



INTRODUCTION TO HTML

HYPertext Markup Language (HTML)

- HTML is not a programming language.
- It is a markup language that tells web browsers how to structure the web documents.
- The first version of HTML was written by Tim Berners-Lee in 1993.
- HTML 2.0, published in 1995, which contains all the features of HTML 1.0 along with that few additional features.
- HTML 4.01 is widely used and was a successful version of HTML before HTML 5.0

ANATOMY OF HTML

- HTML consists of a series of elements.

- An element has:

- The starting tag

- `< tagName >`

- The content

- Any other HTML Element or Plain Text

- The closing tag

- `< /tagName >`

ANATOMY OF HTML

- HTML consists of a series of elements.
- An element has:

- The starting tag

< tagName >

- The content

Any other HTML Element or Plain Text

✓ E.g.

➤ The closing tag
< h1> This is HTML Level – 1 Heading </h1>

< /tagName >

ANATOMY OF HTML

- HTML elements also have attributes.
- Attributes define additional characteristics or properties of the element.
- It needs to be placed within the starting tag.
- HTML attributes consist of two parts:
 - A name
 - A value

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- HTML attributes consist of two parts:

➤ A name

✓ E.g.

```
< h1 id = "heading" > This is HTML Level – 1 Heading </h1>
```

STRUCTURE OF HTML DOCUMENT

- A web page constructed using HTML has a standard and essential structure.
- The page always begins with the `<html>` start tag of the html element and always terminates with the `</html>` end tag of the html element.
- The web page is then further subdivided into two main sections which are the '**head**' and the '**body**'.
- The head section begins with the `<head>` start tag and terminates with the `</head>` end tag.
- Immediately following this comes the `<body>` start tag and just before the html end tag comes the `</body>` end tag.

STRUCTURE OF HTML DOCUMENT

- ❑ A webpage constructed using HTML has a standard and essential structure.
- ❑ The head section starts with the start tag of the `<html>` element and ends with the end tag of the `</html>` element.
- ❑ The `<head>` tag contains the title of the page which is displayed at the top of the browser window.
- ❑ The head section starts with the start tag and ends with the end tag.
- ❑ Immediately following the closing `</body>` tag before the `</html>` tag comes the `</body>` end tag.

STRUCTURE OF HTML DOCUMENT

- Comments : start with <!-- and end with -->
- Document Type Declaration
 - All HTML documents must start with a <!DOCTYPE> declaration.
 - It is an "information" to the browser about what document type to expect.
 - HTML4 : <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
 - HTML5 : <!DOCTYPE html>

STRUCTURE OF HTML DOCUMENT

- Comments : start with <!-- and end with -->

<!DOCTYPE html>

- Document Type Declaration

<!-- This is a HTML Comment -->

- All HTML documents must start with a <!DOCTYPE> declaration.

<html>

<head>

- It is an "information" to the browser about what document type to expect.

</head>

- HTML4 : <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<body>

- HTML5 </body><!DOCTYPE html>

</html>



HTML ELEMENTS

THE <TITLE> ELEMENT

- Title element provides title to a web page.
- The title appears in title bar of web browser.
- The title of a Web page determines its ranking in certain search engines.
- The title will also appear on Favorite lists, History lists, and Bookmark lists to identify your page

THE <TITLE> ELEMENT

- Title element provides title to a web page.

```
<!DOCTYPE html>
```

- The title appears in title bar of web browser.

```
<!-- This is a HTML Comment -->
```

- The title of a Web page determines its ranking in certain search engines.

```
< html >
```

```
<head>
```

```
<title> Home Page </title>
```

```
</head>
```

```
<body>
```

```
</body>
```

```
</html>
```

HEADING <HN> ELEMENTS

- Some text in a web document may be more important than other text.
- HTML provides six heading elements (h1 through h6) for specifying the relative importance of information.
- To create a heading use the expression <Hn>....</Hn>
here n is a number between 1 and 6
- In this case, the 1 corresponds to the largest size heading while the 6 corresponds to the smallest size.

HEADING <HN> ELEMENTS

- So the web document may be more important than other text.
`<!-- This is a HTML Comment -->`
- HTML provides six heading elements (h1 through h6) for specifying the relative importance of information.
`<html>`
 `<head>`
 `<title> Home Page </title>`
 `</head>`
 `<body>`
 `<h1>Level 1 Heading</h1>`
 `<h2>Level 2 heading</h2>`
 `<h3>Level 3 heading</h3>`
 `<h4>Level 4 heading</h4>`
 `<h5>Level 5 heading</h5>`
 `<h6>Level 6 heading</h6>`
 `</body>`
`</html>`
- To create a heading use the expression
`<h1>Level 1 Heading</h1>`
- In this case, the 1 corresponds to the first heading. The 6 corresponds to the last heading.

