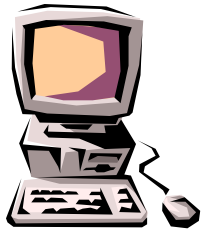
Introduction to HTML



Definitions

- W W W – World Wide Web.
- HTML – **HyperText Markup Language** – The Language of Web Pages on the World Wide Web.

  HTML is a text formatting language.
- URL – Uniform Resource Locator.
- Browser – A software program which is used to show web pages.

Introduction To HTML

- HTML means Hypertext Markup Language. In 1960 Ted Nelson introduced Hypertext. HTML is a scripting language which is used to create web pages.
- HTML is a hypertext Language because it supports font styled text, pictures, graphics and animations and also it provides hyper links that used to browse the Internet easily.

Rules to write HTML Code:-

- Every HTML document begins with start tag is terminates with an ending tag is</html>
- HTML documents should be saved with the extension .html or .htm.
- A tag is made up of left operator(<),a right operator(>) and a tag name between these two operators
- . If you forget to mention the right operator(>) or if you give any space between left operator and tag name browser will not consider it as tag.
- At the same time if browser not understands the tag name it just ignores it, browser won‟t generate any errors.
- HTML language is not case sensitive, hence user can write the code in either upper case or lower case. No difference between <HTML></html>

Tags

- Codes enclosed in brackets
- Usually paired

  <TITLE>My Web Page</TITLE>
- ***Not*** case sensitive

  <TITLE> = <title> = <TITLE>

Choosing Text Editor

- There are many different programs that you can use to create web documents.
- HTML Editors enable users to create documents quickly and easily by pushing a few buttons. Instead of entering all of the HTML codes by hand.
- These programs will generate the HTML Source Code for you.

Choosing Text Editor

- HTML Editors are excellent tools for experienced web developers; however; it is important that you learn and understand the HTML language so that you can edit code and fix “bugs” in your pages.
- For this Course, we will focus on using the standard Microsoft Windows text editors, NotePad. We may use also textpad.

Starting NotePad

NotePad is the standard text editor that comes with the microsoft windows operating system. To start NotePad in windows 9x or XP follow the steps bellow:

- Click on the “Start” button located on your Windows task bar.
- Click on “Programs” and then click on the directory menu labeled “Accessories”.
- Locate the shortcut “NotePad” and click the shortcut once.

HTML Page Creation & Editing

In this chapter you will learn to create HTML pages with a standard text editor.

Objectives

Upon completing this section, you should be able to

1. Choose a Text Editor.
2. Create a Basic Starting Document.
3. Understand and set Document Properties.
4. View Your Results in a Browser.

- **Basic Structure of HTML**
- An HTML document's basic structure consists of5 elements:
- <!DOCTYPE>
- <html>
- <head>
- <title>
- <body>

- **<!DOCTYPE>**
- The tag in HTML is used to inform the browser about the HTML version used in the web page. It is referred as the **document type declaration (DTD)**.
- Syntax
- <!DOCTYPE html>

- **<html>**
- The <html> tag in HTML is used to specify the root of HTML and XHTML pages. The <html>**<html>**
- The <html> tag informs the browser that this is an HTML document. It is the second outer container for everything in an HTML document, followed by the tag. The <html> tag requires a beginning and ending tag.

Syntax of the <html> Tag

```
<!DOCTYPE html>
<html>
...
</html>
```

- **<head>**
- The <head> tag in HTML is used to contain metadata (**data about data**). It is used between the<html> and <body> tags.
- The head of an HTML document is a section of the document whose content is not displayed in the browser when the page loads. It only contains HTML document metadata, which specifies information about the HTML document.

- the head section of an HTML document plays an essential role in the creation of a website.
- The document title, character set, styles, links, scripts, and other meta information are defined by metadata.
- The following is a list of metadata tags:
- <title>
- <style>
- <meta>
- <link>
- <script>
- <base>

Syntax of the <head> Tag

```
<!DOCTYPE html>
<html>
    <head>
    ...
    </head>

</html>
```

- **Example:** In this example, we are going to use the <head> tag containing the <style> (to add CSS to our content) and <title> (to add title to our webpage) tag.

```html
<!DOCTYPE html>
<html>
<head>
<title>head tag</title>
<style>
    h1{
        color: blue;
    }
</style>
</head>
<body>
    <h1> head tag  </h1>
</body>
</html>
```

Output:

- **<title>**
- This <title> tag in HTML displays the title of a web page and can help in higher rankings in search results if appropriate keywords are included.
- The most significant meta element to add to our webpage is the <title> element. It gives a relevant title to the full HTML content. It appears at the top of the browser window and gives the webpage a fitting name when saved as a favorite or bookmark.
- It can be found in all HTML/XHTML documents. The <title> element must be positioned between the <head> element, and there can only be one title element per document.

```
<!DOCTYPE html>
<html>
<head>
    <title> ... </title>
</head>

</html>
```

- **<body>**
- The <body> tag in HTML specifies the main content of an HTML document that appears on the browser. It can contain headings, text, paragraphs, photos, tables, links, videos, etc.
- The <body> tag must come after the <head> tag, or it must be inserted between the </head> and </html> tags. This tag is essential for all HTML documents and should only be used once throughout the document.
-

Syntax of the <body> Tag

```
<!DOCTYPE html>
<html>
<head>
  <title>Body Tag</title>
</head>
<body>
 <h1>...</h1>
 <p>...</p>
</body>
</html>
```

