



# CUI Abbottabad

Department of Computer Science

## Web Technologies

Lecture-2-[CLO-2]  
HTML-Part1

# Agenda

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- Introduction to HTML
- HTML Elements and Tags
- Basic HTML syntax
- Head Tag
- Typography
- Block level Elements
- Inline elements

# HTML(Hyper Text Markup Language)

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- A markup language for describing web pages using tags and elements
- The tags describe document content
- HTML documents are text documents that contains:
  - Elements
  - formatting instructions, called tags
  - the text that is to be displayed on a Web page

# HTML Tags

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- HTML tags are keywords (tag names) surrounded by **angle brackets** like `<html>`

HTML tags range from formatting commands to controls that allow user input

HTML tags are of two types:

1. **Paired tags/Block Level Tags:** These tags has an start/opening and ending/closing tag, like `<p> content </p>` , The end tag is written like the start tag, with a forward slash before the tag name.
2. **Un-Paired tags/Inline Tags:** it has only starting tag, it does not contain any content and usually define some type of directive for the browser to take the web page. For example line break `<br>` instructs the browser to start the new line.

# Basic HTML Tags

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- On Top of html document we write **<!DOCTYPE>** declaration, it tells browser that this is an HTML page, recent version of html5 uses following doctype declaration: **<!DOCTYPE html>**
- All HTML documents begin with **<html>** and end with **</html>**
- Two other important HTML tags are the **<head>** tag and the **<body>** tag
- The **<head>** tag contains information that is used by the Web browser, and you place it at the start of an HTML document, after the opening **<html>** tag

# Head Tags

- The `<head>` tag pair and the tags it contains are referred to as the **document head**
- Following the document head is the `<body>` tag, which contains the **document body**

Tag	Description
<u><code>&lt;head&gt;</code></u>	Defines information about the document
<u><code>&lt;title&gt;</code></u>	Defines the title of a document
<u><code>&lt;base&gt;</code></u>	Defines a default address or a default target for all links on a page
<u><code>&lt;link&gt;</code></u>	Defines the relationship between a document and an external resource
<u><code>&lt;meta&gt;</code></u>	Defines metadata about an HTML document
<u><code>&lt;script&gt;</code></u>	Defines a client-side script
<u><code>&lt;style&gt;</code></u>	Defines style information for a document

# Head Tags

- The <base> tag specifies the base URL/target for all relative URLs in a page:

## The HTML <base> Element

The <base> tag specifies the base URL/target for all relative URLs in a page:

```
<head>  
<base href="http://www.w3schools.com/images/" target="_blank">  
</head>
```

## Link

- Link include a information e.g stylesheet in a pag  
<link href="style.css" rel="stylesheet" type="text/css" media="all">

# Head Tags

## META

It is used to help search engines index a page. There are several different meta names.

The author meta:

```
<META NAME="author" CONTENT="Nongjian Zhou">
```

## Style

Contains style information for a document, or a part of document., usually in the CSS. E.g

```
<style type="text/css"> body { color:red; } </style>
```

## Script

```
<script language="javascript" type="text/javascript"> function  
myFunction()  
{ alert('Hello world'); }  
</script>
```



# Attributes in HTML Tags

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Inside almost all html tags we use various attributes(parameters) to configure HTML tags

Example:

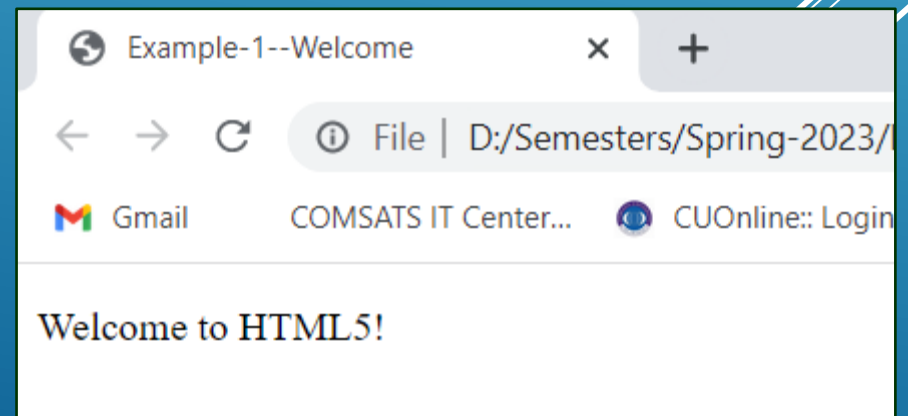
```
<body bgcolor= "blue">
```

Here bgcolor is an attribute of body tag to which we assigned the blue value

# Basic HTML Page Syntax/Template

```
1  <!DOCTYPE html>
2  <!-- First HTML5 example. -->
3  ▼ <html>
4  ▼   <head>
5       <meta charset = "utf-8">
6       <title>Example-1--Welcome</title>
7   </head>
8
9  ▼   <body>
10       <p>Welcome to HTML5!</p>
11   </body>
12 </html>
```

