

HTML

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What is HTML?

- Stands for HyperText Markup Language
- HyperText: Link between web pages.
- Markup Language: Text between tags which defines structure.
- It is a language to create web pages
- HTML defines how the web page looks and how to display content with the help of elements
- It forms or defines the structure of our Web Page
- Need to save your file with .html extension

Features Of HTML

- The learning curve is very easy (easy to modify)
- Create effective presentations
- Add links wherein we can add references
- Can display documents on platforms like Mac , Windows, Linux etc
- Add videos, graphics and audios making it more attractive.
- Case insensitive language

HTML Editors

- Simple editor: Notepad
- Notepad++
- Atom
- Best editor: Sublime Text.

HTML Skeleton

```
<!DOCTYPE html>
<html>
<head>
    <title></title>
</head>
<body>

</body>
</html>
```

<!DOCTYPE html>

Instruction to the browser about the HTML version.

<html>

Root element which acts as a container to hold all the code

Browser should know that this is a HTML document

Permitted content: One head tag followed by one body tag

<head>

Everything written here will never be displayed in the browser

It contains general information about the document

Title, definitions of CSS and script sheets

Metadata (information about the document)

<body>

- Everything written here will be displayed in the browser
- Contains text, images, links which can be achieved through tags.
- Examples:
 - `<p> This is our first paragraph. </p>`
 - `Go To Google`
 - ``

HTML Comments

- Comments don't render on the browser
- Helps to understand our code better and makes it readable.
- Helps to debug our code
- Three ways to comment:
 - Single line
 - Multiple line
 - Comment tag `//`Supported by IE

HTML Element

- Elements are created using tags
- Elements are used to define semantics
- Can be nested and empty

Basic Structure

`<p color="red"> This is our first Paragraph </p>`

- Contains following things:
 - Start tag: `<p>`
 - Attributes: `color ="red"`
 - End tag: `</p>` // optional
 - Content: This is our first paragraph

Element Types

- **Block Level :**
 - Takes up full block or width and adds structure in the web page
 - Always starts from new line
 - Always end before the new line
 - Example :
 - `<p >`
 - `<div>`
 - `<h1>...<h6>`
 - ``
 - ``

Element Types

- **Inline Level:**
 - Takes up what is requires and adds meaning to the web page
 - Always starts from where the previous element ended
 - Example :
 - ``
 - ``
 - ``
 - ``
 - `<a>`

Basic Tags:

- Enclosed within `<>`
- Different tags render different meaning .
- **`<title>` tag**
 - Whatever is written this tag comes up in the web page's tab
 - Defines the title of the page
 - Syntax: `<title>Home </title>`
- **`<p>` tag**
 - Defines the paragraph
 - Syntax: `<p > This is our first Paragraph </p>`

List of Self closing tags

- **<hr> tag**
 - Stands for horizontal rule
 - Dividing the web page
- **
 tag**
 - Stands for break line
 - Moving to next line
- ** tag**
 - To add images in the web page

- **<h1> tag <h6>tag**
 - Stands for heading tag
 - Defines heading of a page
 - h1 represents most important page in the page
 - h6 represents least important page in the page
- ** tag**
 - Defines the text to be bold
 - Replaced tag //HTML5
- ** tag**
 - Defines the text to be italic
 - Replaced <i>tag //HTML5

- ** tag**

- Stands for ordered list
- To define series of events that take place in some order
- Example making a tea (like a flow chart)
- `.....`

- ** tag**

- Stands for unordered list
- To define series of events that take place where order is not important.
- Example your hobbies
- `.....`

- ** tag**

- Defines the list item
- Used inside the 'ol' and 'ul' tag to define the events
-

- **<div> and tags**

- Both of these are used to group different tags .
- Acts like a container.
- Effective while styling.
- <div>.....</div>
-
- Difference <div> is block level and is inline level.

- ** tag**

- Used to add images in a web page
- Syntax: ``
- Self closing tag.