- **Example:** In the given example, we are going to use the <body> tag to add a heading, paragraph, and image to our webpage.

```
<!DOCTYPE html>
 <html>
<head>
<title>Body Tag</title>
 </head> <body>
<h1>Example of body tag</h1>
 <p>This paragraph and the image displayed below is written
between the body tag.</p>
<img
src="https://cdn.pixabay.com/photo/2022/07/09/13/24/mountains-
7310910__340.jpg" alt="mountains">
</body>
</html>
```

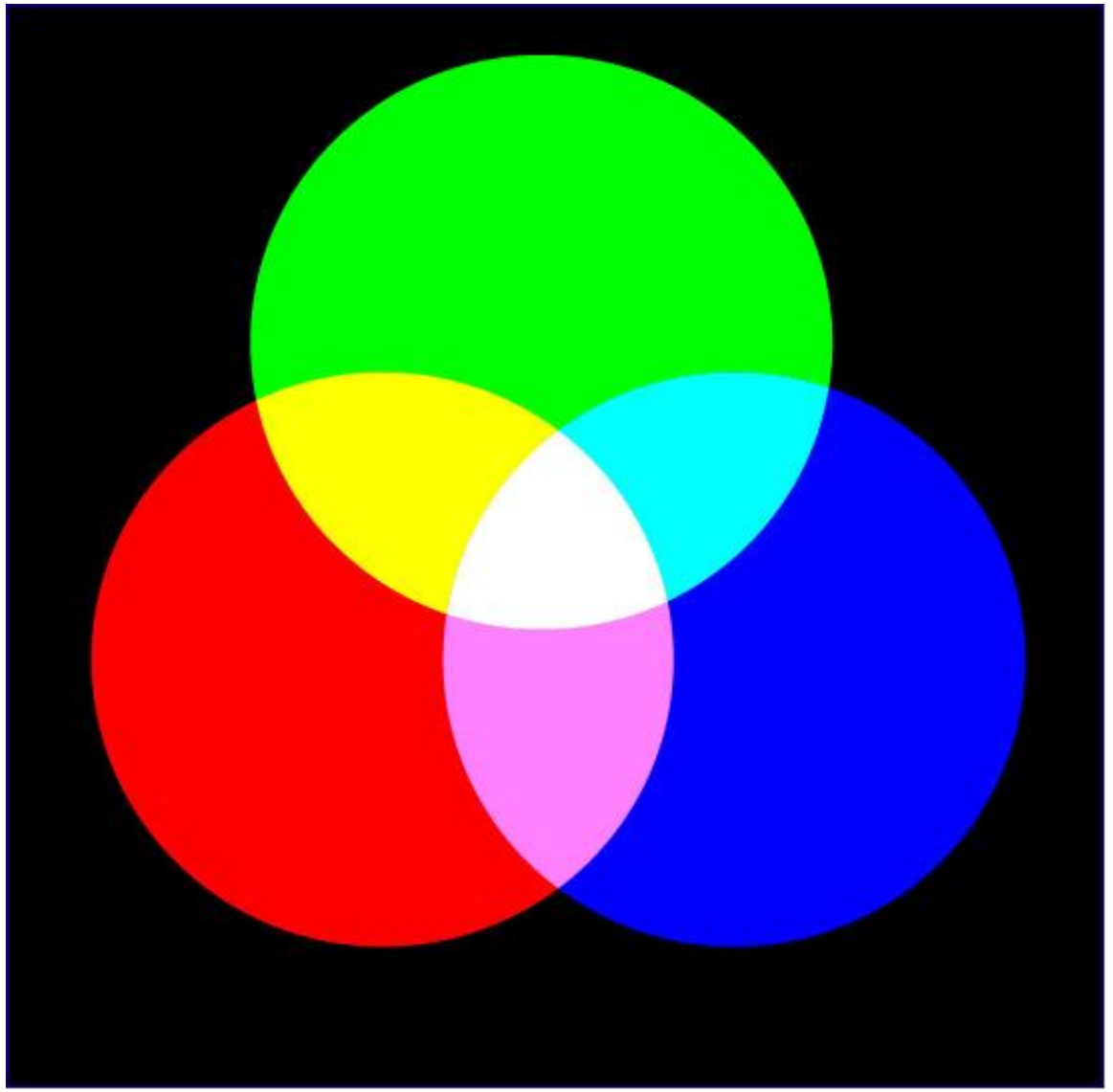
Creating a Basic Starting Document

```
<HTML>
<HEAD>
        <TITLE>Al al-Bayt University</TITLE>
</HEAD>
<BODY>
  This is what is displayed.
</BODY>
</HTML>
```

Color Codes

- Colors are set using "RGB" color codes, which are, represented as hexadecimal values. Each 2-digit section of the code represents the amount, in sequence, of red, green or blue that forms the color.

Main Colours



16 Basic Colors

Color Name	RGB Triplet	Hexadecimal	Color Name	RGB Triplet	Hexadecimal
Aqua	(0,255,255)	00FFFF	Navy	(0,0,128)	000080
Black	(0,0,0)	000000	Olive	(128,128,0)	808000
Blue	(0,0,255)	0000FF	Purple	(128,0,128)	800080
Fuchsia	(255,0,255)	FF00FF	Red	(255,0,0)	FF0000
Gray	(128,128,128)	808080	Silver	(192,192,192)	C0C0C0
Green	(0,128,0)	008000	Teal	(0,128,128)	008080
Lime	(0,255,0)	00FF00	White	(255,255,255)	FFFFFF
Maroon	(128,0,0)	800000	Yellow	(255,255,0)	FFFF00

