HTML5 Tags

Hypertext Markup Language 5 (HTML5)

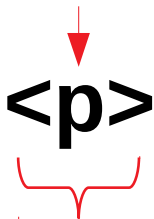# Table of Content

- Tags

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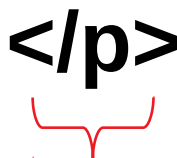
Tags

(Hypertext Markup Language 5)

HTML – Tag

- HTML tags are "keywords enclosed in angle bracket <>"
- Most of the tags are in pair (with "opening or start" and "closing or end" tags)

Tag name

<p>   **</p>**

Start tag   End tag

HTML – Tag

- HTML tags label pieces of content in document such as heading, paragraph, table etc.

- HTML tags are not case sensitive

  - \<P> means same as \<p>

- It is recommended to use lowercase tags

HTML – Tag

- Syntax for opening tag : <keyword>

- Syntax for closing tag : </keyword>

```
<html>                              ← Opening tag
    <head>                          ← Opening tag
    </head>                         ← Closing tag
    <body>
    </body>
</html>                             ← Closing tag
```

HTML5 Tags
(Categories)

Category	Description
Basic Tags	Defines basic page structure, title, line break, comments etc
Formatting	Defines text formatting
Forms and Input	Defines input from user, grouping, results etc
Frames	Defines sub-window
Images	Defines image content
Audio and Video	Defines audio and video content
Links	Defines hyperlinks and navigation links
Lists	Defines lists and menu items

HTML5 Tags
(Categories)

Category	Description
Tables	Defines tables (row, cell, caption etc)
Style and formatting	Defines styles, sections in pages, header, footer etc
Meta Info	Defines meta data of document and provides additional information
Programming	Defines objects, scripting, external app container etc

HTML5 Tags
(Categories – Basic tags)

Tag	Description
<!DOCTYPE>	Defines the type of document
<html>	Defines container for HTML web page
<head>	Contains styling, metadata and programming information
<title>	Contains title of the web page
<meta>	Defines metadata of web page
<body>	Defines body of web page
<h1> to <h6>	Defines HTML headings

HTML5 Tags
(Categories – Basic tags)

Tag	Description
<p>	Defines a paragraph
 	Inserts a single line break
<hr>	Defines a thematic change in the content
<!-- -->	Defines a comment

HTML5 Tags
(Document type)

- <!DOCTYPE> is a special tag to convey "type of the document" to browser
- The tag is used to inform browser that the document is HTML web page
- Syntax to declare document as HTML web page

```
<!DOCTYPE html>
Or
<!DOCTYPE HTML>
```

HTML5 Tags
(HTML page container)

- <html> and </html> are opening and closing tags of HTML web page
- Entire HTML web page is housed between these two tags
- Syntax :

```
<!DOCTYPE html>
<html>
      . . . Insert other elements of web page here . . .
</html>
```

HTML5 Tags
(Page header)

- <head> and </head> are opening and closing tags of HTML web page header (or head)

- This part of the web page contains styling information, programming logic (script), metadata and page title

- Syntax :

```
<head>
     . . . page information . . .
</head>
```

HTML5 Tags
(Page title)

- <title> and </title> are opening and closing tags of HTML web page title

- Syntax :

```
<head>
    <title> My first web page </title>
</head>
```

HTML5 Tags
(Page metadata)

- Metadata is information about data
- <meta> tag is used to add metadata (language, encoding, web page description etc) of web page
- Example : English pages use UTF-8 encoding for text

```
<head>
    <meta charset="UTF-8" />
</head>
```

HTML5 Tags
(Page body)

- <body> and </body> are opening and closing tags of HTML web page body
- This part of the web page is displayed to user
- Syntax :

```
<body>
    . . . Insert elements with content to be displayed . . .
</body>
```

HTML5 Tags
(Page headings)

- <h1> and </h1> are opening and closing tags of large heading
- Other heading are similarly numbered from h2 to h6
- Syntax :

```
<body>
    <h1> Largest heading </h1>
    <h2> Second large heading </h2>
    <h6> Smallest heading </h6>
</body>
```

