

# WRITING WEB PAGES

## HTML BASICS



Lecture 2

# Learning Outcomes



- ❧ After Successful completion of this lesson Learner will able to :
  - ❧ Identify structure of a HTML document.
  - ❧ Identify elements of HTML.
  - ❧ Identify basic tags of HTML

# Topics



- ❧ Introduction to HTML
- ❧ HTML Editors
- ❧ HTML versions
- ❧ Elements of HTML
- ❧ HTML Document structure
- ❧ Basic tags

# Writing Web Pages



## ❧ Web Page

❧ Consists of Texts, images, links, tables, lists, sounds, etc..

❧ A **web page** is a document commonly written in **HyperText Markup Language (HTML)** that is accessible through the Internet or other network using an Internet browser.



# Web Standards



❧ Create and Maintain by W3C

❧ Why?

❧ To make internet better place

❧ The development is easy

❧ Ensure that the browser displays website properly

❧ Easier for search engines to access and index

❧ Easier to access with other program codes (Ex : Javascript)

# What is mark up language?



- ❧ A computer language that uses **tags** to define elements within a document.
- ❧ It is human-readable, meaning markup files contain **standard words**, rather than typical programming syntax.
- ❧ **HTML is a mark up language**

# HTML



- ❧ HTML is a **markup language** for describing web documents (web pages).
- ❧ It is a special subset of SGML(Standard Generalized Markup Language).
- ❧ HTML stands for **Hyper Text Markup Language**
- ❧ A markup language is a set of **markup tags**
- ❧ HTML documents are described by HTML tags