Color Codes

1. WHITE	1. #FFFFFF
2. BLACK	2. #000000
3. RED	3. #FF0000
4. GREEN	4. #00FF00
5. BLUE	5. #0000FF
6. MAGENTA	6. #FF00FF
7. CYAN	7. #00FFFF
8. YELLOW	8. #FFFF00
9. AQUAMARINE	9. #70DB93
10. BAKER'S CHOCOLATE	10. #5C3317
11. VIOLET	11. #9F5F9F
12. BRASS	12. #B5A642
13. COPPER	13. #B87333
14. PINK	14. #FF6EC7
15. ORANGE	15. #FF7F00

The Body Element

- The BODY element of a web page is an important element in regards to the page's appearance. Here are the attributes of the **BODY** tag to control all the levels:

  TEXT="#RRGGBB" to change the color of **all the text** on the page (**full page text color.**)

- This element contains information about the page's background color, the background image, as well as the text and link colors.

Background Color

- It is very common to see web pages with their background color set to white or some other colors.
- To set your document's background color, you need to edit the <BODY> element by adding the BGCOLOR attribute. The following example will display a document with a white background color:

<BODY BGCOLOR="#FFFFFF"></BODY>

TEXT Color

- The TEXT attribute is used to control the color of all the normal text in the document. The default color for text is black. The TEXT attribute would be added as follows:

  <BODY BGCOLOR="#FFFFFF" TEXT="#FF0000"></BODY>

In this example the document's page

color is white and the text would be red.

Background Image

```
<!DOCTYPE html>
<html>
<body>

<h2>Background Image</h2>

<p>A background image for a p element:</p>

<p style="background-image: url('img_girl.jpg');">
You can specify background images<br>
for any visible HTML element.<br>
In this example, the background image<br>
is specified for a p element.<br>
By default, the background-image<br>
will repeat itself in the direction(s)<br>
where it is smaller than the element<br>
where it is specified. (Try resizing the<br>
browser window to see how the<br>
background image behaves.
</p>

</body>
</html>
```

Background sound

- The HTML <bgsound> tag is used to play music in the background. This tag is for Internet Explorer only.
- Example
- You can try to run the following code to add background music in HTML −

```
<!DOCTYPE html>
<html>
   <head>
      <title>HTML bgsound Tag</title>
   </head>
   <body>
      <bgsound src = "/html/yourfile.mdi"/>
      <p>Plays sound file in the background.</p>
   </body>
</html>
```

What is an HTML Tag?

HTML Tags are pre-defined elements in HTML, enclosed within these brackets `< >` signs. For example: `<html>`, `<table>`, etc. All HTML tags has a particular function associated with them.

Each tag has a special function and a combination of various tags developes a website. **For example**, a <p> tag defines a paragraph in the website and a <table> tag displays a table.

Types of tags in HTML-

- There are two types of tags in HTML that are used by the Website Designers:

1. Paired Tags (Opening and Closing Tags)
2. Unpaired Tags (Singular Tag)

Paired Tags - Opening and Closing Tags

Paired tags are a set of two tags with the same name. In each Paired tag set, one is an opening tag, and the other one is the closing tag. The closing tag has a `/` slash, it means that the tag is closed now.

It is necessary to close a paired tag; otherwise, it can result in the malfunctioning of the website. When the content is written within paired tags, then it ensures that the effect of those tags would be limited to only the content between them.

List of some paired tags in HTML:

Open Tag	Close Tag
<html>	</html>
<table>	</table>
<form>	</form>
<head>	</head>

Unpaired Tags - Singular Tags

Unpaired tags are single tags with no closing tag. These tags are also called **Singular Tags**. These are also called **non-container tags** because they do not contain any content.

It is recommended to close the unpaired/singular tags also. But unfortunately, we do not have the closing tag for those. So, an unpaired tag is closed after adding a slash(/) just before the greater than `>` sign. For example: `<br />`.

Some Unpaired Tags are:

Open Tag
<hr>

- HTML Elements:

Basic HTML tags

1. Body tag:-

Body tag contain some attributes such as bgcolor, background etc. bgcolor is used for background color, which takes background color name or hexadecimal number and #FFFFFF and background attribute will take the path of the image which you can place as the background image in the browser.

<body bgcolor="#F2F3F4" background= "c:\amer\imag1.gif">

2. Paragraph tag:-

Most text is part of a paragraph of information. Each paragraph is aligned to the left, right or center of the page by using an attribute called as align.

<p align="left" | "right" | "center">

3. Heading tag:-
HTML is having six levels of heading that are commonly used. The largest heading tag is

<h1>. The different levels of heading tag besides <h1> are <h2>,<h3>, <h4>, <h5> and <h6>. These heading tags also contain attribute called as align.

<h1 align="left" | "right" | "center"> .....<h2>

4. hr tag:-
This tag places a horizontal line across the system. These lines are used to break the page. This tag also contains attribute i.e., width which draws the horizontal line with the screen size of the browser. This tag does not require an end tag.

<hr width="50%">.

5. base font:-
This specify format for the basic text but not the headings.

<basefont size=”10”>

6. font tag:-
This sets font size, color and relative values for a particular text.

<font size=”10” color=”#f1f2f3”>

7. bold tag:-
This tag is used for implement bold effect on the text

 .....

8. Italic tag:-
This implements italic effects on the text.

… ....

9. strong tag:-
This tag is used to always emphasized the text

.....

10. tt tag:-
This tag is used to give typewriting effect on the text

<tt>.....</tt>

11. sub and sup tag:-
These tags are used for subscript and superscript effects on the text.