HTML5 Tags
(Paragraph)

- <p> and </p> are opening and closing tags of paragraph
- A paragraph can span to several lines
- Syntax :

```
<body>

    <p> Once upon a time there was a poor farmer in the kingdom of Vijay
Nagar. He had a small piece of land in village to cultivate. The crops does not
yield enough grains for his family to survive. One day he thought of going to
nearby city and work on wages. </p>

</body>
```

HTML5 Tags
(Line break)

- Tag <b> is used to insert a line break
- There is no corresponding closing line break tag
- Self-closing tag (tag name followed by space abd forward slash " / " -
) is used in XHTML
- Example :

<body> <p> Once upon a time there was a poor farmer in the kingdom of Vijay Nagar.
 He had a small piece of land in village to cultivate.
 The crops does not yield enough grains for his family to survive. </p> </body>

HTML5 Tags
(Horizontal Rule)

- Tag <hr> is horizontal rule
- Horizontal rule also does not have any closing tag
- Self-closing tag (tag name followed by space and forward slash " / " - <hr />) is used in XHTML
- Example :

```
<body>
    <p> This is a paragraph. </p>
    <hr>
    <p> This is a new paragraph below horizontal rule. </p>
</body>
```

HTML Comment

- Comment is piece of code ignored by the web browser
- Comment tag is used to insert comments in the HTML source code
- Developers use comment tag to describe their code
- Comment(s) can be placed anywhere in the document

Syntax : <!-- comment -->

HTML Comment
(Example)

```
<!--  This is a single line comment  -->



<!--

This is multi-line comment

-->
```

HTML5 Tags
(Comment tag)

- Tag <!-- --> is comment tag
- Comment tags are ignored by browser
- Developers use comment tag to describe their code
- Syntax :

```
<!-- Web page body starts here -->
<body>
    <p> This is a paragraph </p>
</body>
<!-- Web page body ends here -->
```

HTML Comments
(Conditional)

- Conditional comments only work in Internet Explorer (IE)
- Supported from IE5 onwards
- They are ignored by other browsers

```
<!--  [if IE 6]>
. . . HTML  Text . . .
<![endif]-->
```

Elements

(Hypertext Markup Language 5)

HTML – Element

- HTML elements are the building blocks of HTML pages
- HTML elements appear in pair of HTML tags (Start and End tags)
- HTML element is everything from "Start tag" to "End tag"
- Anything between **Start** and **End** tags is called content

<html> </html>

HTML – Element Syntax

Syntax : <element-name> content </element-name>

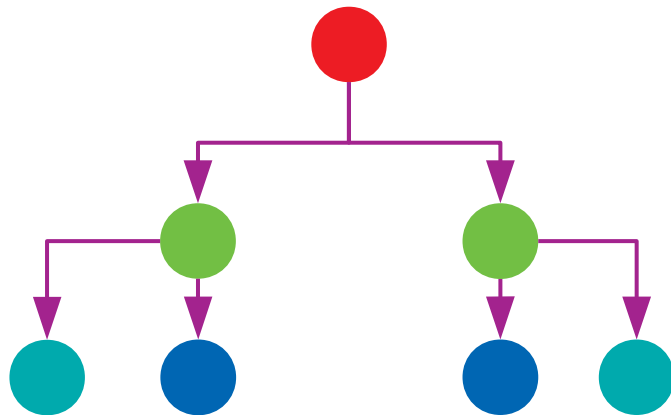Example : <p> This is a paragraph </p>

Start-tag   Content   End-tag

Paragraph Element

HTML – Element

- HTML element is an individual node of HTML page

- Browser creates an object (node) for each tag or pair of tags after parsing the document and construct objects tree

- Elements can be nested (An element containing other element(s))

HTML – Empty or Void Element

- Most of the elements are represented in pair of tags (start and end tags) because they have content

- But, some elements have no content, such elements are called empty or void elements

- These elements are represented only by start tag (no end tag)