Level 1 Heading

Level 2 heading

Level 3 heading

Level 4 heading

Level 5 heading

Level 6 heading

PARAGRAPH <P> ELEMENT

- Paragraph element helps to define the structure of a document.
- When browser renders a paragraph, it places extra space above and below the paragraph text.

<!-- This is a HTML Comment -->

- To create a paragraph use the expression <P>....</P>

```
<html>
  <head>
    <title> Home Page </title>
  </head>
  <body>
    <h1> Level 1 Heading </h1>
    <p> Welcome to HTML </p>
  </body>
</html>
```

PARAGRAPH <P> ELEMENT

- Paragraph element helps to define the structure of a document.
- HTML When a browser renders a paragraph, it places extra space above and below the paragraph text.
- To create a paragraph use the expression <P>....</P>

IMAGE ELEMENT

- element inserts an image in a web document.
 - <!DOCTYPE html>
 - The image file's location is specified with the src (source) attribute.
 - <!-- This is a HTML Comment -->
 - A Browser may not be able to render an image for several reasons.
 - If a browser cannot render an image, the browser displays the alt attribute's value.
- ```
<html>
 <head>
 <title> Home Page </title>
 </head>
 <body>
 <h1> Level 1 Heading </h1>
 <p> Welcome to HTML </p>

 </body>
</html>
```

# IMAGE <IMG> ELEMENT

- <img> element inserts an image in a web document.
- The image file's location is specified with the src (source) attribute.
- A browser may not be able to render an image for several reasons.
- If a browser cannot render an image, the browser displays the alt attribute's value.

# LIST ELEMENTS

■ List elements are used in a web page to organize content that are similar in nature.

## ■ Ordered List

- Ordered lists are a list of numbered items.
- To create an ordered list **<OL>** element is used.
- Multiple list items are inserted using **<LI>** element.
- The TYPE=x attribute allows to change the the kind of symbol that appears in the list.

**A** is for capital letters

**a** is for lowercase letters

**I** is for capital roman numerals

**i** is for lowercase roman numerals

# LIST ELEMENTS

- List elements are used in a web page similar in nature.  
`<!DOCTYPE html>`
- Ordered List  
`<!-- This is a HTML Comment -->`  
`<html>`
  - `<head>`
    - Ordered lists are a list of numbered items.  
`<title> Home Page </title>`
    - `</head>`
    - To create an ordered list `<OL>` element is used.  
`<body>`
    - Multiple list items are inserted using `<LI>` element.  
`<OL>`
      - `<LI> This is step one. </LI>`
      - `<LI> This is step two. </LI>`
      - `<LI> This is step three. </LI>`
    - The TYPE=x attribute adds the kind of symbol that appears in the list.  
`</OL>`
  - A is for capital letters  
`</body>`
  - i is for lowercase roman numerals  
`</html>`
  - a is for lowercase letters
  - i is for lowercase roman numerals

# LIST ELEMENTS

■ List elements are used in a web page to organize content that are similar in nature.

## ■ Unordered List

- An unordered list is a list of bulleted items
- To create an unordered list **<UL>** element is used.
- Multiple list items are inserted using **<LI>** element.
- The TYPE=shape attribute allows to change the type of bullet that appears.

**circle** for an empty round bullet

**disc** for a solid round bullet

**square** for a square bullet

# LIST ELEMENTS

- List elements are used in a web page similar in nature.
  - <!DOCTYPE html>
  - <!-- This is a HTML Comment -->
  - Unordered List
    - <html>
    - <head>
    - An unordered list is a list of bulleted items
      - <title> Home Page </title>
      - </head>
      - To create an unordered list <UL> element is used.
      - <body>
      - Multiple list items are inserted using <LI> element.
        - <LI> First item in list </LI>
        - <LI> Second item in list </LI>
        - <LI> Third item in list </LI>
      - </UL>
    - circle for an empty round bullet
    - disc for a solid round bullet
    - square for a square bullet
  - First item in list
  - Second item in list
  - Third item in list

# LIST ELEMENTS

- List elements are used in a web page to organize content that are similar in nature.
- Description List or Definition List
  - Displays elements in definition form like in dictionary.
  - The `<dl>`, `<dt>` and `<dd>` tags are used to define description list.
    - `<dl>` tag defines the description list.
    - `<dt>` tag defines data term.
    - `<dd>` tag defines data definition (description).

