HTML Overview and Tags

HTML stands for Hypertext Markup Language, and it is the most widely used language to write Web Pages.

• Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.

• As its name suggests, HTML is a Markup Language which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers.

Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

Why to Learn HTML?

Originally, **HTML** was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers. Now, **HTML** is being widely used to format web pages with the help of different tags available in HTML language.

HTML is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning HTML:

- **Create Web site** - You can create a website or customize an existing web template if you know HTML well.

- **Become a web designer** - If you want to start a carrer as a professional web designer, HTML and CSS designing is a must skill.

- **Understand web** - If you want to optimize your website, to boost its speed and performance, it is good to know HTML to yield best results.

- **Learn other languages** - Once you understands the basic of HTML then other related technologies like javascript, php, or angular are become easier to understand.

Applications of HTML

As mentioned before, HTML is one of the most widely used language over the web. I'm going to list few of them here:

- **Web pages development** - HTML is used to create pages which are rendered over the web. Almost every page of web is having html tags in it to render its details in browser.

- **Internet Navigation** - HTML provides tags which are used to navigate from one page to another and is heavily used in internet navigation.

- **Responsive UI** - HTML pages now-a-days works well on all platform, mobile, tabs, desktop or laptops owing to responsive design strategy.

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- **Offline support** HTML pages once loaded can be made available offline on the machine without any need of internet.

- **Game development**- HTML5 has native support for rich experience and is now useful in gaming development arena as well.

Audience

This **HTML tutorial** is designed for the aspiring Web Designers and Developers with a need to understand the HTML in enough detail along with its simple overview, and practical examples. This tutorial will give you enough ingredients to start with HTML from where you can take yourself at higher level of expertise.

Prerequisites

Before proceeding with this **tutorial** you should have a basic working knowledge with Windows or Linux operating system, additionally you must be familiar with −

- Experience with any text editor like notepad, notepad++, or Edit plus etc.
- How to create directories and files on your computer.
- How to navigate through different directories.
- How to type content in a file and save them on a computer.
- Understanding about images in different formats like JPEG, PNG format.

HTML Tags

As told earlier, HTML is a markup language and makes use of various tags to format the content. These tags are enclosed within angle braces **<Tag Name>**. Except few tags, most of the tags have their corresponding closing tags. For example, **<html>** has its closing tag **</html>** and **<body>** tag has its closing tag **</body>** tag etc.

Above example of HTML document uses the following tags −

Sr.No	Tag & Description
1	**<!DOCTYPE...>** This tag defines the document type and HTML version.
2	**<html>** This tag encloses the complete HTML document and mainly comprises of document header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags.
3	**<head>** This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
4	**<title>** The <title> tag is used inside the <head> tag to mention the document title.
5	**<body>** This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc.
6	**<h1>** This tag represents the heading.
7	**<p>** This tag represents a paragraph.

To learn HTML, you will need to study various tags and understand how they behave, while formatting a textual document. Learning HTML is simple as users have to learn the usage of different tags in order to format the text or images to make a beautiful webpage.

World Wide Web Consortium (W3C) recommends to use lowercase tags starting from HTML 4.

HTML Document Structure

A typical HTML document will have the following structure −

```
<html>

    <head>
        Document header related tags
    </head>

    <body>
        Document body related tags
    </body>

</html>
```

We will study all the header and body tags in subsequent chapters, but for now let's see what is document declaration tag.

The <!DOCTYPE> Declaration

The <!DOCTYPE> declaration tag is used by the web browser to understand the version of the HTML used in the document. Current version of HTML is 5 and it makes use of the following declaration −

```
<!DOCTYPE html>
```

There are many other declaration types which can be used in HTML document depending on what version of HTML is being used. We will see more details on this while discussing <!DOCTYPE...> tag along with other HTML tags.

Heading Tags

Any document starts with a heading. You can use different sizes for your headings. HTML also has six levels of headings, which use the elements **<h1>, <h2>, <h3>, <h4>, <h5>,** and **<h6>**. While displaying any heading, browser adds one line before and one line after that heading.

Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>Heading Example</title>
    </head>

    <body>
        <h1>This is heading 1</h1>
```

```
        <h2>This is heading 2</h2>
        <h3>This is heading 3</h3>
        <h4>This is heading 4</h4>
        <h5>This is heading 5</h5>
        <h6>This is heading 6</h6>
    </body>

</html>
```

This will produce the following result –

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

Paragraph Tag

The **<p>** tag offers a way to structure your text into different paragraphs. Each paragraph of text should go in between an opening <p> and a closing </p> tag as shown below in the example −

Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>Paragraph Example</title>
    </head>

    <body>
        <p>Here is a first paragraph of text.</p>
        <p>Here is a second paragraph of text.</p>
        <p>Here is a third paragraph of text.</p>
    </body>
```

```
</html>
```

This will produce the following result –

Here is a first paragraph of text.

Here is a second paragraph of text.

Here is a third paragraph of text.

Line Break Tag

Whenever you use the **
** element, anything following it starts from the next line. This tag is an example of an **empty** element, where you do not need opening and closing tags, as there is nothing to go in between them.

The <br /> tag has a space between the characters **br** and the forward slash. If you omit this space, older browsers will have trouble rendering the line break, while if you miss the forward slash character and just use <br> it is not valid in XHTML.

Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>Line Break  Example</title>
    </head>

    <body>
        <p>Hello<br />
            You delivered your assignment ontime.<br />
            Thanks<br />
            Mahnaz</p>
    </body>

</html>
```

This will produce the following result –

Hello
You delivered your assignment
on time.
Thanks
One Byte Labs

Centering Content

You can use **<center>** tag to put any content in the center of the page or any table cell.

Example

```
<!DOCTYPE html>
<html>

   <head>
      <title>Centring Content Example</title>
   </head>

   <body>
      <p>This text is not in the center.</p>

      <center>
         <p>This text is in the center.</p>
      </center>
   </body>

</html>
```

This will produce following result –

This text is not in the center.

This text is in the center.

Horizontal Lines

Horizontal lines are used to visually break-up sections of a document. The **<hr>** tag creates a line from the current position in the document to the right margin and breaks the line accordingly.

For example, you may want to give a line between two paragraphs as in the given example below −

Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>Horizontal Line Example</title>
    </head>

    <body>
        <p>This is paragraph one and should be on top</p>
        <hr />
        <p>This is paragraph two and should be at bottom</p>
    </body>

</html>
```

This will produce the following result –

This is paragraph one and should be on top

_____

This is paragraph two and should be at bottom

Again **<hr />** tag is an example of the **empty** element, where you do not need opening and closing tags, as there is nothing to go in between them.

The **<hr />** element has a space between the characters **hr** and the forward slash. If you omit this space, older browsers will have trouble rendering the horizontal line, while if you miss the forward slash character and just use **<hr>** it is not valid in XHTML

Preserve Formatting

Sometimes, you want your text to follow the exact format of how it is written in the HTML document. In these cases, you can use the preformatted tag **<pre>**.

Any text between the opening **<pre>** tag and the closing **</pre>** tag will preserve the formatting of the source document.

Example

```
<!DOCTYPE html>
```

```
<html>

   <head>
      <title>Preserve Formatting Example</title>
   </head>

   <body>
      <pre>
         function testFunction( strText ){
            alert (strText)
         }
      </pre>
   </body>

</html>
```

This will produce the following result –

```
function testFunction( strText ){
   alert (strText)
}
```

Try using the same code without keeping it inside **<pre>...</pre>** tags

Nonbreaking Spaces

Suppose you want to use the phrase "12 Angry Men." Here, you would not want a browser to split the "12, Angry" and "Men" across two lines −

```
An example of this technique appears in the movie "12 Angry Men."
```

In cases, where you do not want the client browser to break text, you should use a nonbreaking space entity ** ** instead of a normal space. For example, when coding the "12 Angry Men" in a paragraph, you should use something similar to the following code −

Example

```
<!DOCTYPE html>
<html>

   <head>
      <title>Nonbreaking Spaces Example</title>
```

```
    </head>

    <body>
        <p>An example of this technique appears in the movie
"12 Angry Men."</p>
    </body>

</html>
```

This will produce the following result −

An example of this technique appears in the movie
"12 Angry Men."