German Jordanian University الجامعة الألمانية الأردنية

CS355 Web Technologies

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Lecture 3

Concepts of HTML/XHTML

- HTML stands for Hyper Text Markup Language
- Document formatting language used to design most Web pages.
- A simple, powerful, platform-independent document language.
- HTML is an application of Standardized Generalized Markup Language (SGML), a system for defining structured document types and markup languages to represent instances of those document types.

Concepts of HTML/XHTML

- XHTML stands for Extensible Hyper Text Markup Language used to create and organize web pages.
- HTML and XHTML are the foundation of all web development.
- HTML based on SGML and supports static webpages.
- XHTML based on XML and supports dynamic web pages.

Advantages of XHTML

- XHTML is more easily implemented on large networks such as the Internet.
- XHTML helps to make web pages look identical in different browsers, such as Internet Explorer, Firefox, Chrome, Safari, Opera, ..etc.
- XHTML defines and organizes the page contents but *does not format or style* it. CSS is responsible for the page contents format or style.

HTML/XHTML Documents

- HTML/XHTML documents are plain text files with special Markup "tags" or codes that a web browser uses to interpret and display information on the computer screen.
- An HTML/XHTML file must have an .htm or .html file extension.

HTML/XHTML Tags

- A tag is a text inside angle brackets < and >
- Used to mark-up HTML/XHTML elements.
- HTML tags normally come in pairs:
  - <start tag>
  - <end tag>
- The text between the start and end tags is the element content.

HTML/XHTML Tags

- HTML/XHTML tags are not case sensitive, for example, <B> is the same as <b>.
- The most important tags in HTML/XHTML are tags that define headings, paragraphs and line breaks.
- Example: a paragraph is normally denoted like this:

```
<p>
This is a simple paragraph
</p>
```

Nested HTML/XHTML Tags

- Tags can be nested inside each other.

Example:

```
<a><b></b></a>
```

- Tags cannot be overlapped.

Example:

```
<a><b></a></b>
```

this form is incorrect

HTML/XHTML Page Structure

- The basic web page component's structure:

```
<html>
   <head>
   <title></title>
   </head>
   <body>
   </body>
</html>
```

HTML/XHTML Page Components

- **`<html> </html>`**

  Surrounds the entire page

- **`<head> </head>`**

  head is a container for metadata, it contains settings information (metadata) such as character set, styles, scripts, … etc. Metadata is not displayed.

HTML/XHTML Page Components

- **`<title>  </title>`**

  Holds the page title, it appears at the top of the web browser window and used in search results.

- **`<body> </body>`**

  Contains the main body text. All parts of the page normally visible are in the body.

HTML/XHTML Key Components Structure

The basic HTML/XHTML key component's structure :

- **`<h1> </h1>`**

  HTML defines six levels of headings. A heading element implies all the font changes, paragraph breaks before and after, and any white space necessary to render the heading. Headers are ordered from strongest emphasis (H1) to (H6) the lowest emphasis.

- **`<p> </p>`**

  paragraphs: most of the page body should be enclosed in paragraphs.

HTML/XHTML Lists Structure

The HTML/XHTML Lists structure :

- **`<ul> </ul>`**

  Unordered list: usually listed as bullets

- **`<ol> </ol>`**

  Ordered list: usually listed as numbers.

HTML/XHTML Tables Structure

The HTML/XHTML Tables structure :

- **`<table> </table>`**

  Defines beginning and end of a table

- **`<tr> </tr>`**

  Table row: Defines a table row.

- **`<td> </td>`**

  Defines data in a table cell.

  - <td> occurs within <tr> in which occurs within <table>.

HTML/XHTML Links Structure

The HTML/XHTML links structure :

- **<a> **

  anchor tag <a> is used to provide the basic web link

Example:

```
<a href = "http://www.Google.com"> link to Google.com </a>
```

- Href: is Hypertext REFerence which is the HTML/XHTML code used to create a link to another page.
- The site to be visited **"http://www.Google.com"**.
- The text "link to Google.com" will be highlighted as a link.

