

Introduction

Hyper-text Markup Language (HTML5)

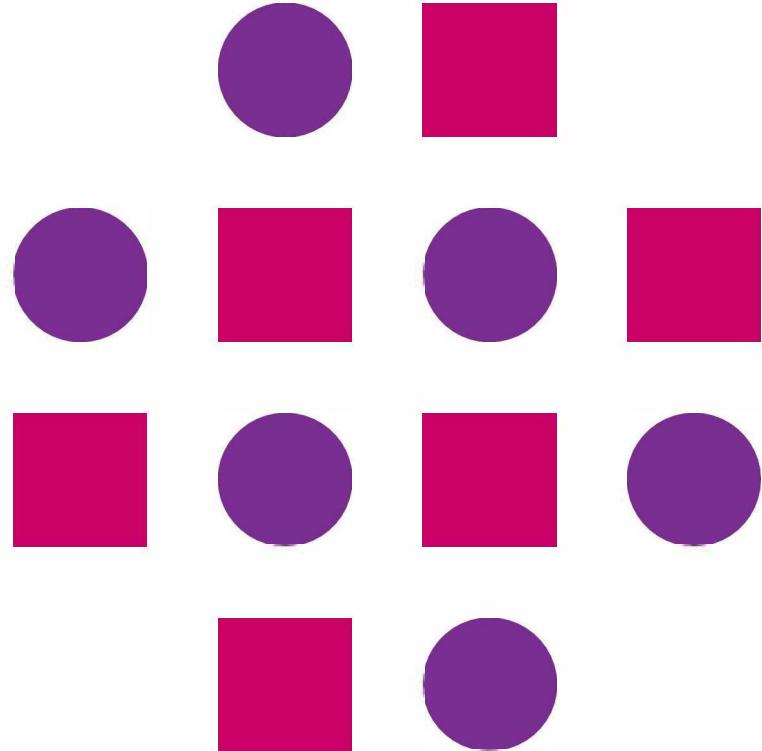


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68%

Hyper Text Mark-up Language

(Deep Down into HTML)

What is HTML?

HTML (Hypertext Mark-up Language) is a standard mark-up language for creating Web pages

- Hyper Text means “Text within Text”. A text which has a link within it, is known as hyper text.
- Mark-up language “mark up” a text document with tags that tell a web browser how to structure the document to display.
- HTML is a subset of the Standard Generalized Markup Language (SGML).
- SGML is an international standard (ISO 8879) published in 1986 as a format for structuring and marking up documents

Where HTML is used?

- HTML is used to create Web Pages
- HTML is extensively used in online solutions such as e-commerce, banking, insurance, trading, blogging, social media, Information provided by government, news and many more...
- People use web browsers to access the desired websites from computer, tablet or mobile devices
- Browsers render the web pages to screen so that content can be seen by user

Why HTML5?

- Provides the integration for latest multimedia.
- Candidate for cross-platform mobile apps (designed with low-powered devices in mind)
- Many new syntactic features are included -
 - To natively include and handle multimedia and graphical content
 - To enrich the semantic content of documents, new page structure elements have been introduced.
 - DOM is now fundamental parts of the HTML5 specification
 - Improves processing of any invalid documents
- Game Development with canvas

What is HTML5?

- HTML5 is the new standard for HTML, XHTML and HTML DOM (Document Object Model)
- HTML5 is a cooperation between World Wide Web Consortium ([W3C](#)) and Web Hypertext Application Technology Working Group ([WHATWG](#))