**HTML tells HOW to  
display**

# SGML

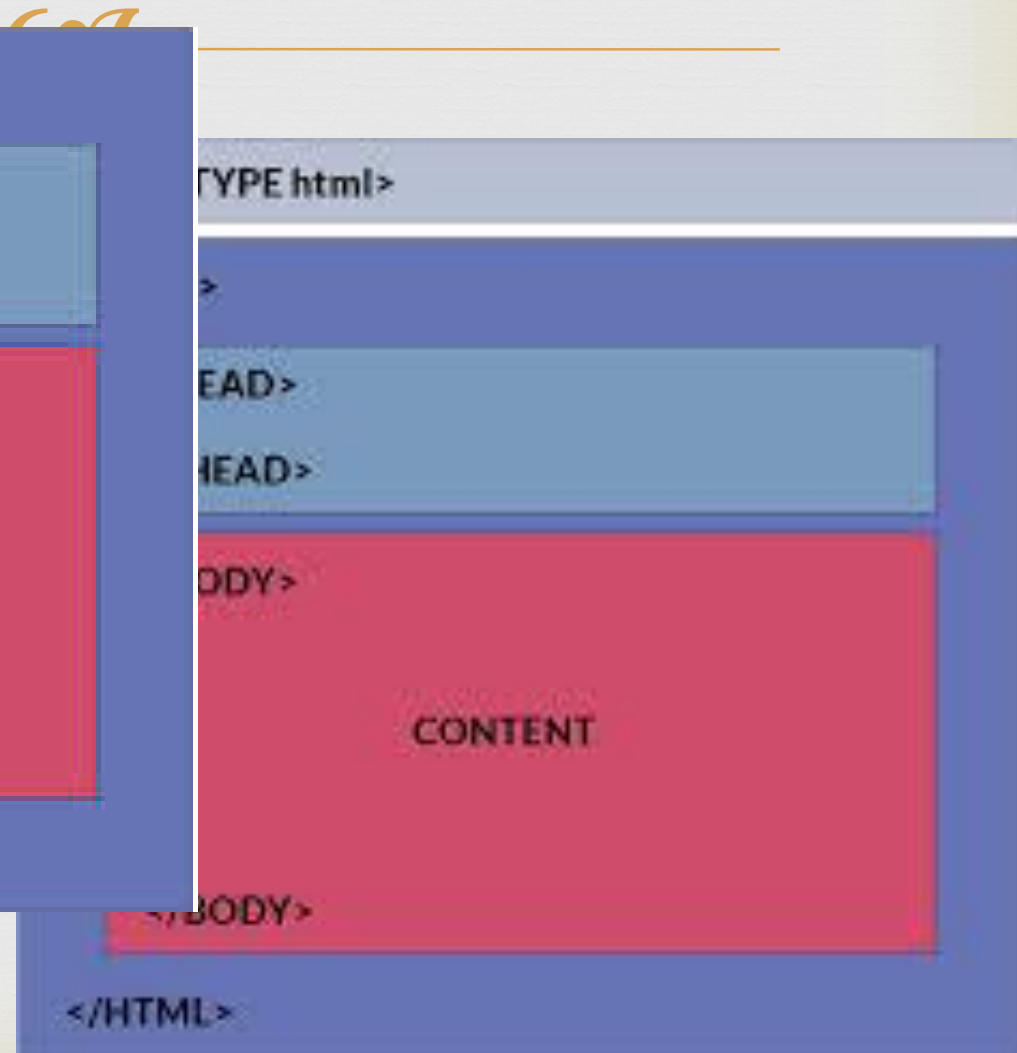
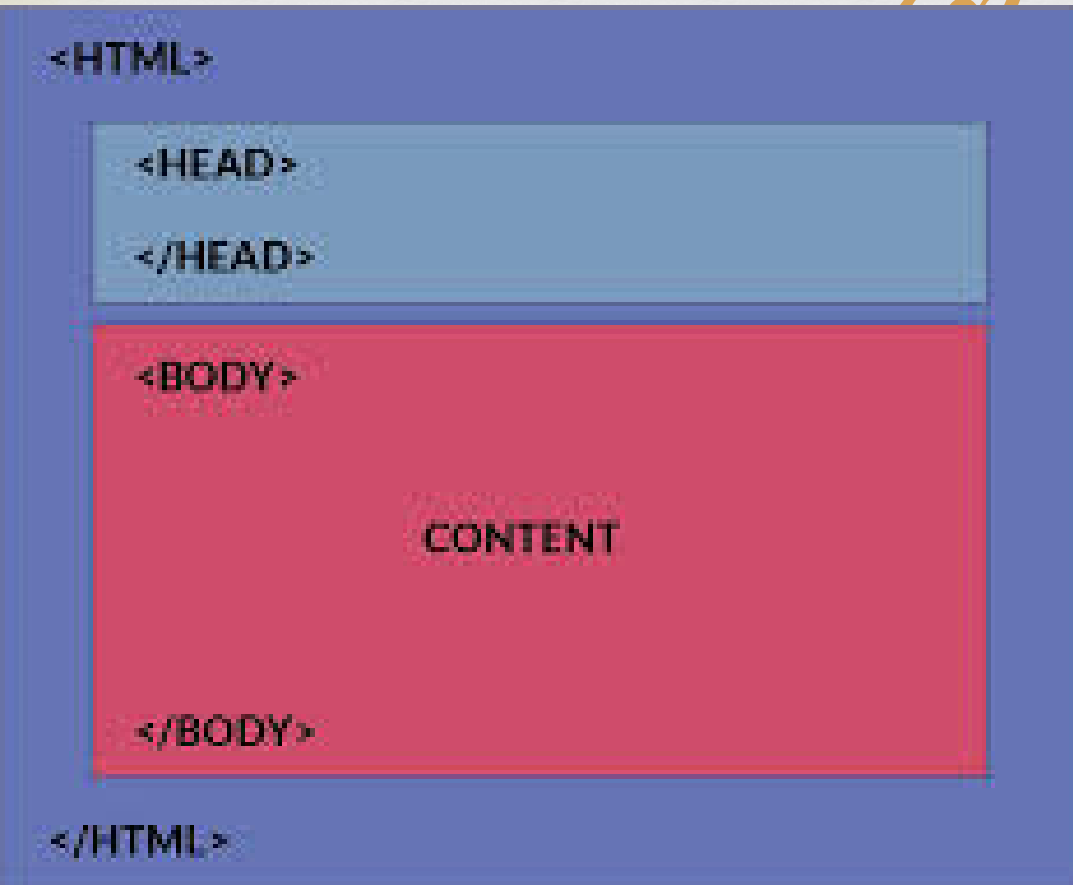
## (Standard Generalized Markup Language)

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- ❧ a system for organizing and tagging elements of a document.
- ❧ SGML was developed and standardized by the International Organization for Standards (ISO) in 1986.
- ❧ SGML itself does not specify any particular formatting; rather, it specifies the rules for tagging elements.