- **<a> tags**

- Used to add links in a web page
- `` Name of the link ``

- **<table> tag**
 - Used to create a table on a web page
 - Need other tags for completing the creation of a table
 - <tr> : for marking the table row
 - <th> : for table header
 - <td> : for table column data
 - Everything is always enclosed within <tr>
 - <thead> : to keep all header data
 - <tbody> : to keep all body data

- **<form> tag**

- Action attribute: It specifies the URL to send form data to
- Method attribute: specifies the type of HTTP request(GET or POST)
- Example: `<form action="/my-form-submitting-page" method="POST">`
- `<input>`: used to accept data from the user
- Some types of inputs are:

- **Text:** used to store text data. Syntax: type="text"
- **Password:** used to enter a secure password. Syntax: type="password"
- **Placeholder:** temporary text in input fields. It is generally accompanied by "text" and "password" attributes. Syntax: placeholder="insert- text-here"
- **Button:** used to include buttons in the form. Syntax: type="button"
value="insert-text-here"
- **Submit button:** For creating a submit button. All the data will get submitted when it is clicked. Syntax: type="submit"
- **Checkbox:** to provide the ability to check multiple options. Syntax: type="checkbox". To check options by default, set it with the checked attribute.

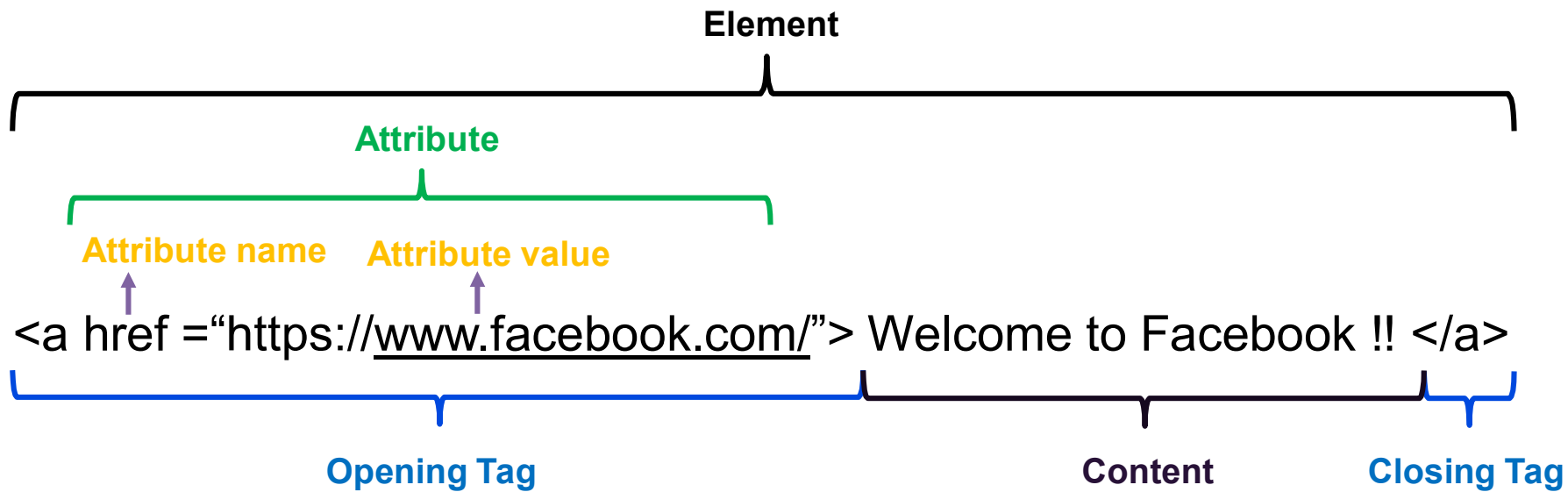
- **Radio Button:** allows one to choose a single option. Syntax: type="radio". Keep the name attribute of all the options the same.
- **<select>:** For every possible option to select, use an <option> tag<option>
- **Text Areas:** multi-line plain-text editing control. Syntax: <textarea>. You can specify how large the text area is by using the "rows" and "cols" attributes
- **Labels:** add captions for individual items in a form. Syntax: <label>. A label can be used by placing the control element inside the <label> element, or by using the "for" and "id" attributes.
- Validations ensure that users fill out forms in the correct format, e.g.:
 - a. **required:** The Boolean attribute which makes a field mandatory:
 - b. **email :** the browser will ensure that the field contains an @ symbol.