HTML - Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
.....
```

```
</head>
```

```
<body>
```

```
.....
```

```
</body>
```

```
</html>
```

Document type declaration

start of HTML page

Page header contains metadata info

Information about the page

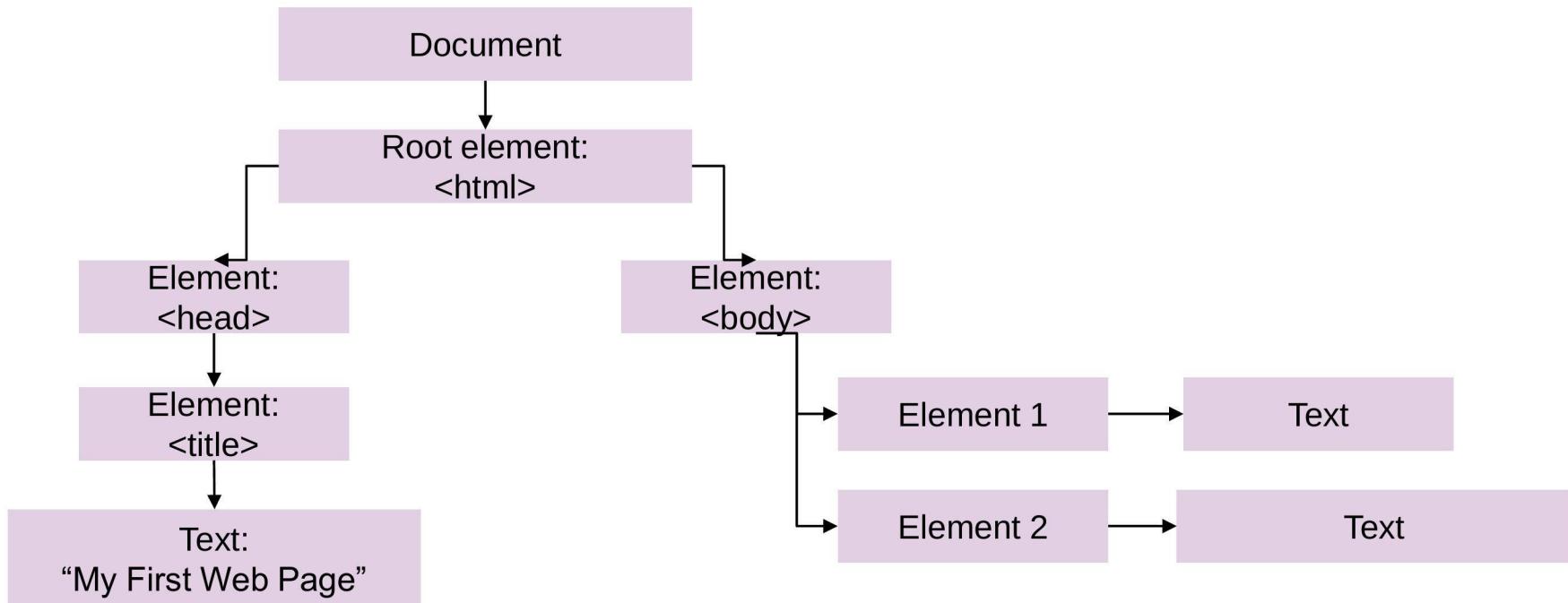
Page body contains visible

Content what user should see

HTML5 – Requirements

- Text editor
- Web browser

HTML - DOM



HTML – Page structure

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

  <body>
    Content 1
    Content 2
  </body>
</html>
```

*only content inside body is displayed

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
↓
<keyword>
Start tag

</keyword>
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>      ←  
    <head>←  
    </head>←  
    <body>  
    </body>  
</html>      ←
```

The diagram illustrates the structure of an HTML document. It shows the following code:

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

Red dashed arrows point from the text labels "Opening tag" and "Closing tag" to their respective counterparts in the code. A red dashed box encloses the first opening tag "<head>" and the closing tag "</head>". Another red dashed box encloses the second opening tag "<body>" and the closing tag "</body>". A third red dashed box encloses the outermost opening tag "<html>" and the outermost closing tag "</html>".

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

(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 is used to insert a line break
- There is no corresponding closing line break tag
- Self-closing tag (tag name followed by space and forward slash “ / ” -
) is used in XHTML

Example :

```
<body> <p> Once upon a time there was a poor farmer in the  
kingdom of Vijay Nagar. <br> He had a small piece of land in  
village to cultivate. <br /> 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
```