Code Example-Example-1.html



# Basic HTML Text Layout

```
<!DOCTYPE html>
<html>
<!-- Example-2.html -->
<!-- Demo web page -->

<head>
  <title>Example-2.html</title>
</head>

<body>
  This is a whole lot of text that
  goes on and on and
  on
  and

  on
  .
  .
  .
</body>

</html>
```

- the BODY can contain multiple lines of text
  - text layout and spacing is pretty much ignored by the browser
  - every sequence of whitespace is interpreted as a single space
  - browser automatically wraps the text to fit the window size
- ➔ can layout text in an HTML document for readability, will not affect how it is viewed

Code Example-[Example-2.html](#)

# Text Formatting Tags

```
<!DOCTYPE html>
<html>
<!-- Example-3.html -->
<!-- Demo web page -->

<head>
<title>Example-3.html</title>
</HEAD>

<body>
  <p>
    This is a paragraph of text<br/>
    made up of two lines.
  </p>

  <p>
    This is another paragraph with a
    &nbsp; GAP &nbsp; between
    some of the words.
  </p>

  <p>
    &nbsp;&nbsp;  This paragraph is<br/>
    indented on the first line<br/>
    but not on subsequent lines.
  </p>
</body>

</html>
```

- for the most part, layout of the text must be left to the browser
- can override some text layout
  - can cause a line break using the `<br/>` tag (no closing tag)
  - can specify a new paragraph (starts on a new line, preceded by a blank line) using `<p>...</p>`
  - can force a space character using the symbol for a non-breaking space: `&nbsp;`

Example-3.html

Code Example-Example-3.html

# Separating Block of Text

```
<!DOCTYPE html>
<html>
<!-- Example-4.html -->
<!-- Demo web page -->

<head>
  <title>Example-4.html</title>
</head>

<body>
  <h1>Major heading 1</h1>
  <p>
    Here is some text.
  </p>

  <h2>Subheading</h2>
  <p>
    Here is some subtext.
  </p>

  <hr/>
  <h1>Major heading 2</h1>
  <p>
    Here is some more text.
  </p>
</body>

</html>
```

- can specify headings for paragraphs or blocks of text
  - <h1>...</h1> tags produce a large, bold heading
  - <h2>...</h2> tags produce a slightly smaller heading
  - ...
  - <h6>...</h6> tags produce a tiny heading
- can insert a horizontal rule to divide sections
  - <hr/> draws line across window
  - <hr width="50%" /> sets width
  - <hr size=10 /> sets thickness

# Text Alignment

```
<!DOCTYPE html>
<html>
<!-- Example5.html -->

<head>
  <title> Example5.html </title>
</head>

<body>

  <h1 style="text-align:center">Centered Heading</h1>
  <p>
    Here is some left-justified text
    (which is the default in HTML).
  </p>

  <p style="text-align:center">
    Here is some centered text.
  </p>

  <div style="text-align:right">
    <h2>Right-justified Heading</h2>
    <p>Here is some right-justified text.</p>
  </div>

</body>

</html>
```

- can specify how elements should be aligned (default is left-justified)
  - utilize **STYLE** attribute of tag
- to justify more than one element as a group, use **DIV** tags
  - all elements enclosed in **DIV** are formatted similarly

Code Example-Example-5.html

# Text Formatting Tags

```
<!DOCTYPE html>
<html>
<!-- Example-6.html -->
<head>
  <title> Example-6.html </title>
</head>

<body>
  <p>
    Text can be emphasized using
    <b>bold</b>, <i>italics</i>, or even
    <big>resizing</big>. <br/>
    <u>Underlining</u> text is not
    generally recommended since it looks
    too much a like a hyperlink. <br/>
    The typewriter font is good for
    displaying code:
    <small><tt>sum = sum + i;</tt></small>
  </p>
</body>

</html>
```

• can specify styles for fonts

- <b>... </b> specify bold
- <i>... </i> specify italics
- <u>... </u> specify underlined
- <tt>... </tt> specify typewriter-like (fixed-width) font
- <big>... </big> increase the size of the font
- <small>... </small> decrease the size of the font

*Note: if elements are nested, the order of opening/closing is important!*

- (must be LIFO)



# Text Formatting Tags

```
<!DOCTYPE html>
<html>
<!--Example-7.html Demo Web Page -->
<head> <title> Example-7.html </title></head>

<body>
  <p>
    Text can be emphasized using
    <em>to be considered</em>, <mark>highlighted</mark>,
    or even
    <strike>cut this text</strike>. <br/>
    My favorite color is <del>blue</del><ins>seagreen</ins>
    <br/>I also can use abbreviated text
    <abbr title="Hypertext Markup Language">HTML</abbr>
    to avoid large name again and again in web page. <br/>
    The address <address> House#101, Street 6, F10
    Islamabad:</address> Similarly we can show text in
    different font style, size and color
    <font face="sans serif" size="20"
    color="deeppink">Welcome in HTML font style</font>
  </p>
</body>

</html>
```