_{.....}
^{.....}

12. Break tag:-
This tag is used to the break the line and start from the next line.

13. &amp &lt &gt   &quot:-

These are character escape sequence which are required if you want to display characters that HTML uses as control sequences.

Example: < can be represented as &lt.

14. Anchor tag:-

This tag is used to link two HTML pages, this is represented by <a>

 some text

href is an attribute which is used for giving the path of a file which you want to link.

LINK, VLINK, and ALINK

These attributes control the colors of the different link states:

1. LINK – initial appearance – default = Blue.
2. VLINK – visited link – default = Purple.
3. ALINK –active link being clicked–default= Yellow.

The Format for setting these attributes is:

```
<BODY BGCOLOR="#FFFFFF" TEXT="#FF0000"
      LINK="#0000FF"
     VLINK="#FF00FF"
    ALINK="FFFF00"> </BODY>
```

Using Image Background

- The BODY element also gives you ability of setting an image as the document's background.
- An example of a background image's HTML code is as follows:

```
<BODY BACKGROUND="hi.gif"
  BGCOLOR="#FFFFFF"></BODY>
```

Previewing Your Work

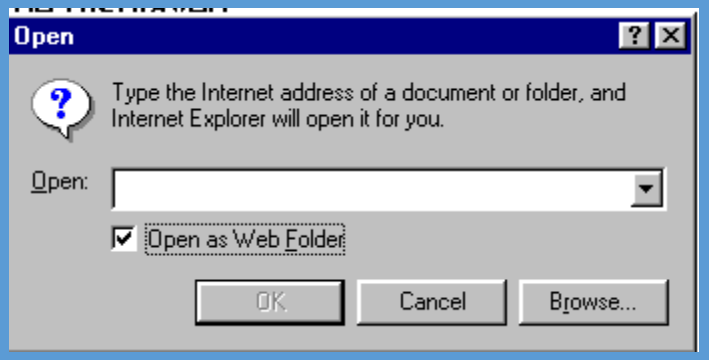
- Once you have created your basic starting document and set your document properties it is a good idea to save your file.
- To save a file, in NotePad, follow these steps:

1. Locate and click on the menu called “File”.
2. Select the option under File Menu labeled “Save As”.
3. In the “File Name” text box, type in the entire name of your file (including the extension name .html).

Edit, Save and View Cycle

- To preview Your Work, open a web browser and do the following:

1. Click on the menu labeled “File”.
2. Locate the menu option, “Open”.



Edit, Save and View Cycle

3. In the “Open” dialog box, click on the “Browse” button and locate your web document.
4. Click “OK” once you have selected your file.

- The web browser will load the same document but with the new revisions. This process is the Edit, Save and View Cycle.

- Character formatting:
- 2.6.1. Heading Tag (H1 to H6) and attribute (ALIGN) 2.6.2. Paragraph Tag and attribute (ALIGN)

  2.6.3. Line Break (BR)

2.6.4. Horizontal Rule (HR) and attribute (ALIGN, SIZE, WIDTH, NOSHADE)

2.6.5. Comment in HTML ()

2.6.6. Text Formatting (B, I, U, BLOCKQUOTE, Q, PREFORMATTED, SUB, SUP, EM, STRIKE, SMALL, BIG, CENTER)

Headings, Paragraphs, Breaks & Horizontal Rules

In this chapter you will add headings to your page, insert paragraphs, add some breaks, and add horizontal rules.

Objectives

Upon completing this section, you should be able to

1. List and describe the different Heading elements.
2. Use Paragraphs to add text to a document.
3. Insert breaks where necessary.
4. Add a Horizontal Rule.

Headings, <Hx> </Hx>

- Inside the **BODY** element, heading elements **H1** through **H6** are generally used for major divisions of the document. Headings are permitted to appear in any order, but you will obtain the best results when your documents are displayed in a browser if you follow these guidelines:

1. **H1**: should be used as the highest level of heading, **H2** as the next highest, and so forth.
2. You should not skip heading levels: e.g., an **H3** should not appear after an **H1**, unless there is an **H2** between them.

Headings, <Hx> </Hx>

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<H2> Heading 2 </H2>
<H3> Heading 3 </H3>
<H4> Heading 4 </H4>
<H5> Heading 5 </H5>
<H6> Heading 6 </H6>
</BODY>
</HTML>
```

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

Paragraphs, <P> </P>

- Paragraphs allow you to add text to a document in such a way that it will automatically adjust the end of line to suite the window size of the browser in which it is being displayed. Each line of text will stretch the entire length of the window.

Paragraphs, <P> </P>

```
<HTML><HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY></H1> Heading 1 </H1>
<P> Paragraph 1, ….</P>
<H2> Heading 2 </H2>
<P> Paragraph 2, ….</P>
<H3> Heading 3 </H3>
<P> Paragraph 3, ….</P>
<H4> Heading 4 </H4>
<P> Paragraph 4, ….</P>
<H5> Heading 5 </H5>
<P> Paragraph 5, ….</P>
<H6> Heading 6</H6>
<P> Paragraph 6, ….</P>
</BODY></HTML>
```

Heading 1

Paragraph 1,….

Heading 2

Paragraph 2,….

Heading 3

Paragraph 3,….

Heading 4

Paragraph 4,….

Heading 5

Paragraph 5,….

Heading 6

Paragraph 6,….

Break,

- Line breaks allow you to decide where the text will break on a line or continue to the end of the window.
- A
 is an empty Element, meaning that it may contain attributes but it does not contain content.
- The
 element does not have a closing tag.

Break,

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR> Line 3 <BR>….
</P>
</BODY>
</HTML>
```

Heading 1

Paragraph 1,….