# Structure of a HTML Document



# Elements of a HTML file



❧ HTML page typically consists of four basic elements.

## ❧ Tag Statements

❧ Commands, `< tag >` , Most of them comes as pairs except few ( e.g. `<br>` tag, etc..)

## ❧ Attributes

❧ Detailing the behavior of the tag (Ex. Color, font)

## ❧ Text, Images

❧ Usually appearing on the page

## ❧ Scripts

❧ Capable of manipulating the document

# HTML Tags



- Tags are always enclosed in angle-brackets : < >
- Case insensitive
- Tags should always be balanced.

## Correct

```
<tag1>  
  <tag2>  
    </tag2>  
  </tag1>
```

## Incorrect

```
<tag1>  
  <tag2>  
    </tag1>  
  </tag2>
```

Figure 1

# HTML Document



- ⌘ All HTML documents must start with a type declaration: `<!DOCTYPE html>`.
- ⌘ The HTML document itself begins with `<html>` and ends with `</html>`.
- ⌘ The *special tags* are used between `<head>` and `</head>`
  - ⌘ ex. `<title>`
- ⌘ The *visible part of the HTML document* is between `<body>` and `</body>`.



# The <!DOCTYPE> Declaration

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- ❧ The <!DOCTYPE> declaration helps the browser to display a web page correctly.
- ❧ There are different document types on the web.
- ❧ To display a document correctly, the browser must know both type and version.
- ❧ The doctype declaration is not case sensitive.
- ❧ Ex. <!DOCTYPE html>

# <head> Tag



- ❧ The <head> element is a container for all the head elements.
- ❧ • The <head> element can include a **title for the document, scripts, styles, meta information, and more.**
  - ❧ <title> (this element is required in an HTML document)
  - ❧ <style> (this is used to define style information for an HTML document)
  - ❧ <base> (specifies the base URL/target for all relative URLs in a document)
  - ❧ <link> (defines a link between a document and an external resource)
  - ❧ <meta> (specify data about data)
  - ❧ <script> (used to define client-side scripting, such as Java script)

# <body> Tag



- ❧ The <body> tag defines the document's body.
- ❧ The <body> element contains all the contents of an HTML document, such as text, hyperlinks, images, tables, lists, etc.

# Example



```
<html>
```

```
<head>
```

```
  <title> First Web Page </title>
```

```
</head>
```

```
<body>
```

```
  This is my first home page
```

```
</body>
```

```
</html>
```



# Comments



- ❧ helpful for other HTML coders when trying to interpret someone else's code.
- ❧ Comments (`<!--your comment -->`)
  - ❧ Comments are a part of the HTML code and is used to explain the code.
  - ❧ Comments aren't displayed in the browser -they are simply there for the programmer's benefit.

# HTML Attributes



- ❧ HTML elements can have attributes
- ❧ Attributes provide **additional information** about an element
- ❧ Attributes are always specified in the **start tag**
- ❧ Attributes come in name/value pairs like:  
**name="value"**
- ❧ Ex.

```
<body bgcolor="blue">
```

This is my first home page

```
</body>
```

# HTML Tag and Attribute Syntax

---

**<tagname** **attribute\_name**=*"value"*>

# HTML Paragraphs



- ❧ Paragraphs are used when writing long sentences.
- ❧ The HTML `<p>` element defines a paragraph.
- ❧ Example

`<p>`

This paragraph contains a lot of lines in the source code, but the browser ignores it.

`</p>`

View



# Paragraph Attributes



## ❧ Align attribute

`<p align="center">This is a centered paragraph.</p>`

## ❧ Title Attribute

`<p title="paragraph1">This is paragraph1 </p>`

## ❧ Style Attribute

The style attribute specifies an inline style for a paragraph to describe the following

❧ »Font

❧ »Color

❧ »Font-size

# HTML `<pre>` tag



- ❧ The HTML `<pre>` element defines preformatted text.
- ❧ The text inside a `<pre>` element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks.
- ❧ Example:

`<pre>`

This paragraph  
contains a lot of lines  
in the source code,  
but the browser  
ignores it.

`</pre>`

[View](#)

# HTML Headings



- œ Headings are defined with the `<h1>` to `<h6>` tags
- œ Use to set headings/section titles in the document
- œ `<h1>` defines the most important heading. `<h6>` defines the least important heading.