HTML/XHTML Image Structure

The HTML/XHTML Image structure :

- **<img />**

  image tag <img> is used to attach an image to the web page

Example:

```
<img src="…/GJUimages/GJUlogo.png" alt = "GJU Site"/>
```

- src represents the image source.
- Image valid formats are .jpg, .png, and .gif.
- alt attribute describing the contents of the image.

EXAMPLES

Images Hyperlink Example #1 1/3

```
1   <!DOCTYPE html>
2
3   <!-- Fig. 2.7: nav.html -->
4   <!-- Images as link anchors. -->
5   <html>
6      <head>
7         <meta charset = "utf-8">
8         <title>Navigation Bar</title>
9      </head>
10
11     <body>
12        <p>
13           <a href = "links.html">
14              <img src = "buttons/links.jpg" width = "65"
15                 height = "50" alt = "Links">
16           </a>
17
18           <a href = "list.html">
19              <img src = "buttons/list.jpg" width = "65"
20                 height = "50" alt = "List of Features">
21           </a>
22
```

Fig. 2.7 | Images as link anchors. (Part 1 of 3.)

Images Hyperlink Example #1 2/3

```
23              <a href = "contact.html">
24                 <img src = "buttons/contact.jpg" width = "65"
25                    height = "50" alt = "Contact Me">
26              </a>
27
28              <a href = "table1.html">
29                 <img src = "buttons/table.jpg" width = "65"
30                    height = "50" alt = "Tables Page">
31              </a>
32
33              <a href = "form.html">
34                 <img src = "buttons/form.jpg" width = "65"
35                    height = "50" alt = "Feedback Form">
36              </a>
37           </p>
38        </body>
39     </html>
```

Fig. 2.7 | Images as link anchors. (Part 2 of 3.)

Images Hyperlink Example #1
3/3 - Output

Fig. 2.7 | Images as link anchors. (Part 3 of 3.)

Ordered and UnOrdered Lists Example #2 - 1/4

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 2.11: list.html -->
4  <!-- Nested lists and ordered lists. -->
5  <html>
6     <head>
7        <meta charset = "utf-8">
8        <title>Lists</title>
9     </head>
10
11    <body>
12       <h1>The Best Features of the Internet</h1>
13
```

Fig. 2.11 | Nested lists and ordered lists. (Part 1 of 4.)

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Ordered and UnOrdered Lists Example #2 - 2/4

```
14          <!-- create an unordered list -->
15          <ul>
16             <li>You can meet new people from countries around
17                the world.</li>
18             <li>
19                You have access to new media as it becomes public:
20
21                <!-- this starts a nested unordered list, which uses a -->
22                <!-- different bullet. The list ends when you -->
23                <!-- close the <ul> tag. -->
24                <ul>
25                   <li>New games</li>
26                   <li>New applications
27
28                      <!-- nested ordered list -->
29                      <ol>
30                         <li>For business</li>
31                         <li>For pleasure</li>
32                      </ol>
33                   </li> <!-- ends line 27 new applications li-->
34
35                   <li>Around the clock news</li>
36                   <li>Search engines</li>
37                   <li>Shopping</li>
```

Fig. 2.11 | Nested lists and ordered lists. (Part 2 of 4.)

Ordered and UnOrdered Lists Example #2 - 3/4

```
38                  <li>Programming
39
40                      <!-- another nested ordered list -->
41                      <ol>
42                          <li>XML</li>
43                          <li>Java</li>
44                          <li>HTML5</li>
45                          <li>JavaScript</li>
46                          <li>New languages</li>
47                      </ol>
48                  </li> <!-- ends programming li of line 38 -->
49              </ul> <!-- ends the nested list of line 24 -->
50          </li>
51
52          <li>Links</li>
53          <li>Keeping in touch with old friends</li>
54          <li>It's the technology of the future!</li>
55      </ul> <!-- ends the unordered list of line 15 -->
56  </body>
57  </html>
```

Fig. 2.11 | Nested lists and ordered lists. (Part 3 of 4.)

Ordered and UnOrdered Lists
Example #2 - 4/4 - Output

Fig. 2.11 | Nested lists and ordered lists. (Part 4 of 4.)