Line 2

Line 3

….

Horizontal Rule, <HR>

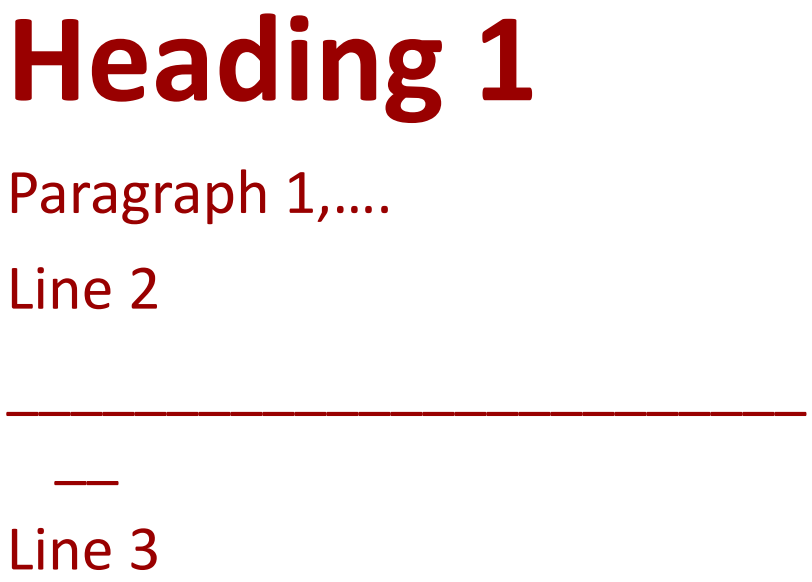
- The <HR> element causes the browser to display a horizontal line (rule) in your document.
- <HR> does not use a closing tag, </HR>.

Horizontal Rule, <HR>

Attribute	Description	Default Value
SIZE	Height of the rule in pixels	2 pixels
WIDTH	Width of the rule in pixels or percentage of screen width	100%
NOSHADE	Draw the rule with a flat look instead of a 3D look	Not set (3D look)
ALIGN	Aligns the line (Left, Center, Right)	Center
COLOR	Sets a color for the rule (IE 3.0 or later)	Not set

Horizontal Rule, <HR>

```
<HTML>
<HEAD>
<TITLE> Example Page</TITLE>
</HEAD>
<BODY>
<H1> Heading 1 </H1>
<P>Paragraph 1, <BR>
Line 2 <BR>
<HR>Line 3 <BR>
</P>
</BODY>
</HTML>
```



Character /Text Formatting

In this chapter you will learn how to enhance your page with Bold, Italics, and other character formatting options.

Objectives

Upon completing this section, you should be able to

1. Change the color and size of your text.
2. Use Common Character Formatting Elements.
3. Align your text.
4. Add special characters.
5. Use other character formatting elements.

Bold, Italic and other Character Formatting Elements

- **<FONT SIZE="+2">** Two sizes bigger**</FONT>**
- The size attribute can be set as an absolute value from 1 to 7 or as a relative value using the "+" or "-" sign. Normal text size is 3 (from -2 to +4).
- **<B> Bold </B>**
- **<I>** ***Italic*** **</I>**
- **<U>** **Underline** **</U>**
- Color = "#RRGGBB" The COLOR attribute of the FONT element. E.g., **<FONT COLOR="#RRGGBB">this text has color</FONT>**
- **<PRE> Preformatted </PRE>** Text enclosed by PRE tags is displayed in a mono-spaced font. Spaces and line breaks are supported without additional elements or special characters.

Bold, Italic and other Character Formatting Elements

- **<EM> *Emphasis* </EM>** Browsers usually display this as italics.
- **<STRONG> STRONG </STRONG>** Browsers display this as bold.
- **<TT> TELETYPE </TT>** Text is displayed in a mono-spaced font. A typewriter text, e.g. fixed-width font.
- **<CITE> Citation </CITE>** represents a document citation (**italics**). **For titles of books, films, etc. Typically displayed in italics. (*A Beginner's Guide to HTML*)**

Bold, Italic and other Character Formatting Elements

```
<P> <FONT SIZE="+1"> One Size
   Larger </FONT> - Normal –

<FONT SIZE="-1"> One Size Smaller
   </FONT> <BR>

<B> Bold</B> - <I> italics</I> - <U>
   Underlined </U> -

<FONT COLOR="#FF0000"> Colored
   </FONT> <BR>

<EM> Emphasized</EM> -
   <STRONG> Strong </STRONG> -
   <TT> Tele Type </TT> <BR>
```

One Size Larger - Normal – One Size Smaller
Bold - *italics* - Underlined - Colored
Emphasized - **Strong** - Tele Type

Alignment

- Some elements have attributes for alignment (ALIGN) e.g. Headings, Paragraphs and Horizontal Rules.
- The Three alignment values are : LEFT, RIGHT, CENTER.
- <CENTER></CENTER> Will center elements.

Alignment

- **<DIV ALIGN="value"></DIV>** Represents a division in the document and can contain most other element type. The alignment attribute of the DIV element is well supported.
- **<TABLE></TABLE>** Inside a TABLE, alignment can be set for each individual cell.