œ Example

`<h1>`

This is heading 1

`</h1>`

# Basic Tags Use to build Content



## ❧ Text Formatting

- ❧ Font tag –not supported in HTML5, and is deprecated in HTML 4.01
- ❧ Styles-Physical and Logical

## ❧ Basic Text Structure

- ❧ Divisions
- ❧ Line Breaks
- ❧ Horizontal rule
- ❧ Lists



# <font>tag



- ❧ The <font> tag is not supported in HTML5. Use CSS instead. (We will learn CSS later)
- ❧ The <font> tag specifies the
  - ❧ font face,
  - ❧ font size,
  - ❧ color

```
<font attribute_name="attribute_value"> text </ font >
```

# Example: <font>tag



```
<html>
```

```
<body>
```

```
  <font size="3" >This is some text!</font>
```

```
  <font color="blue">This is some text!</font>
```

```
  <font face="verdana" >This is some text!</font>
```

```
</body>
```

```
</html>
```

View

# Styles



❧ There are two type of styles

❧ Logical

❧ Physical

❧ **Logical Styles:** Describe meaning of text and Format text

❧ **<CITE>**-citation (usually displayed in italics)

❧ **<EM>** -emphasis (usually italics)

❧ **<STRONG>**-strong emphasis (usually bolds)

# Styles..



## Physical styles

- <b>** -Bold
- <i>* - italics
- <u> -Underline
- <small> -small text
- ~~<del>~~ -deleted text
- <ins> -inserted text
- <sub><sub></sub> -Subscripted text
- <sup><sup></sup> -Superscripted text

[view](#)

# Style attribute



✧ The styles of an HTML element can be done by HTML style attribute.

✧ Syntax

```
<tagname style="property:value;">
```

*Property is CSS property and value is CSS value*





```
<tagname attribute_name="value">
```

```
<tagname style="property:value;">
```

# Example: Style attribute



```
<body style="background-color:powderblue;">  
<p style="font-family:courier;font-size:20px">This is a  
paragraph.</p>
```

[View](#)

# Basic Text Structure



## ❧ Line Breaks <br>

- ❧ To end a line after a certain word, you may use a line break.
- ❧ There is no </br> tag.

[View](#)

## ❧ Horizontal Rule <hr>

- ❧ Puts a line across the page
- ❧ Attributes : align, noshade,width, size
- ❧ No </hr> tag

[View](#)

# Special Text Characters



&	&amp
<	&lt
>	&gt
"	&quot
©	&copy
space	&nbsp

[View](#)

# Lists in HTML



- ⌘ Ordered List
- ⌘ Unordered Lists
- ⌘ Description / Definition Lists

## Ordered List

1. First item
2. Second item
3. Third item
4. Fourth item

## Unordered List

- Item
- Item
- Item
- Item

## Definition List

### Semester 1

CSC1122

CSC1131

### Semester II

CSC1222

CSC1242



# Unordered List



- ❧ An unordered list starts with the `<ul>` tag.
- ❧ Each list item starts with the `<li>` tag.
- ❧ The list items will be marked with bullets.

```
<ul>
```

```
<li>Green</li>
```

```
<li>Blue</li>
```

```
<li>Red</li>
```

```
</ul>
```

# Unordered List..

✧ The CSS **list-style-type** property is used to define the style of the list item...

Style	Description
list-style-type:disc	The list items will be marked with discs (default)
list-style-type:circle	The list items will be marked with circles
list-style-type:square	The list items will be marked with squares
list-style-type:none	The list items will not be marked

- Green
  - Blue
  - Red
- 
- Green
  - Blue
  - Red

Ex: `<ul style ="list-style-type:circle">`

[View](#)

# Ordered List



- ❧ An ordered list starts with the `<ol>` tag.
- ❧ Each list item starts with the `<li>` tag.
- ❧ The list items will be marked with numbers .

`<ol>`

`<li>Green</li>`

`<li>Blue</li>`

`<li>Red</li>`

`</ol>`

# Ordered List : type attribute



Type	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

1. Green  
2. Blue  
3. Red

A. Green  
B. Blue  
C. Red

[View](#)

# Description / Definition Lists



- ❧ A definition list is a **list of terms and corresponding definitions**.
- ❧ •] Basically a definition list is composed of three HTML elements and some text. These are the
  - ❧ `<dl>` :defines the description list
  - ❧ `<dt>` :defines the term (name)
  - ❧ `<dd>` :tag describes each term.
- ❧ Web browsers generally format the definition on a new line and indent it.