```
-->
```

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>

The diagram illustrates the structure of an HTML element. It shows the start-tag (<p>) in purple, the content "This is a paragraph" in black, and the end-tag (</p>) in purple. Below the start-tag is the label "Start-tag" with a purple bracket. Below the content is the label "Content" with a red bracket. Below the end-tag is the label "End-tag" with a purple bracket. A green bracket at the bottom groups the start-tag, content, and end-tag together under the label "Paragraph Element".

Start-tag Content End-tag

Paragraph Element

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

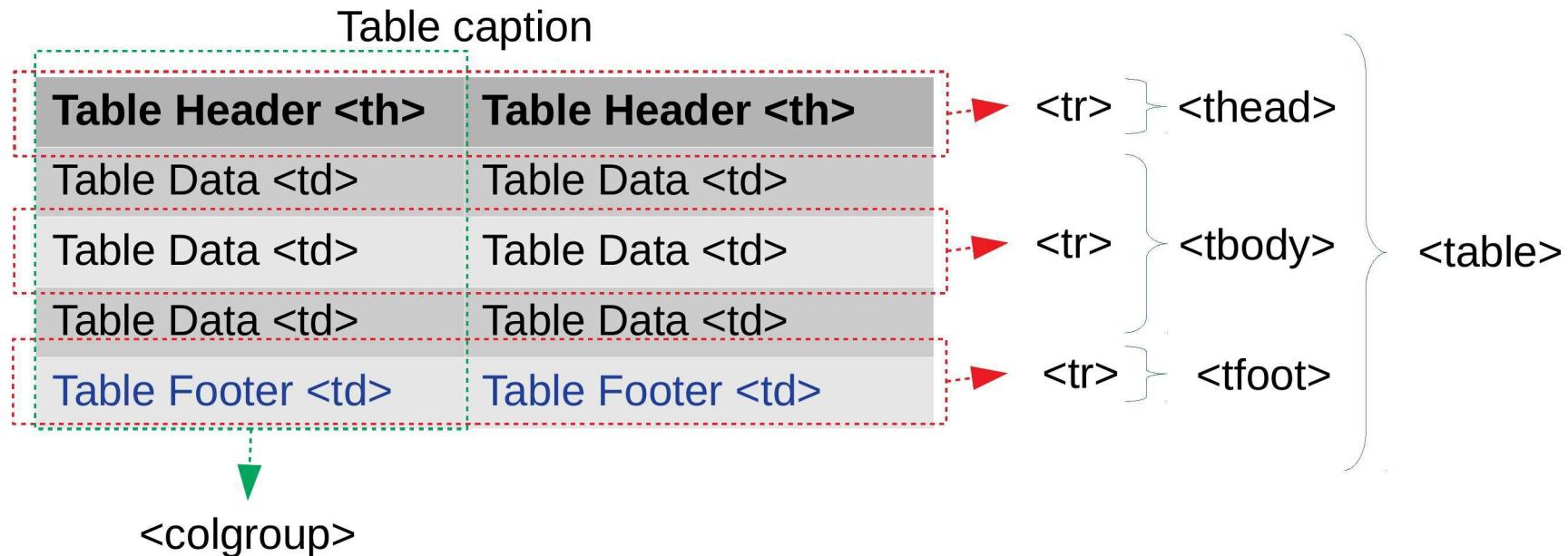
Tables

(Hypertext Markup Language 5)

Table Tags

Tag	Description
<table>	Table is defined with this tag
<th>	Defines a header cell in a table
<tr>	Defines a row in a table
<td>	Defines a cell in a table
<caption>	Defines a table caption
<colgroup>	Specifies a group of one or more columns in a table for formatting
<col>	Specifies column properties for each column within a <colgroup> element

Table tags



Tables

- Tables are defined with the `<table>` tag
- A table is divided into rows (with **table row** `<tr>` tag)
- Each row is divided into **table header** `<th>` and **table data** `<td>` cells
- A table row is nested in `<thead>` tag to define table header group
- A table row is nested in `<tfoot>` tag to define table footer
- A data cell can contain text, images, list, paragraphs, forms etc.

Table Example

