

# **Lab 1**

## **HTML Fundamentals**

### **Objective**

**After studying this lab student should be able to:**

- 1- Understand and recognize the definition and the purpose of using HTML.**
- 2- Know the Major HTML Syntax Components**
- 3- Understand the meaning and the use of HTML tags and its attributes.**
- 4- Create his own first webpage**

## ***What Is html?***

- HyperText Markup Language (HTML) is the language for specifying the *static* content of Web pages
  - ***hypertext*** refers to the fact that Web pages are more than just text
    - can contain multimedia, provide links for jumping within & without
  - ***markup*** refers to the fact that it works by augmenting text with special symbols (tags) that identify structure and content type
  - There are many versions of HTML and different

## ***Why Learn HTML?***

- It is possible to create WebPages without knowing anything about the HTML source behind the page. There are excellent editors on the market that will take care of the HTML parts. All you need to do is layout the page.
- However, there are several benefits of learning HTML, The most of those benefits are:
  - 1) You can use tags the editor does not support.
  - 2) You can read the code of other people's pages, and "borrow" the cool effects.
  - 3) You can do the work yourself, when the editor simply refuses to create the effects you want.
- You can write your HTML by hand with almost any available text editor, including notepad that comes as a standard program with Windows.
- All you need to do is type in the code, then save the document, making sure to put an **.html** extension or an **.htm** extension to the file (for instance "mypage.html").

## 1. Web Page Structure

**Note:** [Type all tags in lowercase letters!]

Here are the tags you should use in every Web page.

Try This Code
<pre>&lt;html&gt; &lt;head&gt; &lt;title&gt;Your Title Here&lt;/title&gt; &lt;/head&gt; &lt;body&gt;     Your content here ... &lt;/body&gt; &lt;/html&gt;</pre>

### Notes

- Type in a copy of the sample and call it **template.html**
- Use it as the starting point for all your HTML documents. As you learn new features that you want to use all the time, add them to your template file.
- Use only lowercase letters, numbers, underscores \_, and dashes -, in your file names. Don't use spaces.
- The order of your tags is **important**. Don't overlap them. Use them in the order they appear in the sample HTML code.
- The arrangement of your content is not important. The browser formats it based on the HTML tags. Use spaces and blank lines to make it easier to read your HTML code.
- The text in the title-tags does **not** appear on your Web page. It is use in your browser's title bar. Later you'll learn how to use headings.

### Try This

Replace **your content here ...** with some of your own content.

## 2. HEADINGS

`<hx>` Use headings to mark off different sections of your Web pages.

### Try The Following code

```
<html>
<head>
<title>Headings</title>
</head>
<body>
  <h1>A Level One Heading</h1>
  Your content here ...

  <h2>A Level Two Heading</h2>
  Your content here ...

  <h3>A Level Three Heading</h3>
  Your content here ...

  <h4>A Level Four Heading</h4>
  Your content here ...

  <h5>A Level Five Heading</h5>
  Your content here ...

  <h6>A Level Six Heading</h6>
  Your content here ...
</body>
</html>
```

The text of your content stays the regular size, except for the parts between the heading-tags.

### Notes

- Heading-tags add white space before and after the heading text.
- Use heading-tags only for headings. Don't use them just to make something big or stand out. There are other tags to do those things.

### 3. PARAGRAPHS

The paragraph-tag creates a paragraph.

#### Try The Following code

```
<html>
<head>
<title>Paragraphs</title>
</head>
<body>

<h1>          Dream </h1>
<P>
    My name is XXXXXX
    I'm a student at Shoubra faculty of Engineering
    Benha University
    I'm proud to be an engineering student
</p>
<p>
    One day I'm going to be an engineering ,
    Who is going to change his around world,
    My Dreams should come true Inshaa Allah,
    .
</p>
</body>
</html>
```

#### Notes

- The browser removes all of the extra white space.
- The paragraph-tag, <p>, inserts a blank line and then starts a new line.
- Although you can leave out the closing paragraph-tag, </p>, don't. Future versions of HTML require it.
- Don't use empty paragraphs to insert blank lines. It doesn't work correctly. Use <br>.

## 4. ATTRIBUTES 1

**bgcolor, align** Attributes change how a tag works. Most tags take attributes. This topic shows how to use attributes with values.

### Try The Following code

```
<html>
<head>
<title>Attributes</title>
</head>

<body bgcolor="#00FFFF" text="#FF00FF">

<h1 align="center">Center</h1>
<p align="right">Right Alignment</p>

</body>
</html>
```

- Note the color of the background and text on the right. The heading is centered. The paragraph's text is aligned to the right.
- Color codes (see below) must start with a #. You can also use color names. For example, "#FF00FF" could be replace by "fuchsia". In either case, don't forget the quotation marks.
- Here are some colors to experiment with. (TRY THIS)

Aqua	00FFFF	Black	000000
Blue	0000FF	Fuchsia	FF00FF
Gray	808080	Green	008000
Lime	00FF00	Maroon	800000
Navy	000080	Olive	808000
Purple	800080	Red	FF0000
Silver	C0C0C0	Teal	008080
White	FFFFFF	Yellow	FFFF00

## 5. ATTRIBUTES 2

**Background:** Using an image as a background.

### Try The Following code

```
<html>
<head>
<title>Attributes</title>
</head>

<body background="ANYNAME.gif">

</body>
</html>
```

Setting the **background** attribute to a valid image file causes your browser to paint the image over and over in the background of your page. Everything else on the page sits on top of it.

### Notes

- This sample won't work if you type it in. You have to use an image file that is on your computer.
- You can use .gif and .jpg image files as backgrounds. With newer browsers you may be able to use .png files, too.
- Some backgrounds might make it hard to read your page.