- HTML5 does not require empty elements to be closed

- But if you want stricter validation, or if you need to make your document readable by XML parsers, you must close all HTML elements properly

HTML – Empty or Void Element

- Empty elements are required to be closed in XHTML

- Self-closing tags, element name followed by space character and forward slash "/" is used to close the empty elements

Line break (HTML) :

Line break (XHTML) :

Horizontal Rule (HTML) : <hr>

Horizontal Rule (XHTML) : <hr />

HTML – Empty or Void Element

- Following are the empty elements

HTML5	XHTML	Comment
<area>	<area />	Defines a hyperlink area with some text in an image map
<base>	<base />	Specifies the document's base URL or target for all relative URLs in the document
 	 	Represents a line break

HTML – Empty or Void Element

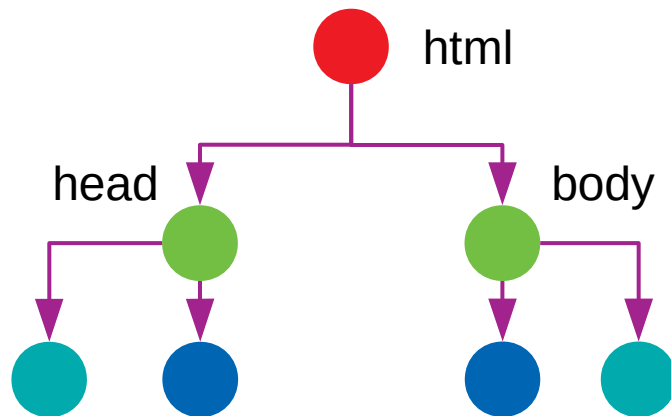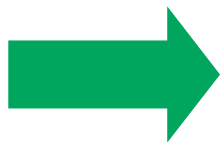| HTML5	XHTML	Comment
<col>	<col />	Defines the properties of one or more columns within a <colgroup> element
<command>	-	Defines a command that can be invoked by a user
<hr>	<hr />	Specifies a thematic change in content
<img>	<img />	Defines an image
<input>	<input />	Defines a typed data field that allows the user to edit the data
<link>	<link />	Defines a relationship between a document and an external resource such as a cascading style sheet

HTML – Empty or Void Element

HTML5	XHTML	Comment
<keygen>	-	Defines a key-pair generator control for forms that is used to encrypt data that will be passed to the server
<meta>	<meta />	Defines metadata that describes the HTML document
<param>	<param />	Defines a parameter for an object
<source>	-	Defines a multimedia resource for a <video> or <audio> element
<wbr>	-	Optionally breaks up a large word at this element

HTML – Tags vs Elements

- Tags are labels of HTML document

- Elements are nodes of object tree constructed by browsers at run time by parsing HTML document

```
<html>
<head> </head>
<body> </body>
</html>
```

HTML – Attributes

- HTML elements have set of various properties
- These properties can be set by using attributes
- Attributes provide additional information about an element
- Attributes are always specified in the start tag
- Attributes usually come in name and value pairs (example : name="value")

Examples :

<p **lang**= "en-us"> This is English paragraph </p>

<meta **charset**="UTF-8">

HTML – Attributes

- Attribute names and attribute values are case-insensitive

- World Wide Web Consortium (W3C) recommends lowercase attribute(s) values

HTML – Global attributes

- Global attributes are attributes common to all HTML elements

- These attributes may be specified on all elements, with some exceptions where it is not relevant

  – Example : The volumechange event fired by user agent is received only by media elements

- Following slides describe some of the elements (not exhaustive list)

HTML – Global attributes
(Accesskey)

- Attribute's value is used by the user agent as a guide for creating a keyboard shortcut that activates or focuses the element

- If specified, the value must be a single printable character (a string exactly one Unicode code point in length)

- Do not use " ", nor characters that normally require a modifier key to generate, as a value of accesskey

- Value – shortcut key

HTML – Global attributes
(class)

- Assigns a class name or space-separated list of class names to an element

- Value - classname

HTML – Global attributes
(id)

