



UNIVERSITY OF DIYALA

# Web Design and Programming

## Lecture 3:

### Creating Structured Documents

Assoc. Prof.

Ali A. Al-Ani



Department of Computer Science  
College of Science



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## Objectives

1. **Presentational elements such as** `<b>`, `<i>`, `<u>`, `<s>`, `<tt>`, `<sup>`, `<sub>`, `<strike>`, `<big>`, `<small>`, and `<hr />`
2. **Phrase elements such as** `<em>`, `<strong>`, `<abbr>`, `<acronym>`, `<dfn>`, `<blockquote>`, `<q>`, `<cite>`, `<code>`, `<kbd>`, `<var>`, `<samp>`, and `<address>`
3. **Lists such as unordered lists using** `<ul>` and `<li>`, **ordered lists using** `<ol>` and `<li>`, **and definition lists using** `<dl>`, `<dt>`, and `<dd>`
4. **Using Character Entities for Special Characters.**

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## *Presentational Elements*

- If we use a word processor, we are familiar with the ability to make text bold, italic, or underlined; these are just three of the ten options available to indicate how text can appear in XHTML.
- The full list is *bold, italic, monospaced, underlined, strikethrough, teletype, larger, smaller, superscripted, and subscripted text.*
- All of the presentational elements can carry the universal attributes. We should also be aware that we can use CSS to get similar results.



## *Presentational Elements*

1. *The <b> Element:* Anything that appears in a <b> element is displayed in **bold**, for Ex:  
**bold** → <b> bold </b>
- This <b> element has the same effect as the <strong> element, but the <strong> element is used to indicate that its contents have *strong emphasis*.
2. *The <i> Element:* The content of an <i> element is displayed in italicized text, for Ex:  
*italic* → <i>italic</i>
3. The <i> element has the same effect as the <em> element, but the <em> element is used to indicate that its contents have emphasis.



## Presentational Elements

3. **The <u> Element :** The content of a <u> element is underlined with a simple line:

underlined → <u>underlined</u>

4. **The <hr /> Element:** The <hr /> element creates a horizontal rule across the page. It is an *empty element*. The <hr /> is frequently used to separate distinct sections of a page where a new heading is not appropriate.

5. **The <s> and <strike> Elements:** The content of an <s> or <strike> element is displayed with a strikethrough, which is a thin line through the text.

~~Strikethrough~~ → <s>strikethrough</s>



## Presentational Elements

6. **The <tt> Element:** The content of a <tt> element is written in monospaced font.

monospaced → <tt>monospaced</tt>

7. **The <sup> Element:** The content of a <sup> element is written in superscript; the font size used is the same size as the characters surrounding it but is displayed half a character's height above the other characters.

31<sup>st</sup> → 31<sup>st</sup>

- The <sup> element is especially helpful in adding exponential values to equations, and adding the *st*, *nd*, *rd*, and *th* suffixes to numbers such as dates.



## *Presentational Elements*

8. *The <sub> Element:* The content of a <sub> element is written in subscript; the font size used is the same as the characters surrounding it, but is displayed half a character's height beneath the other characters. **Log<sub>2</sub> → log<sub>2</sub>**
9. *The <big> Element:* The content of the <big> element is displayed one font size larger than the rest of the text surrounding it. **HTML → H<big> TM</big>L**
10. *The <small> Element:* The content of the <small> element is displayed one font size smaller than the rest of the text surrounding it. If the font is already the smallest, it has no effect. **HTML → H<small> TM</small>L**



## *Phrase Elements*

- The following elements are not used as widely as the elements we have met before. As the element names indicate, they are designed to describe their content:
  1. *<em> and <strong> for emphasis.*
  2. *<blockquote>, <cite>, and <q> for quotations and citations.*
  3. *<abbr>, <acronym>, and <dfn> for abbreviations, acronyms, and key terms.*
  4. *<code>, <kbd>, <var>, and <samp> for computer code and information.*
  5. *<address> for addresses.*



## Phrase Elements

- While some of these phrase elements are displayed in a manner similar to the `<b>`, `<i>`, `<pre>`, and `<tt>` elements we have already seen, they are designed for specific purposes.
- For example, where we want to add emphasis to a word within a sentence we should use the `<em>` and `<strong>` elements rather than the presentational elements we just met; there are several good reasons for this, such as:
  1. Applications such as *screen readers* (which can read pages to web users with *visual impairments*) could add suitable intonation to the reading voice so that users with visual impairments could hear where the emphasis should be placed.



## Phrase Elements

2. *Automated programs* could be written to find the words *with emphasis and pull them out as keywords* within a document, or specifically index those words so that a user could find important terms in a document.
- Then, the appropriate use of phrase elements adds more information to a document (*such as which words should have emphasis, which are parts of programming code, which parts are addresses, and so on*) rather than just saying how it should be presented visually.



## *XHTML : Lists*

- There are many reasons why we might want to add a list to our pages, from putting our five favorite albums on our home page to including a numbered set of instructions for visitors to follow and so on. We can create three types of lists in XHTML:
  1. *Unordered lists*, which are like lists of bullet points.
  2. *Ordered lists*, which use a sequence of numbers or letters instead of bullet points.
  3. *Definition lists*, which allow you to specify a term and its definition.



