

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, is the same as .
- 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** :

- ` `

Unordered list: usually listed as bullets

- ` `

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** :

- ``

image tag `` is used to **attach an image** to the web page

Example :

```

```

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