

The Hypertext Markup Language (HTML)

Basics



HTML

- ❑ HTML is a markup language that specifies the structure and content of documents (web pages) that are displayed in web browsers.
- ❑ Web pages are stored on web servers and are requested and displayed by web browsers
- ❑ When a page is viewed by a web browser, it shows text, images, lists, headings, tables, forms, hyperlinks to other online documents, etc.
- ❑ HTML5 is the latest version of HTML.

Structure of an HTML Document

- ❑ Every document starts with a DOCTYPE, followed by an HTML section that contains a head and body.
- ❑ A Simple HTML Document:

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

    <h1>My First Heading</h1>
    <p>My first paragraph.</p>

  </body>
</html>
```

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- ❑ An HTML file is a text file with filename extension: .htm or .html

filename.html

- ❑ An HTML file can be created using Simple text editors like notepad, TextPad, Notepad++, etc
- ❑ Also it can be created using IDE → Visual Studio Code, Sublime, NetBeans, Atom, and others.

Example Explained

- ❑ The `<!DOCTYPE html>` declaration defines that this document is an HTML 5 document.
 - *'DOCTYPE' keyword is not case sensitive. So, `<!doctype html>` or `<!DOCTYPE html>`, both will do.*
- ❑ 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 Element

- ❑ An HTML element is defined by a start tag, some content, and an end tag:

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

- ❑ The HTML element is everything from the start tag to the end tag:

`<h1>My First Heading</h1>`

`<p>My first paragraph.</p>`

Note: Some HTML elements have no content (like the `
` element). These elements are called empty elements. Empty elements do not have an end tag!

HTML Tags

- ❑ Html tags are not case sensitive, e.g. and are equivalent
- ❑ There are two types of tags
 - Container tags: come in pairs: a beginning tag like <title> and a closing tag like </title >
- ❑ The text between the start and end tags is the **element content**
 - Empty tags: do not contain any text and are not permitted to have end tags

Examples: img, br, input

Basic HTML Tags

▣ Headings

- Headings are defined with the `<h1>` to `<h6>` tags

▣ Paragraphs

- Paragraphs are defined with the `<p>` tag
- HTML automatically adds an extra blank line before and after a paragraph

▣ Line Breaks

- The `
` tag is used when you want to end a line.

- `<!-- This is a comment -->`

Headings

- ❑ There are six headings with different font sizes to specify the relative importance of information
- ❑ Heading element `<h1></h1>` is displayed in the largest font and is considered to be the most significant
- ❑ Other headings `h2`, `h3`, ..., `h6`.

`<h1>Heading Level 1</h1>`

`<h2>Heading Level 2</h2>`

`<h3>Heading Level 3</h3>`

`<h4>Heading Level 4</h4>`

`<h5>Heading Level 5</h5>`

`<h6>Heading Level 6</h6>`

Heading Level 1

Heading Level 2

Heading Level 3

Heading Level 4

Heading Level 5

Heading Level 6

Paragraphs

- ❑ The HTML <p> element defines a paragraph.
- ❑ A paragraph always starts on a new line, and is usually a block of text.
- ❑ Example

<p>This is a paragraph.</p>

<p>This is another paragraph.</p>

- ❑ With HTML, you cannot change the display by adding extra spaces or extra lines in your HTML code.
- ❑ The browser will automatically remove any extra spaces and lines when the page is displayed:

<p>This is a paragraph.

This is another paragraph.

</p>

Horizontal Rules

- The `<hr>` tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

The `<hr>` element is used to separate content (or define a change) in an HTML page:

- Example

```
<h1>This is heading 1</h1>
<p>This is some text.</p>
<hr>
<h2>This is heading 2</h2>
<p>This is some other text.</p>
<hr>
```

- The `<hr>` tag is an empty tag, which means that it has no end tag.

Line Breaks

- ❑ The HTML `
` element defines a line break.
- ❑ Use `
` if you want a line break (a new line) without starting a new paragraph:
- ❑ Example

`<p>`This is`
`a paragraph`
`with line breaks. `<p>`

Images

- ❑ Images can improve the design and the appearance of a web page.
- ❑ The tag is used to embed an image into a Web document:

- ❑ The URL is the location of the image file. The ALT attribute specifies text to be displayed if the browser does not display the image.
- ❑ Example



Images

- ❑ Image Size - Width and Height
- ❑ **style** attribute to specify the width and height of an image.

```

```

- ❑ Alternatively, you can use the **width** and **height** attributes:

```

```

Linking

- ❑ HTML links are hyperlinks.
- ❑ You can click on a link and jump to another page.
- ❑ When you move the mouse over a link, the mouse arrow will turn into a little hand.
- ❑ HTML **links** are defined with the `<a>` tag.
- ❑ Example

```
<a href="https://sabu.edu.ly/">Visit Sabtatha University</a>
```

```
<a href="#web">Web Technology</a>
```

Using Images as Hyperlinks

- ❑ The and the <a> tags together is the most common way of adding a clickable image link in HTML.

- ❑ Example

```
<a href = "links.html">
```

```
    <img src = " images/img.jpg " width = "65" height = "50"  
        alt = "Links">
```

```
</a>
```

Formatting tags in HTML

- ❑ Formatting tags allow text to be stylized in HTML5 without the need for CSS.
- ❑ There are a number of HTML5 formatting tags, and the most popular ones include:
 1. **** - used to make text bold
 2. **<i>** - used to italicize text
 3. **<u>** - used to underline text
 4. **<mark>** - used to highlight text
 5. **** - used to mark text as important

Formatting tags in HTML

6. **<sub>** - used to defines subscript text. Subscript text appears half a character below the normal line.
7. **<sup>** element defines superscript text. Superscript text appears half a character above the normal line

□ Example

`<p>This text is bold</p>`

`<p><i>This text is italic</i></p>`

`<p>This is_{subscript} and ^{superscript}</p>`

This text is bold

This text is italic

This is _{subscript} and ^{superscript}