Special Characters & Symbols

- These Characters are recognized in HTML as they begin with an ampersand and end with with a semi-colon e.g. **&value;** The value will either be an entity name or a standard ASCII character number. They are called **escape sequences**.
- The next table represents some of the more commonly used special characters. For a comprehensive listing, visit the W3C's section on special characters at:
  http://www.w3.org/MarkUp/HTMLPlus/htmlplus_13.html

Special Characters & Symbols

Special Character	Entity Name	Special Character	Entity Name
Ampersand	& &	Greater-than sign	> >
Asterisk	∗ **	Less-than sign	< <
Cent sign	¢ ¢	Non-breaking space	
Copyright	© ©	Quotation mark	" "
Fraction one qtr	¼ ¼	Registration mark	® ®
Fraction one half	½ ½	Trademark sign	™ ™

Special Characters & Symbols

- Additional escape sequences support accented characters, such as:
- **ö**
  - a lowercase o with an umlaut: ö
- **ñ**
  - a lowercase n with a tilde: ñ
- **È**
  - an uppercase E with a grave accent: È

NOTE: Unlike the rest of HTML, the escape sequences are **case sensitive**. You cannot, for instance, use < instead of <.

Additional Character Formatting Elements

- **<STRIKE>** strike-through text**</STRIKE>**

DEL is used for STRIKE at the latest browsers

- **<BIG>** places text in a big font**</BIG>**
- **<SMALL>** places text in a small font**</SMALL>**
- **_{** places text in subscript position **}**
- **^{** places text in superscript style position **}**

Example

```
<P><STRIKE> strike-through text </STRIKE></BR>

<BIG>places text in a big font </BIG><BR>

<SMALL> places text in a small font</SMALL><BR>

<SUB> places text in subscript position </SUB>
Normal
<SUP> places text in superscript style position </SUP><BR>
  </P>
```

Blockquote

- The <blockquote> tag in HTML is used to display the long quotations (a section that is quoted from another source). It changes the alignment to make it unique from others. It contains both opening and closing tags. In blockquote tag, we can use elements like heading, list, paragraph, etc.
- Syntax:
- <blockquote>----</blockquote>

```
<html>
  <body>
    <h1>GeeksforGeeks</h1>
    <h2><blockquote> Tag</h2>
    <!--blockquote Tag starts here -->
    <blockquote cite=
"https://www.geeksforgeeks.org/html-tutorials/">


<p>
        HTML stands for HyperText Markup Language. It
        is used to design web pages using a markup language.
        HTML is the combination of Hypertext and Markup languag
        Hypertext defines the link between the web pages. A
        markup language is used to define the text document wit
        tag which defines the structure of web pages.
      </p>


    </blockquote>
    <!--blockquote Tag ends here -->
  </body>
</html>
```

<blockquote> Tag

> HTML stands for HyperText Markup Language. It is used to design web pages using a markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. A markup language is used to define the text document within tag which defines the structure of web pages.

<q>: The Inline Quotation element

The `<q>` HTML element indicates that the enclosed text is a short inline quotation. Most modern browsers implement this by surrounding the text in quotation marks. This element is intended for short quotations that don't require paragraph breaks; for long quotations use the `<blockquote>` element.

Css: q:{font-style:italic;}

```
1 <p>When Dave asks HAL to open the pod
  bay door, HAL answers: <q
  cite="https://www.imdb.com/title/tt00626
  22/quotes/qt0396921">I'm sorry, Dave.
  I'm afraid I can't do that.</q></p>
2
```

When Dave asks HAL to open the pod bay door, HAL answers: *“I'm sorry, Dave. I'm afraid I can't do that.”*

Preformatted text

- HTML pre tag
- The **HTML <pre> tag** is used *to specify pre formatted texts*. Texts within <pre>.....</pre> tag is displayed in a fixed-width font. Usually it is displayed in Courier font. It maintains both space and line break.
- It is widely used to display language examples e.g. Java, C#, C, C++ etc because it displays the code as it is typed.
- HTML pre tag example

HTML pre tag example

```
<pre>
This is a formatted text
by using the HTML pre tag. It maintains
    both space and line break.
</pre>
```

```
<!DOCTYPE>
<html>
<body>
<pre>
package com.javatpoint;
public class FirstJava{
public static void main(String args[]){
System.out.println("hello java");
}
}
</pre>
</body>
</html>
```

Lists

- HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

1. Ordered List or Numbered List (ol)
2. Unordered List or Bulleted List (ul)
3. Description List or Definition List (dl)

List Elements

- HTML supplies several list elements. Most list elements are composed of one or more <LI> (List Item) elements.
- UL : Unordered List. Items in this list start with a list mark such as a bullet. Browsers will usually change the list mark in nested lists.

<UL>

<LI> List item **…</LI>**

<LI> List item **…</LI>**

</UL>

- List item …
- List item …

List Elements

- You have the choice of three bullet types: **disc(default), circle, square.**
- These are controlled in Netscape Navigator by the “TYPE” attribute for the <UL> element.

<UL TYPE=“square”>

<LI> List item …</LI>

<LI> List item …</LI>

<LI> List item …</LI>

</UL>

- List item …
- List item …
- List item …

List Elements

- OL: Ordered List. Items in this list are numbered automatically by the browser.

<OL>

<LI> List item …</LI>

<LI> List item …</LI>

<LI> List item …</LI>

</OL>

1. **List item …**
2. **List item …**
3. **List item**

- You have the choice of setting the TYPE Attribute to one of five numbering styles.

List Elements

TYPE	Numbering Styles	
1	**Arabic numbers**	**1,2,3, ……**
a	**Lower alpha**	**a, b, c, ……**
A	**Upper alpha**	**A, B, C, ……**
i	**Lower roman**	**i, ii, iii, ……**
I	**Upper roman**	**I, II, III, ……**

List Elements

- You can specify a starting number for an ordered list.

