>, and <meta> elements.
- Ex:

<script>

document.write("Hello World!")

</script>

<noscript>Your browser does not support JavaScript!</noscript>

HTML5 Elements

- **Definition and Usage <script>**
 - The <script> tag is used to embed a client-side script (JavaScript).
 - The <script> element either contains scripting statements, or it points to an external script file through the src attribute.
 - Common uses for JavaScript are image manipulation, form validation, and dynamic changes of content.

Example:

```
<script>
```

```
document.getElementById("demo").innerHTML = "Hello  
JavaScript!";
```

```
</script>
```

HTML5 Elements

Script Attribute	Value	Description
<u>async</u>	async	Specifies that the script is executed asynchronously (only for external scripts)
<u>charset</u>	<i>charset</i>	Specifies the character encoding used in an external script file
<u>defer</u>	defer	Specifies that the script is executed when the page has finished parsing (only for external scripts)
<u>src</u>	<i>URL</i>	Specifies the URL of an external script file
<u>type</u>	<i>media_type</i>	Specifies the media type of the script

HTML5 Elements

- Definition and Usage <style>
 - The <style> tag is used to define style information (CSS) for a document.
 - Inside the <style> element you specify how HTML elements should render in a browser.

Attribute	Value	Description
media	<i>media_query</i>	Specifies what media/device the media resource is optimized for
type	text/css	Specifies the media type of the <style> tag
Scoped	Scoped	Specifies the style elements, that is the parent element and its child element.

Heading Elements

- The HTML <h1> to <h6> tag is used to define headings in an HTML document. <h1> defines largest heading and <h6> defines smallest heading.
- Specific Attributes
- 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.

HTML5 Flow Elements

Flow elements are used in the body of HTML documents.

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.

HTML5 Flow Elements

Tag	Description
<code></code>	Represents the bold text.
<code><bdo></code>	Specifies the direction of text display
<code><blockquote></code>	Specifies a long quotation
<code>
</code>	Inserts a single line break
<code><button></code>	Specifies a push button
<code><canvas></code>	New Tag: This is used for rendering dynamic bitmap graphics on the fly, such as graphs or games.
<code><cite></code>	Specifies a citation
<code><code></code>	Specifies computer code text

HTML5 Flow Elements

Tag	Description
<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
	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

HTML5 Flow Elements

Tag	Description
<code><embed></code>	New Tag:Defines external interactive content or plugin.
<code><footer></code>	New Tag:Specifies a footer for a section and can contain information about the author, copyright information, et cetera.
<code></code>	Specifies emphasized text
<code><fieldset></code>	Specifies a fieldset
<code><figure></code>	New Tag:Specifies a piece of self-contained flow content, typically referenced as a single unit from the main flow of the document.
<code><form></code>	Specifies a form
<code><h1></code> to <code><h6></code>	Specifies header 1 to header 6
<code><header></code>	New Tag:Specifies a group of introductory or navigational aids.
<code><hgroup></code>	New Tag:Specifies the header of a section.
<code><hr></code>	Specifies a horizontal rule

HTML5 Flow Elements

Tag	Description
<i>	Specifies italic text
<iframe>	Specifies an inline sub window (frame)
	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.

HTML5 Flow Elements

Tag	Description
<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
	Specifies an ordered list
<output>	New Tag:Specifies some type of output, such as from a calculation done through scripting.
<p>	Specifies a paragraph
<pre>	Specifies preformatted text

HTML5 Flow Elements

Tag	Description
<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
	Specifies strong text
	Specifies a section in a document

HTML5 Flow Elements

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
	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

HTML5 Phrasing Elements

- Phrasing elements are used to represent the text of the HTML document.
- These elements are also used to mark up the HTML document text within the paragraph of the document.

HTML5 Phrasing Elements

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
	Represents the bold text.
<bdo>	Specifies the direction of text display
 	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

HTML5 Phrasing Elements

Tag	Description
<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
	Specifies deleted text
<embed>	New Tag:Defines external interactive content or plugin.
	Specifies emphasized text
<i>	Specifies italic text
<iframe>	Specifies an inline sub window (frame)
	Specifies an image
<input>	Specifies an input field
<ins>	Specifies inserted text

HTML5 Phrasing Elements

Tag	Description
<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.
<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.