- Specifies a unique identifier (ID) for an element which must be unique in the whole document

- Value - name

HTML – Global attributes
(title)

- Provides advisory information related to the element

- It would be appropriate for a tooltip

- Value - text

HTML – Global attributes (style)

- Specifies inline style information for an element

- Value - style

HTML – Global attributes
(bgcolor)

- Places a background color behind an element

- Value - numeric, hexidecimal, RGB values

HTML – Global attributes (background)

- Places a background image behind an element

- Value - URL

HTML – Global attributes (width)

- Specifies the width of tables, images, or table cells

- Value - numeric

HTML – Global attributes
(height)

- Specifies the height of tables, images, or table cells

- Value - numeric

HTML – Global attributes
(align)

- Horizontally aligns tags

- Value - right, left, center

HTML – Global attributes
(valign)

- Vertically aligns tags within an HTML element

- Value - top, middle, bottom

HTML – Global attributes
(data-*)

- Specified on any HTML element, to store custom data specific to the page

- A custom data attribute starts with "data-" and would be named based on your requirement

- Example : data-subject, data-mesg

- Value - data

HTML – Global attributes
(lang)

- Specifies the primary language for the element's text content

- Value - language-code

HTML – Global attributes
(dir)

- Specifies the direction in which the text should flow

- Example left to right for english, french etc and right to left for arabic language

- Value – ltr (left to right), rtl (right to left)

HTML – Global attributes
(contextmenu)

- Specifies a context menu for an element

- A context menu is a menu that appears when the user clicks the right mouse button on the element

- Value - menu-id

HTML – Global attributes
(dragable)

- Specifies whether an element is draggable or not

- Value – true, false

HTML – Global attributes
(spellcheck)

- Specifies whether the element may be checked for spelling errors or not

- Value – true, false

HTML – Global attributes
(hidden)

- Indicates that the element is not yet, or is no longer, relevant

- Value – hidden

HTML – Global attributes
(translate)

- Specifies whether the text content of an element should be translated or not

- Value – yes, no

HTML – Character Entity Reference

Symbol	Entity Name	Entity Number	Description
&	&	&	Ampersand
<	<	<	Less than symbol
>	>	>	Greater than symbol
"	"	"	Double quotation
©	©	©	Copy Right
®	®	®	Registered Trademark
™	™	™	Trademark
			Non-breaking space
'	'	'	Apostrophe (Single Quote)

HTML – Classwork

- Write a web page to display following text

This is a "paragraph"

10 > 5

6 < 13

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Page Structure

(Hypertext Markup Language 5)

HTML - Example

```html
<!DOCTYPE html>
<html>
    <head>
        <title>My first web page</title>
    </head>
    <body>
        <h1> Greeting</h1>
        <p> Hello Web World! </p>
    </body>
</html>
```