<OL TYPE =“i”>

<LI> List item …</LI>

<LI> List item …</LI>

</OL>

<P> text ….</P>

<OL TYPE=“i” START=“3”>

<LI> List item …</LI>

</OL>

List Elements

i. List item …

ii. List item …

Text ….

iii. List item …

List Elements

- **DL: Definition List**. This kind of list is different from the others. Each item in a DL consists of one or more **Definition Terms (DT elements),** followed by one or more **Definition Description (DD elements).**

```
<DL>
<DT> HTML </DT>
<DD> Hyper Text Markup Language </DD>
<DT> DOG </DT>
<DD> A human's best friend!</DD>
</DL>
```

HTML

Hyper Text Markup Language

DOG

A human's best friend!

Nesting Lists

- You can nest lists by inserting a UL, OL, etc., inside a list item (LI).

EXample

```
<UL TYPE = “square”>
<LI> List item …</LI>
<LI> List item …
<OL TYPE=“i” START=“3”>
<LI> List item …</LI>
<LI> List item …</LI>
<LI> List item …</LI>
<LI> List item …</LI>
<LI> List item …</LI>
</OL>
</LI>
<LI> List item …</LI>
</UL>
```

- List item …
- List item …
  iii. List item …
  iv. List item …
  v. List item …
  vi. List item …
  vii. List item …
- List item …

What will be the output?

```
<H1 ALIGN="CENTER">SAFETY TIPS FOR CANOEISTS</H1>
<OL TYPE=“a” START=“2”>
<LI>Be able to swim </LI>
<LI>Wear a life jacket at all times </LI>
<LI>Don't stand up or move around. If canoe tips,
    <UL>
    <LI>Hang on to the canoe </LI>
    <LI>Use the canoe for support and </LI>
     <LI>Swim to shore
    </UL> </LI>
<LI>Don't overexert yourself </LI>
<LI>Use a bow light at night </LI>
</OL>
```

The output….

SAFETY TIPS FOR CANOEISTS

b. Be able to swim
c. Wear a life jacket at all times
d. Don't stand up or move around. If canoe tips,
    - Hang on to the canoe
    - Use the canoe for support and
    - Swim to shore
e. Don't overexert yourself
f. Use a bow light at night

```
<H1 ALIGN="CENTER">SAFETY TIPS FOR
CANOEISTS</H1>
<OL TYPE="a" START="2">
<LI>Be able to swim </LI>
<LI>Wear a life jacket at all times </LI>
<LI>Don't stand up or move around. If canoe tips,
<UL>
<LI>Hang on to the canoe </LI>
<LI>Use the canoe for support
<OL type="I" start="4">
<LI> Be careful </LI>
<LI> Do not look around</LI>
</LI> </OL>
 <LI>Swim to shore
</UL> </LI>
<LI>Don't overexert yourself </LI>
<LI>Use a bow light at night </LI>
</OL>
```

What will be the output?

The output….

SAFETY TIPS FOR CANOEISTS

b. Be able to swim
c. Wear a life jacket at all times
d. Don't stand up or move around. If canoe tips,
    - Hang on to the canoe
    - Use the canoe for support
        IV. Be careful
        V. Do not look around
    - Swim to shore
e. Don't overexert yourself
f. Use a bow light at night

Images

In this chapter you will learn about images and how to place images in your pages.

Objectives

Upon completing this section, you should be able to

1. Add images to your pages.

Images

- **<IMG>**This element defines a graphic image on the page.
- **Image File (SRC:source):** This value will be a URL (location of the image) E.g. http://www.domain.com/dir/file.ext or /dir/file.txt.
- **Alternate Text (ALT):** This is a text field that describes an image or acts as a label. It is displayed when they position the cursor over a graphic image.
- **Alignment (ALIGN):** This allows you to align the image on your page.

Images

- **Width (WIDTH):** is the width of the image in pixels.
- **Height (HEIGHT):** is the height of the image in pixels.
- **Border (BORDER):** is for a border around the image, specified in pixels.
- **HSPACE:** is for Horizontal Space on both sides of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space on both sides of the image.
- **VSPACE:** is for Vertical Space on top and bottom of the image specified in pixels. A setting of 5 will put 5 pixels of invisible space above and bellow the image.

Some Examples on images

1) <IMG SRC="jordan.gif" border=4>

2) <IMG SRC=" jordan.gif" width="60" height="60">

3) <IMG SRC="jordan.gif" ALT="This is a text that goes with the image">

4) <IMG SRC=" jordan.gif " Hspace="30" Vspace="10" border=20>

5) < IMG SRC =" jordan.gif" align="left">

blast blast blast blast blast

Anchors, URLs and Image Maps

In this chapter you will learn about Uniform Resource Locator, and how to add them as Anchor or Links inside your web pages.

Objectives

Upon completing this section, you should be able to

1. Insert links into documents.
2. Define Link Types.
3. Define URL.
4. List some commonly used URLs.
5. Plan an Image Map.

Links

- There are three types of Link:
- Internal Link
- External Link
- Mailto link

Internal Link

HTML internal link is linked within the same web page. This link can be an absolute path or relative path.

HTML internal link name is followed by the hash sign(#). You have to assign an `id` to refer section of your page, which is referred to as an internal link to the same page.

When you click on an internal anchor link, you will scroll automatically to the referred section and display it on your browser.

To understand internal link see the below examples.

- *Lession.1* link can be referred as *Introduction of Lession.1* automatically.
- *Lession.2* link can be referred as * Introduction of Lession.2 * automatically.