HTML5 Phrasing Elements

Tag	Description
<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
	Specifies strong text
	Specifies a section in a document

HTML5 Phrasing Elements

Tag	Description
<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

HTML5 Embedded Elements

- 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.

HTML5 Embedded Elements

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)
	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.

HTML5 Interactive Elements

- Interactive elements are specifically intended for user interaction.

HTML5 Interactive Elements

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)
	Specifies an image
<input>	Specifies an input field
<keygen>	Generate key information in a form
<label>	Specifies a label for a form control
<menu>	Deprecated: Specifies a menu list

HTML5 Interactive Elements

Tag	Description
<object>	Specifies an embedded object
<select>	Specifies a selectable list
<textarea>	Specifies a text area
<video>	New Tag:Specifies a video file.

HTML5 Interactive Elements

Tag	Description

HTML5 Interactive Elements

Tag	Description

HTML5 Elements

Tag	Description
<frame>	Deprecated: Specifies a sub window (a frame)
<frameset>	Deprecated: Specifies a set of frames
<head>	Specifies information about the document
<html>	Specifies an html document
<isindex>	Deprecated: Specifies a single-line input field

HTML5 Elements

Tag	Description
<keygen>	Generate key information in a form
<layer>	Specifies a layer
<legend>	Specifies a title in a fieldset
	Specifies a list item

HTML5 Elements

Tag	Description
<link>	Specifies a resource reference
<marquee>	Create a scrolling-text marquee
<multicol>	Specifies a multicolumn text flow
<nobr>	No breaks allowed in the enclosed text
<noembed>	Specifies content to be presented by browsers that do not support the <embed>tag

HTML5 Elements

Tag	Description
<noframes>	Deprecated:Specifies a noframe section
<optgroup>	Specifies an option group
<option>	Specifies an option in a drop-down list
<param>	Specifies a parameter for an object
<dfn>	Specifies a definition term

HTML5 Elements

<code><samp></code>	Specifies sample computer code
<code><plaintext></code>	Deprecated: Render the remainder of the document as preformatted plain text

HTML5 Elements

Tag	Description
<s>	Deprecated: Specifies strikethrough text
<strike>	Deprecated: Specifies strikethrough text
<tbody>	Specifies a table body

HTML5 Elements

Tag	Description
<td>	Specifies a table cell
<title>	Specifies the document title
<tr>	Specifies a table row
<u>	Deprecated: Specifies underlined text

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

HTML5 Elements

HTML5 Elements

- A complete list of standard tags available in HTML5 is given below. All the tags are ordered alphabetically along with an indication if they have been introduced newly or they have been deprecated in HTML5.

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.

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

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
	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

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.
	Specifies bold text
<big>	Deprecated:Specifies big text
<i>	Specifies italic text
<small>	Specifies small text
<tt>	Deprecated:Specifies teletype text
	Deprecated: Specifies text font, size, and color

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

HTML5 Elements

Tag	Description
<iframe>	Specifies an inline sub window (frame)
<ilayer>	Specifies an inline layer
	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
	Specifies a list item

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

HTML5 Elements

Tag	Description
<noframes>	Deprecated:Specifies a noframe section
<noscript>	Specifies a noscript section
<object>	Specifies an embedded object
	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

HTML5 Elements

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

HTML5 Elements

Tag	Description
<section>	New Tag:Represents a generic document or application section.
<select>	Specifies a selectable list
<spacer>	Specifies a white space
	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

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
	Specifies an unordered list

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

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 an background image behind an element
bgcolor	numeric, hexadecimal, RGB values	Places a background color behind an element

HTML5 Attributes

Attribute	Options	Function
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.
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.

HTML5 Attributes

Attribute	Options	Function
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.
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.

Custom Attributes

- 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 *datasubject* 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.

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