**Revision HTML**

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# What is HTML?

**HTML (Hyper-text Markup Language):**

o HTML is a language for describing webpages.

o HTML is not a programming language, it is a markup language.

o A markup language is a set of markup tags.

o HTML uses markup tags to describe webpages.

o HTML language isn't case-sensitive, and doesn't affect by spaces and line breaks.

o HTML is Browser Dependent language.

# HTML Versions

| Version | Year |
|---------|------|
| HTML | 1991 |
| HTML 2.0 | 1995 |
| HTML 3.2 | 1997 |
| HTML 4.01 | 1999 |
| XHTML | 2000 |
| HTML5 | 2014 |

# HTML Elements

o An HTML element usually consists of a **start tag and end tag**, with the content inserted in between:**<p>My first paragraph.</p>**

o HTML elements with no content are called empty elements. Empty elements do not have an end tag, such as the **<br>** element (which indicates a line break).

o HTML elements can be nested (elements contain elements):

o HTML nested elements, should be properly nested.

# HTML Elements (Cont.)

o HTML tags are not case sensitive: \<P> means the same as\<p>.

o The HTML5 standard does not require lowercase tags, but W3C **recommends lowercase** in HTML elements, and demands lowercase for stricter document types like XHTML.

# HTML Attributes

o HTML Elements can have attributes.

o Attributes provide additional information about HTML elements.

o Attributes usually come in name/value pairs like: name="value"

o **Example**: a title attribute is added to the <p> element. The value of the title attribute will be displayed as a tooltip when you mouse over the paragraph:

<p title="I'm a tooltip">

This is a paragraph.

</p>

# HTML Attributes (Cont.)

o The HTML5 standard does not require lowercase attribute names.

o The HTML5 standard does not require quotes around attribute values.

o W3C **recommends quotes** in HTML attributes, and demands quotes for stricter document types like XHTML.

o Double quotes around attribute values are the most common in HTML, but single quotes can also be used.

# HTML Comments

o Comments are not displayed by the browser, but they can help document your HTML source code.

o **HTML Comment:** <!--This is a comment-->

o **Conditional Comments:** defines some HTML tags to be executed by specific browser only.

<!--[if IE9]>

.... some HTML here....

<![endif]-->

# Getting started…

## HTML Document Structure

```
<!DOCTYPE html>
<html>
      <head>
            <title> Introduction to web
            development</title>
      </head>
      <body>
            <p>Welcome
            to HTML!</p>
      </body>
</html>
```
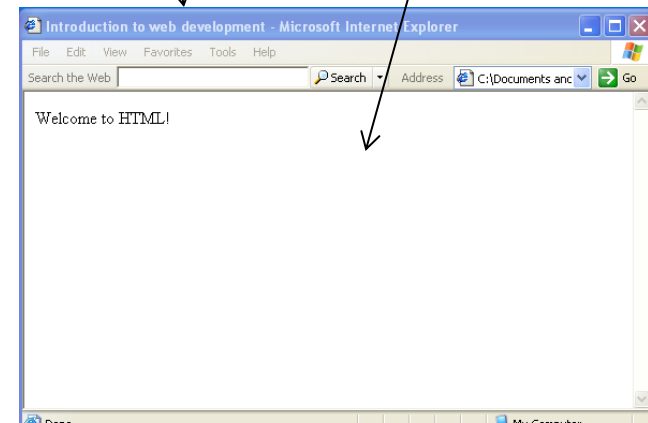
Title tags

Body tags

# HTML Headings

o Headings are defined with the <h1> to <h6>tags.

o <h1> defines the most important heading (bigger font).<h6> defines the least important heading (smaller font).

o <h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and soon.

```
<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>
```

## This is heading 1

## This is heading 2

### This is heading 3

This is heading 4

This is heading 5

This is heading 6

# HTML Text and Paragraphs

## Paragraphs:

o The HTML **\<p\>** element defines a paragraph: <span style="color:red">\<p\> This is a paragraph.\</p\></span>

o With HTML, you cannot change the output by adding extra spaces or extra lines in your HTML code. The browser will remove any extra spaces and extra lines when the page is displayed.