## 6. COMMENTS

`<!-- helpful info -->` The text with a comment is not shown on your Web page.

### Try The Following code

```
<html>
<head>
<title>Comments</title>
</head>
```

```
<body>
<!-- This is a comment. -->
<!-- This comment is spread
      out over two lines. -->
<!--
      This is a good
      comment too.
-->
</body>
</html>
```

The output window should be empty.

## 7. *PREFORMATTED TEXT*

**<pre>** Keeps spaces, tabs and returns exactly like you type them.

### Try The Following code

```
<html>
<head>
<title>Entering Text</title>
</head>

<body>

<pre>
    Mary's Lamb

    Mary had a Little Lamb,
      Its fleece was white as snow,
    And everywhere that Mary went,
      The Lamb was sure to go.

    It followed her to school one day,
      That was against the rule,
    It made the children laugh and play,
      To see a Lamb at school.
</pre>
</body>
</html>
```

### Notes

- The output from **<pre>** is displayed in a typewriter-style (monospaced) font, not the usual one.
- Don't make your preformatted lines too long. Keep them to about 60 characters.



- As an advice, inside of **<pre>** you can use **<a>**, **<strong>**, **<em>**, **<i>** and **<b>**, but **not** **<hx>**, **<p>** or **<br>**.

## 8. ENTITIES

Entities are used to enter special characters and characters you can't type from the keyboard, like ©.

### Try The Following code

```
<html>
<head>
<title>Entities</title>
</head>
<body>

<p>
5 &gt; 2
</p>
<p>
2 &lt; 5 or 2 &#60; 5
</p>
<p>
&amp;
</p>
<p>
Copyright &copy; 2000
</p>
<p>
&#65; &#66; &#67;
</p>

</body>
</html>
```

Entities start with an ampersand, & and end with a semicolon, ;.

Try the following:

Character	Entity	Name
<	&#60;	&lt;
>	&#62;	&gt;
&	&#38;	&amp;
"	&#34;	&quot;
©	&#169;	&copy;
÷	&#247;	&divide;
×	&#215;	&times;
±	&#177;	&plusmn;
¢	&#162;	&cent;
£	&#163;	&pound;
¥	&#165;	&yen;
	&#160;	&nbsp;

## 9. LOGICAL STYLES

`<em>`, `<strong>`, `<code>` Logical styles tell how you want words to be used. The browser decides how the words look.

### Try This Code

```
<html>
<head>
<title>Logical Styles</title>
</head>

<body>

<p>
Here is an
<em>emphasized</em>
word.
</p>
<p>
These words are
<strong>strongly emphasized.</strong>
</p>
<p>
This is some text.<br>
<code>This is some text as code.</code>
</p>

</body>
</html>
```

These tags give a hint about how the browser should display their contents.

### Notes

- `<em>` is usually displayed in *italics*.
- `<strong>` is usually displayed in **bold**.
- `<code>` is usually displayed in a monospaced font. It is supposed to mean that the enclosed text is in a computer programming language.

## 10. PHYSICAL STYLES

`<i>`, `<b>`, `<tt>` Physical styles tell the browser how to display text.

### Try This Code

```
<html>
<head>
<title>Physical Styles</title>
</head>

<body>

<p>
Here is a word in
<i>italics.</i>
</p>
<p>
<b>These words are in bold.</b>
</p>
<p>
This is some text.<br>
<tt>This is some text in teletype.</tt>
</p>
</body>
</html>
```

These tags tell the browser the *style* you want used to display their contents.

### Notes

If your reader's browser is unable to display italics, bold or teletype it does nothing.

## 11. SUBSCRIPTS AND SUPERSCRIPTS

**<sub>**, **<sup>** Adding text below and above the line.

### Try This Code

```
<html>
<head>
<title>Subscripts and Superscripts</title>
</head>
<body>
<p>
H<sub>2</sub>O
</p>
<p>
x<sup>3</sup>
</p>
</body>
</html>
```

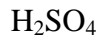
**<sub>** and **<sup>** are useful for pages containing equations and chemical formulas. They can also be used for footnotes.

### Notes

- Subscripts are written about halfway below the base line of normal characters. Superscripts are written about halfway above the top of normal characters. Both should be slightly smaller than normal.
- Although the results may not be satisfactory, you can put subscripts and superscripts inside each other. Be sure not to overlap them. For example, you can put a subscript on a superscript.

### Try This

Write HTML to display:



$$a^2 + b^2 = c^2$$



## 12. FONT SIZE

**<font>, size** Changing the size of letters with absolute values.

### Try This Code

```
<html>
<head>
<title>Fonts 1 - SIZE</title>
</head>
<body>

<font size="7">HTMLEmentary</font> <br>
<font size="6">HTMLEmentary</font> <br>
<font size="5">HTMLEmentary</font> <br>
<font size="4">HTMLEmentary</font> <br>
<font size="3">HTMLEmentary</font> <br>
<font size="2">HTMLEmentary</font> <br>
<font size="1">HTMLEmentary</font>

</body>
</html>
```

The **<font>** tag has to have an attribute.

### Notes

- Fonts usually start out with **size** set to 3,
- The allowed sizes 1-7.
- Another way to change the size of fonts is presented in the next topic. Compare it with this topic.
- The default font size can be changed using a **<basefont>** element in a document's **<head>** section.

### ***13 FONT - COLOR***

**<font>, color** How to change the color of a block of text.

```
<html>
<head>
<title>Fonts 4 - Color</title>
</head>
<body>
<p>
<font color="#ff0000">Red</font>
<p>
</p>
<font color="#00ff00">Green</font>
</p>
<p>
<font color="#0000ff">Blue</font>
</p>
</body>
</html>
```

Use care when picking colors. Fancy colors aren't much good if your readers can't make out what you wrote.