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>
  <a href="#lession1">Lession.1</a><br />
  <a href="#lession2">Lession.2</a><br />
  <a href="#lession3">Lession.3</a><br />
  <a href="#lession4">Lession.4</a><br />
  <br />

  <a id="lession1">Introduction of Lession.1</a>
  <p>This is sub topic.1</p>
  <p>This is sub topic.2</p>
  <p>This is sub topic.3</p>
  <p>This is sub topic.4</p>
  <br />
  <br />
  <div id="lession2">Introduction of Lession.2</div>
  <p>This is sub topic.1</p>
  <p>This is sub topic.2</p>
  <p>This is sub topic.3</p>
  <p>This is sub topic.4</p>
  <br />
  <br />
  <p id="lession3">Introduction of Lession.3</p>
  <p>This is sub topic.1</p>
  <p>This is sub topic.2</p>
  <p>This is sub topic.3</p>
  <p>This is sub topic.4</p>
  <br />
  <br />
  <article id="lession4">Introduction of Lession.4</article>
  <p>This is sub topic.1</p>
  <p>This is sub topic.2</p>
  <p>This is sub topic.3</p>
  <p>This is sub topic.4</p>

  <br /><br /><br /><br /><br /><br /><br /><br /><br /><br />
  <br /><br /><br /><br /><br /><br /><br /><br /><br /><br />
  <br /><br /><br /><br /><br /><br /><br /><br /><br /><br />
</body>
</html>
```

External Link

- HTML Link - External HTML Links is linked to external web page. This link is may be absolute path or relative link path.
- <a> tag is used for anchor name which is referred link to another web page.
- External link is great future to drive a webpage one to another and useful for surf many webpage in website

```
<html>
<head>
</head>
<body>
  <a href="../tutorial.php">HTML</a>
  <br />
  <br />
  <a href="../../css/tutorial.php">CSS</a>
  <br />
  <br />
  <a href="../../javascript/tutorial.php">Java Script</a>
  <br />
</body>
</html>
```

HTML

CSS

Java Script

Mailto link

- HTML Link also use for create a Mailto link to a send a email to a specific E-mail address. *href* attributes value is set mailto link that followed to a e-mail address.
- When click on E-Mail link, it will open E-Mail application. E-Mail link is use to send E-Mail/Review with subject, text message.

```html
<!DOCTYPE html>
<html>
<head>
</head>
<body>
  <p>
    <a href="mailto:surajpdy14@gmail.com">My Mail Id </a>
  </p>
</body>
</html>
```

HOW TO MAKE A LINK

1) The tags used to produce links are the <A> and </A>. The <A> tells where the link should start and the </A> indicates where the link ends. Everything between these two will work as a link.

2) The example below shows how to make the word Here work as a link to yahoo.

Click <A HREF="http://www.yahoo.com">here</A> to go to yahoo.

More on LINKs

<body LINK="#C0C0C0" VLINK="#808080" ALINK="#FF0000">

- **LINK - standard link - to a page the visitor hasn't been to yet. (standard color is blue - #0000FF).**
  VLINK - visited link - to a page the visitor has been to before. (standard color is purple - #800080).
  ALINK - active link - the color of the link when the mouse is on it. (standard color is red - #FF0000).

If the programmer what to change the color

- **Click here to go to yahoo.**

Image Maps

- Image maps are images, usually in gif format that have been divided into regions; clicking in a region of the image cause the web surfer to be connected to a new URL. Image maps are graphical form of creating links between pages.
- There are two type of image maps:

  Client side and server side

Both types of image maps involve a listing of co-ordinates that define the mapping regions and which URLs those coordinates are associated with. This is known as the map file.

HTML Elements Used to Create Image Maps

There are three HTML elements used to create image maps:

- `img` : specifies the location of the image to be included in the map.
- `map` : is used to create the map of clickable areas.
- `area` : is used within the map element to define the clickable areas.

Client-Side Image Maps

- Client-side image maps (USEMAP) use a map file that is part of the HTML document (in an element called MAP), and is linked to the image by the Web browser.

```
<IMG SRC="note.GIF"  Width=200 Height=200
border="5" USEMAP="#map1">
<MAP NAME="map1">
<AREA SHAPE="RECT" COORDS="0,0,90,90"
HREF="hi.html"  ALT="see me…">
<AREA SHAPE="RECT" COORDS="100,100,160,160"
HREF="divPara.html"  ALT="see him…" >
<AREA SHAPE="CIRCLE" COORDS="150,50,20"
HREF="house.html"  ALT="see it…" >
</MAP>
```

We can use Poly as well as Rect……

Shapes, Coords

- Types of Shapes
    - Rect → used for squares and ordered shapes.
    - Circle → used for circles.
    - Poly → used for unordered shapes.
- Number of coordenations for each shape:
    - Rect →4 numbers for two corners
    - Circle →3 numbers for the center & R
    - Poly → depends on the number of corners of the shape(2 numbers for each corner)

HTML Image Maps Example

```
<!DOCTYPE html>
<html>
<body>

<h2>Image Maps</h2>

<img src="https://cdn.pixabay.com/photo/2017/05/11/11/15/workplace-
2303851_960_720.jpg" alt="Desk" usemap="#deskmap" width="500" height="380">

<map name="deskmap">

  <area shape="rect" coords="175,242,420,358" alt="Keyboard" target="_blank"
  href="https://en.wikipedia.org/wiki/Computer_keyboard">

  <area shape="rect" coords="444,251,481,357" alt="Mouse" target="_blank"
href="https://en.wikipedia.org/wiki/Computer_mouse">

  <area shape="rect" coords="375,14,481,357" alt="Diary" target="_blank"
href="https://en.wikipedia.org/wiki/Book">

</map>
</body>
```