## Line breaks:

o The HTML **\<br\>** element defines a line break.

o Use \<br\> if you want a line break (a new line) without starting a new paragraph.

# HTML Blocks

## HTML grouping (container)tags:

o Often used as a container for other HTML elements.

o **<div>** Defines a section in a document(block-level).

o **<span>** Defines a section in a document(inline).

## HTML Block and Inline Elements:

o Every HTML element has a default display value depending on what type of element it is. The default display value for most elements is **block** or **inline**.

# HTML Blocks (Cont.)

## Block-level Elements:

o A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).

o Examples of **block-level elements: <div>, <h1> -<h6>, <p>,<form>.**

## Inline Elements:

o An inline element does not start on a new line and only takes up as much width as necessary.

o Examples of **inline elements: <span>, <a>,<img>.**

# HTML Text Formatting

| | |
|---|---|
| <b>text</b> | writes text as bold |
| <strong> text</strong> | Important text |
| <i>text</i> | writes text in italics |
| <em> text</em> | Emphasized text |
| <u>text</u> | writes underlined text **(Deprecated)** |
| <sub>text</sub> | Lowers text and makes it smaller |
| <sup>text</sup> | lifts text and makes it smaller |
| <del>text</del> | strikes a line through the text |
| <small> text</small> | Define Smaller text than the container |
| <mark> text</mark> | Marked or highlighted text. |
| <font> text</font> | Defines font size, name and color **(Deprecated)**. |
| <center>text</center> | Show the text on Center **(Deprecated).** |

# HTML Images

- In HTML, images are defined with the **<img>** tag.
- The <img> tag is empty, and does not have a closing tag.
- Syntax:

  **<img src="url" alt="some_text" width="width" height="height">**

- **Example:**

  <img src="html5.gif" alt="HTML5 Icon" width="128"height="128">

# HTML Images (Cont.)

- It's recommended to use style attribute for width and height, as the following:

  <span style="color:red"><img src="html5.gif" alt="HTML5 Icon" style="width:128px;height:128px;"></span>

- The **src** attribute **(Required)** specifies the URL (web address) of the image.

- The **alt** attribute **(Required)** provides an alternate text for an image, If a browser cannot find an image, it will display the value of the alt attribute.

# HTML Links

o HTML links are hyperlinks. You can click on a link and jump to another document.

o In HTML, links are defined with the **<a> tag: <a href="url">link text</a>**

o Link Colors in the Page (these body tag attributes are **deprecated**, and CSS should be used instead):

<body link="#C0C0C0" vlink="#808080" alink="#FF0000">

# HTML Links (Cont.)

o The **href** attribute specifies the destination web address or local page (in the same website).

<span style="color:red">&lt;a href="http://www.iti.gov.eg"&gt; ITIWebsite &lt;/a&gt;</span>

<span style="color:red">&lt;a href="about.html"&gt;HTML Images&lt;/a&gt;</span>

o Create bookmarks (link to an area in the same page):

<span style="color:green">&lt;!--First, define bookmark using id attribute--&gt;</span>

<span style="color:red">&lt;h2 id="tips"&gt;Useful Tips Section&lt;/h2&gt;</span>

<span style="color:green">&lt;!--Then add link to it--&gt;</span>

<span style="color:red">&lt;a href="#tips"&gt;Go to Page Top&lt;/a&gt;</span>

# HTML Links (Cont.)

**Link Targets: The target attribute specifies where to open the linked document.**

o **_blank** -Opens the linked document in a new window or tab

o **_self** -Opens the linked document in the same window/tab as it was clicked (this is default)

o **_parent** -Opens the linked document in the parent frame

o **_top** -Opens the linked document in the full body of the window

o **framename** -Opens the linked document in a named frame

# HTML Links (Cont.)

○ **Example:**

<a href="http://www.iti.gov.eg" target="_blank">ITI Website</a>

## Image Link:

<a href="myfile.htm">
    <img src="rainbow.gif">
</a>

# HTML Lists

## Unordered lists

o An unordered list starts with the <ul> tag. Each list item starts with the <li>tag.