• can specify styles for fonts

- `<em>... </em>` specify emphasize
- `<mark>... </mark>` specify highlighted text
- `<strike>... </strike>` to cut the text
- `<del>` to delete the text
- `<ins>` to insert text
- `<abbr title="Computer Science">CS</abbr>`  
specify abbreviated text font
- `<address>... </address>` it put text in italic also  
put line break before and after the address
- `<font..>... </font>` text in different style, size and  
color

*Note: if elements are nested, the order of  
opening/closing is important!*

- (must be LIFO)



# Text Formatting Tags.....

```
<!DOCTYPE html>
<html>
<!-- Example-8.html -->

<head>
<title>Example-8.htm</title>
</head>

<body>
<p>
<span style="color:red">Subscripts</span>
(e.g., x<sub>1</sub>) and
<span style="color:blue">superscripts
</span> (e.g., 2<sup>10</sup>)
can be embedded directly in text.
</p>

<p>
In order to avoid affecting line
spacing, usually it should be made
smaller (e.g.,
<small>2<sub>10</sub></small>).
</p>
</body>

</html>
```

- `<sub>... </sub>` specify a subscript
- `<sup>... </sup>` specify a superscript
- `<p style="color:red"> ...</p>` for paragraphs
- `<span style="color:blue">...</span>` for inline text

The `<span>` tag is used to group inline-elements in a document.

Code Example-Example-8.html

# Text Grouping.....

```
<!DOCTYPE html>
<html>
<!-- Example-9.html -->

<head>
  <title>Example-9.html</title>
</head>

<body>
  <p>
    <tt><pre>
      for (i = 0; i < 10; i++) {
        sum = sum + i;
      }
    </pre></tt>
  </p>

  <p>
    Eagleson's Law states that:
    <blockquote>
      Any code of your own that you haven't
      looked at for six or more months
      might as well have been written by
      someone else.
    </blockquote>
  </p>
</body>

</html>
```

- `<pre>...</pre>` specify text that is to be displayed as is (line breaks and spacing are preserved)
  - *useful for code or whenever you want text to fit a specific layout*
- `<blockquote>...</blockquote>` specify text that is to be indented on both margins
  - *useful for quotations or for indenting text in subsections*

Code Example-Example-9.html

# Lists Tags

```
<!DOCTYPE html>
<html>
<!--Example-10.html -->
<head> <title>Example-10.htm</title></head>
<body>
  <p> <ol type="1">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>

  <p> <ul>
    <li>Computer Science.
    <li>Software Engineering.
    <li>Telecommunication and Networks.
  </ul> </p>

  <p>
    <dl>
      <dt>HTML
      <dd>HyperText Markup Language
      <dt>HTTP
      <dd>HyperText Transfer Protocol
    </dl> </p>
</body>

</html>
```

• there are 3 different types of list elements

- `<ol>...</ol>` specifies an ordered list (using numbers or letters to label each list item)
  - `<li>` identifies each list item
  - *can set type of ordering, start index*
- `<ul>...</ul>` specifies unordered list (using a bullet for each)
  - `<li>` identifies each list item
- `<dl>...</dl>` specifies a definition list
  - `<dt>` identifies each term
  - `<dd>` identifies its definition

# Unordered List Tag

```
<!DOCTYPE html>
<html>
<!-- Example-11.html -->
<head> <title> Example-11.html </title></head>
<body>
  <p> <ul style="list-style-type:circle">
    <li>Books.
    <li>gardening
    <li>Games.
  </ul> </p>

  <p> <ul style="list-style-type:disc">
    <li>Books.
    <li>gardening
    <li>Games.
  </ul> </p>

  <p> <ul style="list-style-type:square">
    <li>Books.
    <li>gardening
    <li>Games.
  </ul> </p>

  <p> <ul style="list-style-type:none">
    <li>Books.
    <li>gardening
    <li>Games.
  </ul> </p>
</body>
</html>
```

• Unordered list with different styles of bullets

– <ul>...</ul>

specifies unordered list  
(using a bullet for each)

• <li> identifies each list item

# Ordered List Tag

```
<!DOCTYPE html>
<html>
<!-- Example-12.html -->
<head> <title> Example-12.html </title></head>
<body>
  <p> <ol type="1">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>
  <p> <ol type="I">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>
  <p> <ol type="i">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>
  <p> <ol type="A">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>
  <p> <ol type="a">
    <li>First thing.
    <li>Second thing.
    <li>Third thing.
  </ol> </p>
</body></html>
```

- Ordered list with different styles of numberings

- <ol>...</ol> specifies ordered list
  - <li> identifies each list item

Code Example-Example-12.html

# Text color, style and size

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- Till html4 we can use `<font>..</font>` tag for text color, style and size but html5 does not support font tag.
- Hence in html5 we can use inline “style” CSS property in html tags for color, style, size and other font setting.
- Using style inline css property we can set more than one properties at a time too.
- Let take example in which we are setting font properties on `<h2>` and `<p>` tags.
- Code example-[Example-13.html](#)