

Lecture 1

HTML



What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.



History of HTML

HTML was created by Sir Tim Berners-Lee in late 1991 but was not released officially, published in 1995 as HTML 2.0. HTML 1.0 was released in 1993. Then comes the HTML 2.0, published in 1995, which contains all the features of HTML 1.0 along with that few additional features for designing websites until January 1997. Then comes the HTML 3.0. It included improved new features of HTML. But these powerful features of new HTML slowed down the browser in applying further improvements. Then comes HTML 4.01, which is widely used and was a successful version of HTML before HTML 5.0, which is currently released and used worldwide. HTML 5 can be said for an extended version of HTML 4.01, which was published in the year 2012.



HTML Editors

To write HTML code, we need an HTML editor, and we can do this with the help of a notepad on our computer. A web page is a text file in which a hypertext language is written according to HTML grammar. This HTML code is displayed by the browser converting it to a web page. Programs in which HTML code is written or modified are called HTML editors. For example Visual Studio Code, Sublime Text, Dreamweaver, Notepad++ etc.. Following steps are required to run HTML code into your web browser

- Open the Text Editor
- Write HTML code
- Save the file with the extension .html
- Run the HTML page into your browser



HTML Elements

An HTML element is defined by a start tag, some content, and an end tag.

<tagname>Content goes here...</tagname>

<p>My first paragraph.</p>

Most tags of HTML have two sections: an opening and a closing portion, and any text is written within that has its effect based on the working of the tag. HTML tag has both a opening <tagname> and a closing tag </tagname>. The closing of tags is done by a forward slash (/) at the very start of the tag name. Some HTML elements have no content (like the
 element). These elements are called empty elements. Empty elements do not have an end tag.



Nested HTML Elements

HTML elements can be nested (this means that elements can contain other elements). All HTML documents consist of nested HTML elements.

The following example contains six HTML elements (<html>, <head>, <title>, <body>, <h1> and <p>):

```
<!DOCTYPE html>  
<html>  
  <head>  
    <title>Page Title</title>  
  </head>  
  <body>  
    <h1>My First Heading</h1>  
    <p>My first paragraph.</p>  
  </body>  
</html>
```

Example Explained

- The **<!DOCTYPE html>** declaration defines that this document is an HTML5 document
- The **<html>** element is the root element of an HTML page
- The **<head>** element contains meta information about the HTML page
- The **<title>** element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The **<body>** element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The **<h1>** element defines a large heading
- The **<p>** element defines a paragraph



HTML Attributes

- All HTML elements can have attributes
- Attributes provide additional information about elements
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like: name="value"
`<element_name attribute_name = "value"> content </element_name>`

For example, The `` tag is used to embed an image in an HTML page. The `src` attribute specifies the path to the image to be displayed:

``

The `` tag should also contain the `width` and `height` attributes, which specifies the width and height of the image (in pixels):

``