# Example



<dl>

<dt>Semester I</dt>

<dd>CSC1122</dd>

<dd>CSC1131</dd>

<dt>Semester II</dt>

<dd>CSC1222</dd>

<dd>CSC1242</dd>

</dt>

</dl>

Semester I

CSC1122

CSC1131

Semester II

CSC1222

CSC1242

[View](#)

# Exercise: Make this list



## First Quarter

- January
- February
- March

## Second Quarter

- April
- May
- June

# Colors in Web Pages



# Colors



- ❧ Colors are defined using a hexadecimal notation for the combination of **Red**, **Green**, and **Blue** (RGB). color values.
- ❧ With HTML, RGB color values can be specified using this formula: **rgb(red, green, blue)**
- ❧ Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.
- ❧ For example, **rgb(255,0,0)** is displayed as red, because red is set to its highest value (255) and the others are set to 0.

# RGB (Red, Green, Blue)



Color	RGB
	rgb(255,0,0)
	rgb(255,255,0)
	rgb(0,255,0)
	rgb(0,255,255)
	rgb(0,0,255)





- ✧ RGB values can also be specified using hexadecimal color values in the form:
  - ✧ #RRGGBB, where RR (red), GG (green) and BB (blue) are hexadecimal values between 00 and FF (same as decimal 0-255).
  - ✧ For example, #FF0000 is displayed as red, because red is set to its

A diagram illustrating the hexadecimal color format. It shows the string "#XXXXXX" in bold black text. Below the string, three curly braces group the characters into pairs: the first two 'X's are grouped under the label "RR", the next two 'X's under "GG", and the last two 'X's under "BB".

**#XXXXXX**  
RR GG BB

# Adding Colors to a web page

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- ❧ Color attribute is used to add colors to background, heading, text or hyperlink.
- ❧ Change background color of the web page
- ❧ Syntax

```
<body bgcolor="color_name | hex_number | rgb_number">
```

- ❧ Example

```
<body bgcolor="#E6E6FA">
```

view

# Change background color of the heading



## ❧ Syntax

```
<h2 style="backgroundcolor:rgb(255,0,0)">heading</h2>
```

## ❧ Change font color of the heading

```
<font color="red"> <h1> Heading 1</h1> </font>
```

# HTML Links



- ❧ HTML links are hyperlinks.
- ❧ A hyperlink is a text or an image you can click on, and jump to another document.
- ❧ One main power of HTML is the ability to link to different types of file format (text/multimedia sources.)
- ❧ Link has to be started with `<a>`, which stands for anchor.

# HTML Links



- ❧ Link has to be started with `<a>`, which stands for anchor.
- ❧ The `href` attribute specifies the destination address
- ❧ Syntax :

**`<a href="resource name" >Prompt Text</a>`**

- ❧ Links can be expressed in **relative** or **absolute** terms,
  - ❧ Absolute : specify the full web address  
Ex: `http://www.ruh.ac.lk`
  - ❧ Relative reference : Link specify with a relative reference  
Ex: `/graphics/image.png`



# Link Attributes



✧ **mailto** attribute

✧ Use to connect email address with a given subjects  
(work if you have installed mail client):

```
<a href="mailto:someone@example.com?Subject=Hello">Send  
mail!</a>
```



❧ **target** attribute : specifies where to open the linked document.

```
<a href="http://www.w3schools.com" target="_blank">Visit  
W3Schools</a>
```

Value	Description
_blank	Opens the linked document in a new window or tab
_self	Opens the linked document in the same frame as it was clicked (this is default)
_parent	Opens the linked document in the parent frame
_top	Opens the linked document in the full body of the window
<i>framename</i>	Opens the linked document in a named frame



- ❧ **name** attribute : specifies the name of an anchor
- ❧ Use to jump directly into a specific section on a different page or the same page.
- ❧ Syntax
  - ❧ Name the required section

```
<a name="C4">Chapter 4</a>
```