<ul>

                                              <li>Networks Dept.</li>

                                              <li>Software Dept.</li>

                                              <li>Multimedia Dept.</li>

</ul>

An Unordered List:

- Item
- Item
- Item
- Item

# HTML Lists (Cont.)

o The CSS list-style-type property is used to define the style of the list item marker: disc, circle, square, none.

```html
<ul style="list-style-type:disc">
    <li>Networks Dept.</li>
    <li>Software Dept.</li>
    <li>Multimedia Dept.</li>
</ul>
```

# HTML Lists (Cont.)

## Ordered lists

o An ordered list starts with the <ol> tag. Each list item starts with the <li>tag.

<ol>

      <li>Networks Dept.</li>

      <li>Software Dept.</li>

      <li>Multimedia Dept.</li>

</ol>

An Ordered List:

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

# HTML Lists (Cont.)

o The **type** attribute of the <ol> tag, defines the type of the list item marker: type="1", type="A", type="a", type="I", type="i".

<ol type="1">

    <li>Networks Dept.</li>

    <li>Software Dept.</li>

    <li>Multimedia Dept.</li>

</ol>

# HTML Lists (Cont.)

## Nested Lists

o List items can contain new list, and other HTML elements, like images and links, etc.

```html
<ul>
    <li>Coffee</li>
    <li>Tea
        <ul>
            <li>Black tea</li>
            <li>Green tea</li>
        </ul>
    </li>
    <li>Milk</li>
</ul>
```

# HTML Forms

**Form Tag:**

<form>

<!--Here goes form fields and HTML-->

</form>

**Attributes:**

○  action=address

○  method=post or get

# HTML Forms (Cont.)

**Form Fields:**

- Text field
- Password field
- Text area
- Check box
- Radio button
- Drop-down menu
- Submit button
- Reset button
- Image button

# Text Field

**Attributes:**

- size
- maxlength
- name
- value
- align
- Tabindex

**Ex.:**

<span style="color:red"><input type="text" size="25" value="Enter your name here!"></span>

Some text...

# Hidden Field

**A control that is not displayed but whose value is submitted to the server.**

## Attributes:

- name
- value

**Ex.:**

<input type= "hidden" value="">

# Password Field

## Attributes:

- Size
- Maxlength
- Name
- Value
- Align
- Tabindex

**Ex.:**

Enter Password : <input type="password" size="25">

Password: ●●●●●●●●

# Text area

## Attributes:

- Rows
- Cols
- Name
- tabindex

```
text area...
this is a text area
```

**Ex.:**

<textarea cols="40" rows="5" name="myname">
Now we are inside the area -which is nice.
</textarea>

# Check box

## Attributes:

o Name

o value

o align

o tabindex

o Checked

☑ choice 1 ☐ choice 2 ☑ choice 3 ☐ choice 4

**Ex.:**

<input type="checkbox" name="option1" value="1" checked > choice1

<input type="checkbox" name="option2" value="2"> choice2

# Radio Button

## Attributes:

- name
- Value
- Align
- Tabindex
- checked

◉ Male  ○ Female

**Ex.:**

<span style="color:red">

&lt;input type="radio" name="group1" value="m" checked &gt; Male

&lt;input type="radio" name="group1" value="f" &gt; Female

</span>

# Drop-down Menu

## Attributes:

o select

- name
- size
- multiple

o option

- Selected
- Value

**Ex.:**   &lt;select name="favDrink"&gt;

&lt;option value="M"&gt;Milk&lt;/option&gt;

&lt;option value="C"&gt;Coffee&lt;/option&gt;

&lt;option value="T"&gt;Tea&lt;/option&gt;

&lt;/select&gt;
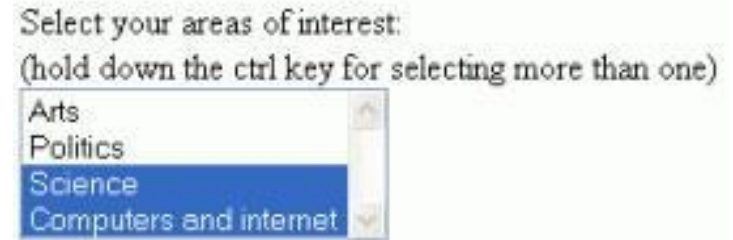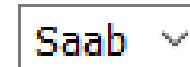
# File

## Allow user to upload file



**Ex.:**

<span style="color:red"><input type="file" name="myFile"></span>

# Submit Button / Reset Button

## Attributes:

o Name

o Value

o Align

o Tabindex

**Ex.:**

<input type="submit" value="Send me your name!">

<input type="reset" value="CLEAR!">

First name: [ ]
Last name: [ ]
[ Send me your name! ] [ Clear! ]

# Image Button

o   Image buttons have the same effect as submit buttons.