## *XHTML : Lists*

### *1. Using the <ul> Element to Create Unordered Lists:*

- If we want to make a list of bullet points, we write the list within the `<ul>` element (*which stands for unordered list*). Each bullet point or line we want to write should then be contained between opening `<li>` tags and closing `</li>` tags (*the li stands for list item*).
- We should always close the `<li>` element, even though we might see some HTML pages that leave off the closing tag. This is a bad habit we should avoid. If we want to create a bulleted list, you can do so like this:

```
<ul> <li>Bullet point number</li> </ul>
```



## XHTML : Lists

### 2. Using the <ol> Element to Create ordered Lists

- Sometimes, we want our lists to be ordered. In an ordered list, rather than prefixing each point with a bullet point, we can use either **numbers (1, 2, 3)**, **letters (A, B, C)**, or **Roman numerals (i, ii, iii)** to prefix the list item.
- An ordered list is contained inside the <ol> element. Each item in the list should then be nested inside the <ol> element and contained between opening <li> and closing </li> tags.
- <ol> <li>**Point number**</li> </ol>
- If we would rather have letters or Roman numerals than Arabic numbers, we must use the **type** attribute on the <ol> element.



## XHTML : Lists

- Using the type Attribute to Select **Numbers, Letters, or Roman Numerals in Ordered Lists**, by giving the type attribute the corresponding character.

<i>Value for type</i>	<i>Attribute Description</i>	<i>Examples</i>
<i>1</i>	<i>Arabic numerals (the default)</i>	<i>1, 2, 3, 4, 5</i>
<i>A</i>	<i>Capital letters</i>	<i>A, B, C, D, E</i>
<i>a</i>	<i>Small letters</i>	<i>a, b, c, d, e</i>
<i>I</i>	<i>Large Roman numerals</i>	<i>I, II, III, IV, V</i>
<i>i</i>	<i>Small Roman numerals</i>	<i>i, ii, iii, iv, v</i>



## XHTML : Lists

- All of the universal attributes and UI event attributes can be used with the `<ol>` elements, and also a *special attribute start*, to control the number a list starts at.
- If we want to specify the number that a numbered list should start at, we can use the **start** attribute on the `<ol>` element. The value of this attribute should be the numeric representation of that point in the list, so a **D** in a list that is ordered with capital letters would be represented by the value **4**:

```
<ol type="A" start="4">
```

```
<li>Point number one</li> <li>Point number two</li> <li>Point number three</li>
```

```
</ol>
```



## XHTML : Lists

### 3. Definition Lists

- The definition list is a special kind of list for providing terms followed by a short text definition or description for them. Definition lists are contained inside the `<dl>` element. The `<dl>` element then contains alternating `<dt>` and `<dd>` elements. The content of the `<dt>` element is the term you will be defining.
- The `<dd>` element contains the definition of the previous `<dt>` element. For example, here is a definition list that describes the different types of lists in XHTML

```
<dl> <dt>Unordered List</dt> <dd>A list of bullet points.</dd>
```

```
<dt>Ordered List</dt> <dd>An ordered list of points.</dd> </dl>
```





## Special Characters

- We can use most alphanumeric characters in our document and they will be displayed without a problem.
- There are, however, some characters that have *special meaning in XHTML*, and for some characters there is not an equivalent on the keyboard we can enter. *For example*, we cannot use the *angle brackets* that start and end tags, as the browser can mistake the following letters for markup.
- We can, however, use a set of different characters known as a *character entity* to represent these special characters. Sometimes we will also see character entities referred to as *escape characters*.



## Special Characters

<i>Special Character</i>	<i>XHTML Code</i>	<i>Displays As</i>
<i>Blank Space</i>	<i>&amp;nbsp;</i>	
<i>Open or Close Quote</i>	<i>&amp;quot;</i>	<i>"</i>
<i>Ampersand</i>	<i>&amp;amp;</i>	<i>&amp;</i>
<i>Less Than</i>	<i>&amp;lt;</i>	<i>&lt;</i>
<i>Greater Than</i>	<i>&amp;gt;</i>	<i>&gt;</i>

- The last four characters in the table would easily confuse the browser. Without using this method, how would it know whether we were writing XHTML code or whether we wanted to display the character itself?



## Special Characters

<i>Special Character</i>	<i>XHTML Code</i>	<i>Displays As</i>
<i>Cent Sign</i>	<i>&amp;cent;</i>	<i>¢</i>
<i>Copyright Symbol</i>	<i>&amp;copy;</i>	<i>©</i>
<i>Trademark Symbol</i>	<i>&amp;reg;</i>	<i>®</i>
<i>1/2 Fraction</i>	<i>&amp;frac12;</i>	<i>½</i>
<i>Inverted Question Mark</i>	<i>&amp;iquest;</i>	<i>¿</i>
<i>Small e, Acute Accent</i>	<i>&amp;eacute;</i>	<i>é</i>

- These are just a sample of the dozens of special characters available to use.



## Comments

- We can leave notes in the source document for yourself and others by marking them up as comments. Anything we put between comment tags (`<!-- -->`) will not display in the browser and will not have any effect on the rest of the source.

`<!-- This is a comment -->`

`<!-- This is a multiple-  
line comment`

`that ends here. -->`

- Comments are useful for labeling and organizing long documents, particularly when they are shared by a team of developers.



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*The End*

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