```
<!-- table starts here -->
<table border="1">
<!-- 1st table row -->
<tr>
<!-- table heading -->
<th>Employee Name</th>
<th>Employee Id</th>
<th>Salary</th>
</tr>
```

```
<!-- 2nd rable row -->
<tr>
<!-- table data -->
<td>Smith</td>
<td>E001</td>
<td>45000</td>
</tr>
<!-- table ends here -->
</table>
```

Links

(Make your page link to the text)

Links

- A web page can contain various links that connect one page to other pages and even specific parts of a given page
- These links are known as hyper links
- Hyper links allows to navigate between Web pages by clicking on words, phrases and images
- A link is specified using HTML tag <a>
- This tag is called **anchor** tag

Links

- HTML uses the `<a>` anchor tag to create a link to another document or web page
- `href` attribute is used to define the address of file to be linked
- `url` is full web address of the page you want to open.
- When clicked on the link text, browser would open the linked page

Syntax :

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

Text Link Example

```
<h1>Text Link Example</h1>

<a href="http://www.google.com">Google</a>
<a href="http://www.yahoo.com">Yahoo</a>
<a href="02_link_target_blank.html">Local</a>
```

Images

(Way to display images in the webpage)

Images

- In HTML5 will use tag to display the images in the webpages.
- “src” attribute is important to display the images, which will have the path or URL to the image.
- “alt” attribute is used to display the alternate text when image is not available or when you have slow internet connection.

Syntax : ``

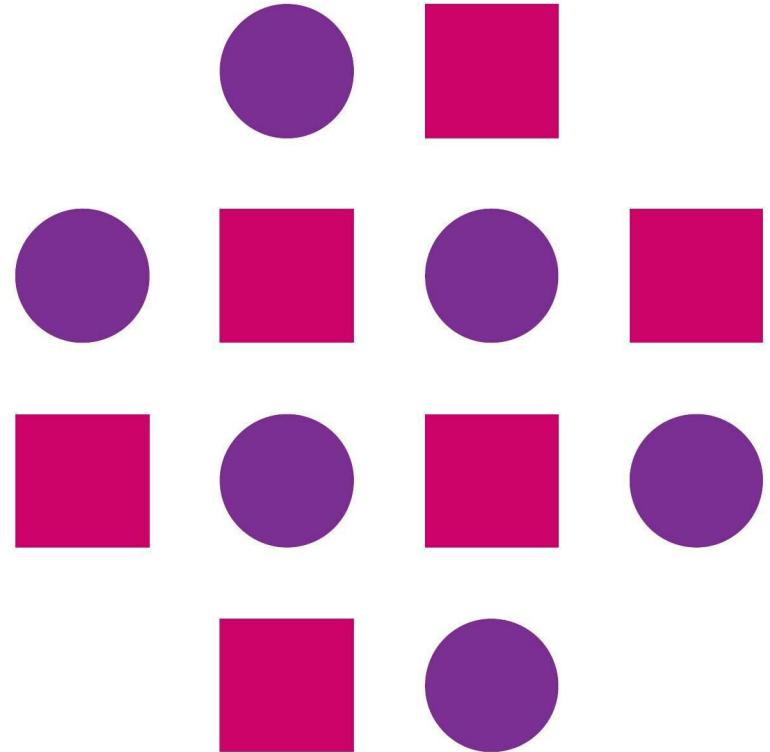
Example :

```

```

Forms

Hypertext Markup Language 5 (HTML5)



Forms

- Forms are used to collect information from users
- Forms are defined by <form>.....</form> tag
- Form elements are different type of input elements like text fields, check box, radio button, list box, submit buttons etc

Web Stack Academy (P) Ltd

#83, Farah Towers,
1st floor, MG Road,
Bangalore – 560001

M: +91-80-4128 9576

T: +91-98862 69112

E: info@www.webstackacademy.com

*Thank
you*

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