## Attributes:

o   name          src

o   align          border

o   width          height

o   Tabindex

**Ex.:**

&lt;input type="image" src="rainbow.gif" name="image" width="60" height="60"&gt;

# Button

o  Will act as a submit button if it's inside a form

**Ex.:**

<input type="button" value="Click me!"/>
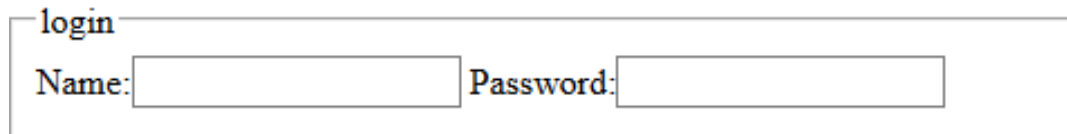
<button name="b1"> click me</button>

# Form Fieldset

o **&lt;fieldset&gt;** is used to enclose a group of related form fields together.

o The &lt;legend&gt; is the fieldset's title.

**Ex.:**

```
<form method="post" action="main.html">
    <fieldset>
        <legend>login</legend>
        Name:<input type="text" id="Name" />
        Password:<input type="password" id="Pswd"/>
    </fieldset>
</form>
```

# Form Labels

o Form labels are used to associate an explanatory text to a form field using the field's ID.

o Clicking on a label focuses its associated field(checkboxes are toggled, radio buttons are checked)

**Ex.:**

```
<form>
    <label for="fn">First Name</label>
    <input type="text" id="fn"/>
</form>
```

First Name [                    ]

# Forms

## Form Controls

o HTML 4 controls are too limited

o Several new types added

## New Input type

| | |
|---|---|
| o color | Datalist |
| o date | email |
| o datetime | number |
| o datetime-local | range |
| o time | search |
| o month | tel |
| o week | url |

# Forms (Cont.)

o `<input type=tel>`

o `<input type=time>`

o `<input type=color>`

o `<input type=month>`

o `<input type=search>`

o `<input type=number>`

o `<input type=email>`

o `<input type=range>`

o `<input type=date>`

o `<input type=time>`

o `<input type=url>`

o o…

# Forms (Cont.)

**&lt;input type="""required&gt;**

o **Required:** We also have required attribute to mark this field as mandatory.

**&lt;input type="""multiple&gt;**

o **Multiple:** allows the user to enter multiple email addresses.

**&lt;input type="""pattern="[0-9][A-Z]{3}"&gt;**

o **Pattern:** custom validate, A part number is a digit followed by three uppercase letters.

**&lt;input type="" placeholder=""&gt;**

o **Placeholder:** add a hint inside the text-field, but where the hint automatically disappears when clicking inside it.

# Forms (Cont.)

## Form Controls: Dates and Times (datetime)



<input type="datetime">

# Forms (Cont.)

## Form Controls: Dates and Times(time)

Arrival Time

09:30

<input type="time">

# Forms (Cont.)

## Form Controls: Dates and Times(date)



<input type="date">

# Forms (Cont.)

## Form Controls: Dates and Times(month)



<input type="month">

# Forms (Cont.)

## Form Controls: Dates and Times(week)



<input type="week">

# Forms (Cont.)

## Form Controls: Search

Search:

pluralsight

Go!

