HTML 5

BASICS, ELEMENTS, ATTRIBUTES, XHTML AND GRAPHICS 2D & 3D

Basics

❖ Hyper Text Markup Language is a markup language for describing web pages.

❖ HTML is set of markup tags. It is described by HTML tags and each tag describes different document content.

❖ HTML is a language, in other word one computer speak with other computer over internet. It means HTML is spoken by two computers, first one is Client and second one is Server.

❖ Web browser are used to read HTML documents and display them. It does not display html tags but use them to determine how to display document.

Basics

HTML Example :

<!DOCTYPE html>	- Defines this document type as html
<html lang="en-US" >	- Describes HTML document
<head>	- Provides Information about document i.e title
<title>Page Title</title>	
</head>	
<body>	- Describes page contents (only body area is displayed by browser)
First Heading	- Describes header
First Paragraph	- Describes paragraph
</body>	
</html>	

DOCTYPE declaration helps browser to display webpage directly as we define type. The doctype gives the browser a list of supported tags and does not include any deprecated tags in the list.

Basics

HTML Headings :

HTML headings are defined with <h1> to <h6> tags.

For Example, <h1>My Header H1</h1>

<h2>My Header H2</h2>

HTML Paragraphs :

HTML Paragraphs are defined with <p> tag.

For Example : <p>My Paragraph</p>

Basics

HTML Links :

HTML Links are defined with <a> tag.

For Example,   Google

HTML Images :

HTML Images are defined with <img> tags.

For Example,   <img src="img1.jpg" width="240" height="320">

Elements

HTML Documents are made up by HTML elements. Elements are written with start tag and end tag with content in between. For Example, <tag>content</tag>

HTML Elements can be nested, so All HTML documents consist of nested HTML elements.

<article> :   Defines independent, self-contained content.

    <a> :   Defines hyperlink.

 <audio> :   Specifies sound or audio.

                  <audio controls>

                        <source src="123.mp3" type="audio/mpeg">

                  </audio>

    <b> :   Specifies bold text

 <body> :   Defines document's body content

  :   Defines a single line break

Elements

<button> :   Defines clickable button.

<caption> :   Defines a caption for table. Must start after <table>. Only one caption allowed.

<datalist> :   Specifies a list of pre-defined options for an <input> element

Provides autocomplete feature as well as dropdown

<dl>   :   Defines description list

<dd> :   Defines a name/value in description list.

<div> :   Defines a section of document

<figure> :   Specifies self-contained content, like image, diagram. While the content of the <figure> element is related to the main flow, its position is independent of the main flow, and if removed it should not affect the flow of the document.

<figcaption> : caption for figure element

Elements

<form> : Used to create an HTML form. It can contains one or more form elements, like input, textarea, button, select, option, label, etc…

<h1> to <h6> : Defines HTML headings

<head> : Defines information about the document

<header> : Defines a header for a document or section

<html> : Defines the root of an HTML document

<i>   : Defines a part of text in an alternate voice or mood

<img> : Defines an image

<input> : Defines an input control

<keygen> : Defines a key-pair generator field (for forms)

    When the form is submitted, the private key is stored locally, and the public key is sent to the server.

Elements

<label>   :   Defines a label for an <input> element

   :   Defines a list item

   :   Defines an ordered list

<option>   :   Defines an option in a drop-down list

<script>   :   Defines a client-side script

<select>   :   Defines a drop-down list

<span>   :   Defines a section in a document

<strong>   :   Defines important text

<style>   :   Defines style information for a document

Elements

<table>   :   Defines a table

<tbody>   :   Groups the body content in a table

<td>   :   Defines a cell in a table

<textarea> :   Defines a multiline input control (text area)

<th>   :   Defines a header cell in a table

<title>   :   Defines a title for the document

<time>   :   Defines a date/time

   :   Defines an unordered list

<video>   :   Defines a video or movie

```
<video width="320" height="240" controls>
    <source src="movie.mp4" type="video/mp4"
</video>
```

Attributes

❖ Attributes provide additional information about HTML elements.

❖ They are specified in start tag in name-value pair like name="value"

Below are some of the attributes :

lang :

   The document language can be declared in the **<html>** tag. The language is declared in the **lang** attribute. Important for accessibility applications and search engines.

   title :

   You can defined title of any elements. When you move the mouse over the element, the title will be displayed as a tooltip.

   href :

   HTML links are defined with the **<a>** tag. The link address is specified in the **href** attribute

Size (height and width):

   In <img> element, we can define height and width of image by this attribute.

   For example, <img src="img.jpg" width="104" height="142">

Attributes

alt :

The alt attribute specifies an alternative text to be used, when an HTML element cannot be displayed.

value :

The value attribute specifies the initial value for an input field

readonly :

The readonly attribute specifies that the input field is read only (cannot be changed)

disabled :

The disabled attribute specifies that the input field is disabled. A disabled element is un-usable and un-clickable. Disabled elements will not be submitted.

Attributes

size :

The size attribute specifies the size (in characters) for the input field. Based on size, element will display.

maxlength :

The maxlength attribute specifies the maximum allowed length for the input field

autocomplete :

The autocomplete attribute specifies whether a form or input field should have autocomplete on or off. When autocomplete is on, the browser automatically complete values based on values that the user has entered before.

novalidate :

novalidate specifies that form data should not be validated when submitted.

Attributes

autofocus :

It specifies that an <input> element should automatically get focus when the page loads

form :

The form attribute specifies one or more forms an <input> element belongs to.

formaction :

The formaction attribute specifies the URL of a file that will process the input control when the form is submitted The formaction attribute overrides the action attribute of the <form> element. The formaction attribute is used with type="submit" and type="image".

formnovalidate :

It specifies that the <input> element should not be validated when submitted.

Attributes

min and max :

      It specify the minimum and maximum value for an <input> element. The min and max attributes work with the following input types: number, range, date, datetime, datetime-local, month, time and week.

multiple :

      It specifies that the user is allowed to enter more than one value in the <input> element. The multiple attribute works with the following input types: email, and file.

placeholder :

      It specifies a hint that describes the expected value of an input field (a sample value or a short description of the format).

required :

      It specifies that an input field must be filled out before submitting the form.

Attributes

step :

It specifies the legal number intervals for an <input> element. For Example, if step="3", legal numbers could be -3, 0, 3, 6, etc.

pattern :

It specifies a regular expression that the <input> element's value is checked against. It works with the following input types: text, search, url, tel, email, and password.

What's New in HTML 5

Elements and Controls :

❖New semantic Elements like <header>, <footer>, <article> and <section>. A semantic element clearly describes its meaning to both the browser and the developer.

❖New form controls like number, date, time, calendar and range.

❖New graphics elements like <svg> and <canvas>

❖New multimedia elements like <audio> and <video>

HTML 5 API

❖ HTML Geolocation

❖ HTML Drag and Drop

❖ HTML Local Storage and Application Cache

❖ FileReader Class

Queries ?

- diff between readonly and disabled

- autocomplete on/off, working based on name?

- pattern on/off

- keygen