- ❧ Link to the section using name

```
<a href="#C4"> Go to Chapter 4</a>
```

# Working with Images



- ❧ Using **<img>** tag we can add images to the web page.
- ❧ Images can be added as **background image** or **foreground image**.
- ❧ There is **no closing tag** for **<img>** tag.
- ❧ Need to specify the correct image format.
  - ❧ GIF -Graphics Interchange Format
  - ❧ JPEG -Joint Photographic Experts Group
  - ❧ bmp
  - ❧ png
  - ❧ tiff



- ❧ Attributes of <img> tag,
  - ❧ **src**-src attribute to define the URL of the image
  - ❧ **width**
  - ❧ **height**
  - ❧ **align**(left , center or right) -align the image
  - ❧ **vspace**-keep space in vertically
  - ❧ **hspace**-horizontal space
  - ❧ **alt**-define an alternate text for an image, if it cannot be displayed





❧ Syntax: Image as a background

```
<body background="image_filename.ext">
```

❧ Syntax :Image as a foreground

```

```

# Tables in HTML



Use to display data in tabular form

Tag	Description
<code>&lt;table&gt;, &lt;/table&gt;</code>	Tables are defined with the <code>&lt;table&gt;</code> tag
<code>&lt;tr&gt;, &lt;/tr&gt;</code>	tables are divided into <b>table rows</b> with the <code>&lt;tr&gt;</code> tag
<code>&lt;th&gt;, &lt;/th&gt;</code>	table row can also be divided into table headings with the <code>&lt;th&gt;</code> tag.
<code>&lt;td&gt;, &lt;/td&gt;</code>	table rows are divided into table data with the <code>&lt;td&gt;</code> tag

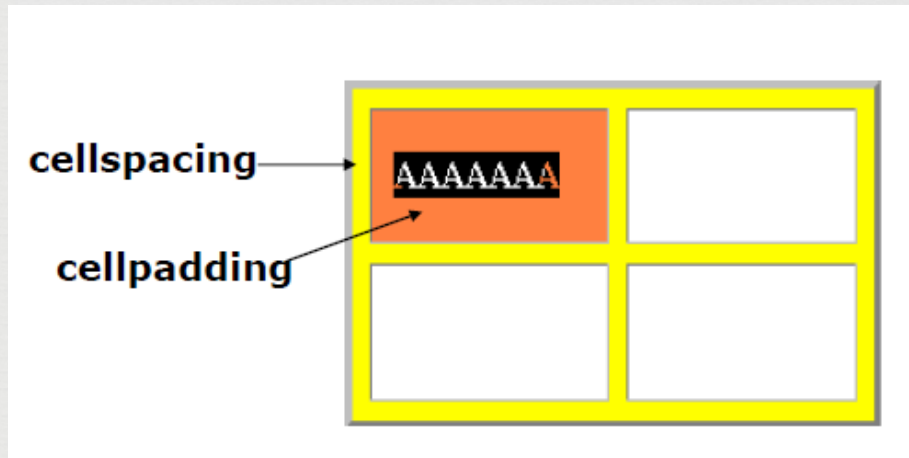
# Attributes of Each Table tag

Table Element	Attributes
<table>	Border, Width, bgcolor, cellspacing, cellpadding Background, align
<tr>	Align=(left, center or right), Width, Valign=(top, middle or bottom)
<td>	Align=(left, center or right), Width, Valign=(top, middle or bottom), colspan, rowspan
<th>	Align=left (center or right) Width, Valign=top, middle or bottom, colspan, rowspan

## ❧ Note :

- ❧ The text in <th> elements are bold and centered by default.
- ❧ Attributes defined within <th>, <td> cells override the default alignment set in a <tr>

# cellpadding and cellspacing



## Cellpadding

```
<table cellpadding="pixels">
```

- ⌘ The cellpadding attribute specifies the space, in pixels, between the cell wall and the cell content

Not supported by HTML5.0

## Cellspacing

```
<table cellspacing="pixels">
```

- ⌘ The cellspacing attribute specifies the space, in pixels, between cells.

Not supported by HTML5.0

# colspan & rowspan



- ❧ Specifies the number of columns a cell should span

`<td colspan="no. of columns">` or  
`<th colspan="no. of columns">`

- ❧ Sets the number of rows a cell should span

`<td rowspan="no. of rows">` or  
`<th rowspan="no. of rows">`





## ❧ Caption attribute

❧ To add a caption to a table, use the **<caption>** tag

**<caption> text </caption >**