Document type declaration

Root element of HTML page

Element contains metadata info of Doc

Element contains title of the Doc

Element contains visible page content

Element defines large heading

Element defines paragraph

HTML – Document type

- The document type is specified by DOCTYPE
- It tells the browser which type and version of document to expect
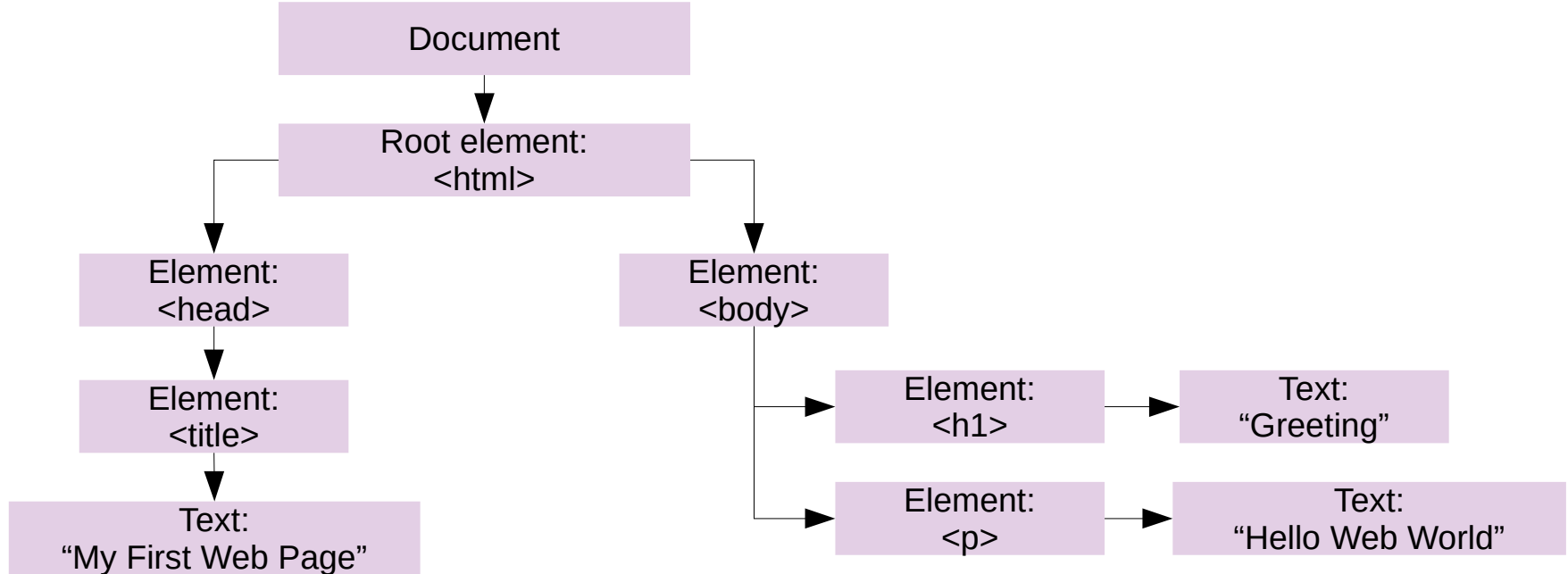
XHTML syntax

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

HTML5 syntax

```
<!DOCTYPE html>
```

HTML - DOM

HTML – Page structure

```
<html>
    <head>
        <title> My First Web Page </title>
    </head>

    <body>
        <h1> Greeting </h1>

        <p> Hello Web World </p>
    </body>
</html>
```

*only content inside body is displayed

HTML
(Important notes)

- Though HTML allows upper case tags too, all tags shall be in lower case
- <!DOCTYPE> is an exception to above point
- <html>, <head>, <title>, body appear only once
- HTML tags shall not overlap

  – <p> Example of overlapping tags </p>

- If a tag is opened in container/parent tag then it shall be closed before closing container/parent tag

  – <p> Correctly closing tags </p>

HTML
(Important notes)

- Though some of the tags can appear under head or body of the page, it is recommended to keep all the tags related to content to be displayed to user in body and rest under head

- Browsers ignore tags that are not recognized

- Paragraph element <p> </p> can't be nested

- <p> Hello <p> world </p> </p> effectively means

  <p> Hello </p> <p> World </p>

HTML
(Important notes)

- The default character encoding for HTML5 is UTF-8

Thank you

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DTD
(Document type declaration)

- A DTD is a Document Type Definition.

- A DTD defines the structure and the legal elements and attributes of an XML document

DTD
(Document type declaration)

- Seen from a DTD point of view, all XML documents are made up by the following building blocks:

  - Elements

  - Attributes

  - Entities

  - PCDATA – Parsed character data (parsed by parser)

  - CDATA – character data (not parsed by parser)

HTML5 Tags
(Page metadata)

- Short description of web page can be written in <meta> tag

- The short description can be used by various search engines while indexing web page for searching purpose

```
<meta name="description" content="Web Development Course" />
```

Empty vs Void Element

- Empty Elements -

  - HTML elements with no content are called empty elements (regardless of whether it is allowed to have content or not)

- Void Elements -

  - A void element is one that cannot have any content

  - They should be created by using self-closing tags