Attributes

- Properties associated with each tag.
- `<tag name="value"></tag>` is the structure.
- Global Attribute:
 - Title : Add extra information (hover)
 - Style: Add style information(font,background,color,size)
- ``
 - src is the attribute used in image tag to define path
 - Width is attribute used to define width in pixels
 - Alt i.e alternate text if image is not loaded
- ` Name of the link `
 - href used to define path of the link.

Anatomy of HTML Tags

Anatomy of HTML Tags



Basic Tags

<pre>

The <pre> tag defines preformatted text.

Text in a <pre> element is displayed in a fixed-width font, and the text preserves both spaces and line breaks. The text will be displayed exactly as written in the HTML source code.

```
<pre>
Text in a pre element
is displayed in a fixed-width
font, and it preserves
both   spaces and
line breaks
</pre>
```

```
<pre>
    This text   is
    in a fixed-pitch
font, and     it preserves both
    spaces and line breaks
</pre>
```

Quotations, Abbreviations and Citations

1. **<blockquote>**

2. **<q>**

3. **<abbr>**

4. **<address>**

5. **<cite>**

6. **<bdo>**

Text Tags

B element displays text in bold → `` and ``

I element displays text in italics → `<i>` and `</i>`

SMALL element makes the text appear smaller in browser → `<small>` and `</small>`

U element underlines a text → `<u>` and `</u>`

DEL element encloses deleted text → `` and ``

INS element encloses inserted text → `<ins>` and `</ins>`

STRONG element emphasizes the text → `` and ``

SUB element displays a text as subscript → `_{` and `}`

SUP element displays a text as superscript → `^{` and `}`

em is used for emphasized text → `` and ``

dfn is used for definition term → `<dfn>` and `</dfn>`

List Tags

Nested List

Example 1 :-

- American Breakfast Delicacies
 - Take Away Dishes
 - American Sausage
 - American Hot dog
 - Dark Sauce
 - Country special sauce
 - American Toast
 - Dine in Dishes
 - Bacon and Fries
 - Fish and Chips
 - American Avacado Burger

Nested List

Example 2 :-

- i. History
 - Mughal Empire
 - British Empire
 - a. Mongol Empire
 - b. Russian Empire
- ii. Mathematics
 - 1. Number System
 - Ratio and Proportion
 - Probability
 - 2. Differentiation
- iii. Science

Table Tags

Table Tags - Colspan

Example :-

Name		Age	Marks			
First Name	Last Name		Maths	English	Social	Science
Krishna	Raj	25	85	45	89	56
Mohan	Kumar	24	67	78	89	34
Shubham	Garg	25	78	76	89	56

Table Tags - Rowspan

Example :-

Name	First Name	Krishna	Mohan	Shubham
	Last Name	Raj	Kumar	Garg
Age		25	26	25
Marks	Maths	85	67	78
	English	45	78	76
	Social	89	89	89
	Science	56	34	56

Table Tags – Rowspan & Colspan

Example 1 :-

Time Table						
Hours	Mon	Tue	Wed	Thu	Fri	Sat
	Social Science	Maths	Physics	Biology	Arts	P.Ed
	Chemistry	History	English	Maths	Sports	Env. Sc.
	Lunch					Half Day
	Maths	Biology	Physics	Social Science	Project	
	Chemistry	Maths	Sports	Physics		

HTML Forms

HTML Forms

- <form>
- <input>
- <label>

```
<form>
  <label for="fname">First
name:</label><br>
  <input type="text" id="fname"
name="fname"
value="Ritwik"><br>
  <label for="lname">Last
name:</label><br>
  <input type="text" id="lname"
name="lname" value="Raj">
</form>
```

<input type="text">	Displays a single-line text input field
<input type="radio">	Displays a radio button (for selecting one of many choices)
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many choices)
<input type="submit">	Displays a submit button (for submitting the form)
<input type="button">	Displays a clickable button

HTML Forms

```
<form>
  <input type="radio" id="male" name="gender" value="male">
  <label for="male">Male</label><br>
  <input type="radio" id="female" name="gender" value="female">
  <label for="female">Female</label><br>
  <input type="radio" id="other" name="gender" value="other">
  <label for="other">Other</label>
</form>
```

```
<input>
<label>
<select>
<textarea>
<button>
<fieldset>
<legend>
<datalist>
<option>
```