<input type="search">

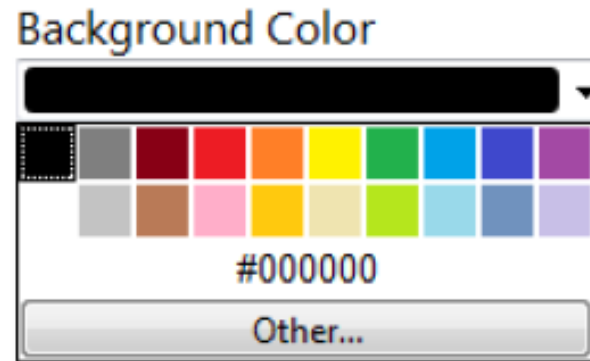# Forms (Cont.)

## Form Controls: Color



<input type="color">

# Forms (Cont.)

## Form Controls: Combo Boxes (datalist)

Title: | Dr |

Mr
Mrs
Miss
Ms

```
<input list="title-list">
<datalist id="title-list">
    <option value="...">
</datalist>
```

# Forms (Cont.)

## Form Controls: telephone

Telephone

555-555-5555

<input type="tel">

# Forms (Cont.)

## Form Controls: number

Number of Years in Development:

8

<input type="number">

# Forms (Cont.)

## Form Controls: range

Development Experience Range:

67

<input type="range">

# Forms (Cont.)

## Form Controls: Email and URIs

lachlan.hunt@lachy.id.au

http://lachy.id.au

| http://lachy.id.au/ | Lachlan Hunt: Web Development Guru |
| http://lachy.id.au/log/ | Lachy's Log |

```
<input type="email">
<input type="url">
```

# Table Tags

## <table> Tag:

o  Used to define main table layout, and specifies start and the end of the table structure.



## <tr> Tag:

o  Used to define row inside the table, and Specifies row start and end.

Text in cells formatted with the <th>tag is bold and centered above each table column.

## <td> or <th>Tag:

o  Used to define columns inside each row, and this tag contains cell data.

o  <th> used with the header cell and make it centered and bold.

# Table Tags (Cont.)

## Simple Table Example:

| First Cell | Second Cell |
|------------|-------------|
| Third Cell | Fourth Cell |

**Two rows**

**Two columns**

```
<table>
    <tr>
        <td> First Cell</td>
        <td> Second Cell</td>
    </tr>
    <tr>

        <td> Third Cell</td>
        <td> Fourth Cell</td>
    </tr>
</table>
```

# Table Tags (Cont.)

## Table with Caption:

**Table Caption**

| First Cell | Second Cell |
|------------|-------------|
|  | Fourth Cell |

```html
<table>
        <caption align="top">
                <b>TableCaption</b>
        </caption>
        <tr>
                <td> First Cell</td>
                <td> Second Cell</td>
        </tr>
        <tr>
                <td>  </td>
                <td> FourthCell</td>
        </tr>
</table>
```

# Table Tags (Cont.)

**Table Caption**

| First Cell | Second Cell |
|------------|-------------|
|            | Fourth Cell |

**Note:**

o To make empty cell in table structure put ** ** in <td> tag of the cell. If you left <td> tag empty, the border of this cell will not appear.

# Colspan and Rowspan Attributes

## Colspaned Cell:

<td colspan="2"> </td>

## Rowspaned Cell:

<td rowspan="2"> </td>

## Rowspanned and Colspanned Cell:

<td colspan="2" rowspan="2"> </td>

# Colspan and Rowspan (Cont.)

## Full Example

(http://w3schools.com/html/tryit.asp?filename=tryhtml_table_span)

## Col span:

```
<table border="1">
    <tr>
        <th>Name</th>
        <th colspan="2">Telephone</th>
    </tr>
    <tr>
        <td>Bill Gates</td>
        <td>66677789</td>
        <td>44556677</td>
    </tr>
</table>
```

| Name | Telephone | |
|------|-----------|--------|
| Bill Gates | 66677789 | 44556677 |

# Colspan and Rowspan (Cont.)

## Row span:

```
<table border="1">
    <tr>
            <th>First Name:</th>
            <td>Bill Gates</td>
    </tr>
    <tr>
            <th rowspan="2">Telephone:</th>
            <td>55577854</td>
    </tr>
    <tr>
            <td>66677789</td>
    </tr>
</table>
```

| First Name: | Bill Gates |
|---|---|
| Telephone: | 55577854 |
|  | 66677789 |

# Any Questions ?

## Thank You