# LIST ELEMENTS

- List elements are used in a web page similar to list or definition list.

```
<!DOCTYPE html>
<!-- This is a HTML Comment -->
<html>
 <head>
 <title> Home Page </title>
 </head>
 <body>
 <dl>
 <dt> HTML </dt>
 <dd> is hypertext markup language </dd>
 <dt> JavaScript </dt>
 <dd> is a scripting language </dd>
 </dl>
 </body>
</html></pre>
```
- HTML is hypertext markup language  
■ JavaScript is a scripting language



**HTML ELEMENTS CONTINUE.....**

# TEXT FORMATTING ELEMENTS

- The text color, size and font type can be changed by `<font>` element.
- `<font color= "color value">` attribute change the color of text by specified value.
- `<font size=n>` attribute change the size of text. Here n, is a number between 1 to 7.
- `<font face="font face value">` attribute change the type of text.
- `bgcolor = "color value"` attribute is used to give a background color to a block level element.

# TEXT FORMATTING ELEMENTS

## ■ Styling elements:

- **<b>** : Style text bold
- **<i>** : Style text italics
- **<u>** : Style text underline
- **<sub>** : put text in subscript
- **<sup>** : put text in superscript

# LINKS

- The HTML anchor tag `<a>` defines a hyperlink that links one HTML element to another resource (HTML page, file, HTML element etc).
- When a user clicks a hyperlink, the browser tries to execute an action associated with it.
- Any displayed element can act as a hyperlink.
- Web browsers typically underline text hyperlinks and color their text blue.
- A link has three parts:

➤ Destination

Label

Target

➤ `<a href=`

`target=`

`>`

Label

`</a>`

# LINKS

■ A link has three parts:

➤ Destination :

- A web page or location within a web page
- A file
- An e-mail address

➤ Label

- the text that will appear underlined or highlighted
- Or any other HTML element.

➤ Target : New window or Tab (\_blank), Same tab (\_Self)

# LINKS

## ■ Internal Linking:

- Enable a user to jump to a specific place on a Web page.
- Two steps are necessary to create an Internal Link.
  - Create the anchor.

```
 label
```

- Create a link to the anchor.

```
label
```

# LINKS

<A HREF="#chap2">Chapter Two</A><BR>

*Link*

<A NAME="chap2">Chapter 2 </A>

*Anchor*

## Table of Contents

[Introduction](#)  
[Chapter One](#)  
[Chapter Two](#)

### Introduction

(Text for Introduction)

### Chapter 1

(Text for Chapter 1)

### Chapter 2

(Text for Chapter 2)

# TABLE <TABLE> ELEMENT

- Tables are used to organize data in rows and columns.
- Tables are defined with the `<table>` element.
- Table element have following nested elements:
  - `<caption>` : specifies a table's title.
  - `<tr>` : Each tr element defines an individual table row.
  - `<td>` : Each td element defines an individual column in a table row.
  - `<th>` : heading data cells are defined by th element.

# TABLE <TABLE> ELEMENT

- Data cell's width can be spanned by multiple column and rows in a html table.
- To span a cell across many columns, **colspan** attribute `<TD COLSPAN=n>` is used.
- To span a cell across many rows, **rowspan** attribute `<TD ROWSPAN=n>` is used.
  - here n is the number of columns to be spanned.
- Border attribute `<table border=n >` puts the n pixels border around table.



**HTML ELEMENTS CONTINUE.....**

# FORMS

- HTML provides a mechanism, called a form, for collecting data from a user.
- Data that users enter on a web page is normally sent to a web server.
- The form is created by a `<form>` element.
- Form element have various control elements to get input from user in various ways.
- It also have essential attributes to define a way for processing the data given by user.

# <FORM> ATTRIBUTES

- The **action** attribute defines the file or web page on which data will be processed after submission.

```
<form action="/page.jsp">
```

- The **method** attribute defines the HTTP method for submitting a form to web server.

- The form-data can be sent as URL variables using **GET** method.
- **POST** method sends form data as HTTP post transaction.
- **GET** is the default method for form.

```
<form method="GET\POST">
```

# <INPUT> ELEMENT

- <input> creates a form-field to get input from user.
- Various kind of form-field can be created by different values of type attribute of <input>.

<input type = text \ password \ submit \ reset \ radio \ checkbox >

- <input type="text"> : Creates a text-field
- <input type="radio"> : Creates radio buttons
- <input type="checkbox"> : Creates a checkbox
- <input type="submit"> : Creates a form submit button
- <input type="button"> : Creates a button to reset form

# <SELECT> ELEMENT

- <select> creates a drop-down control.
- <option> element is used inside select to specify a value that can be selected by user.

<select>

    <option> Option-1 </option>

    <option> Option-2 </option>

</select>

# <TEXTAREA> ELEMENT

- <textarea> defines multi-line text input field.
- **rows** attribute specifies visible number of lines in text area.
- **cols** attribute specifies the width of text area.

```
<textarea rows=n cols=n> Default Text </textarea>
```