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Web Design and Programming

Lecture 2:

An Introduction to HTML

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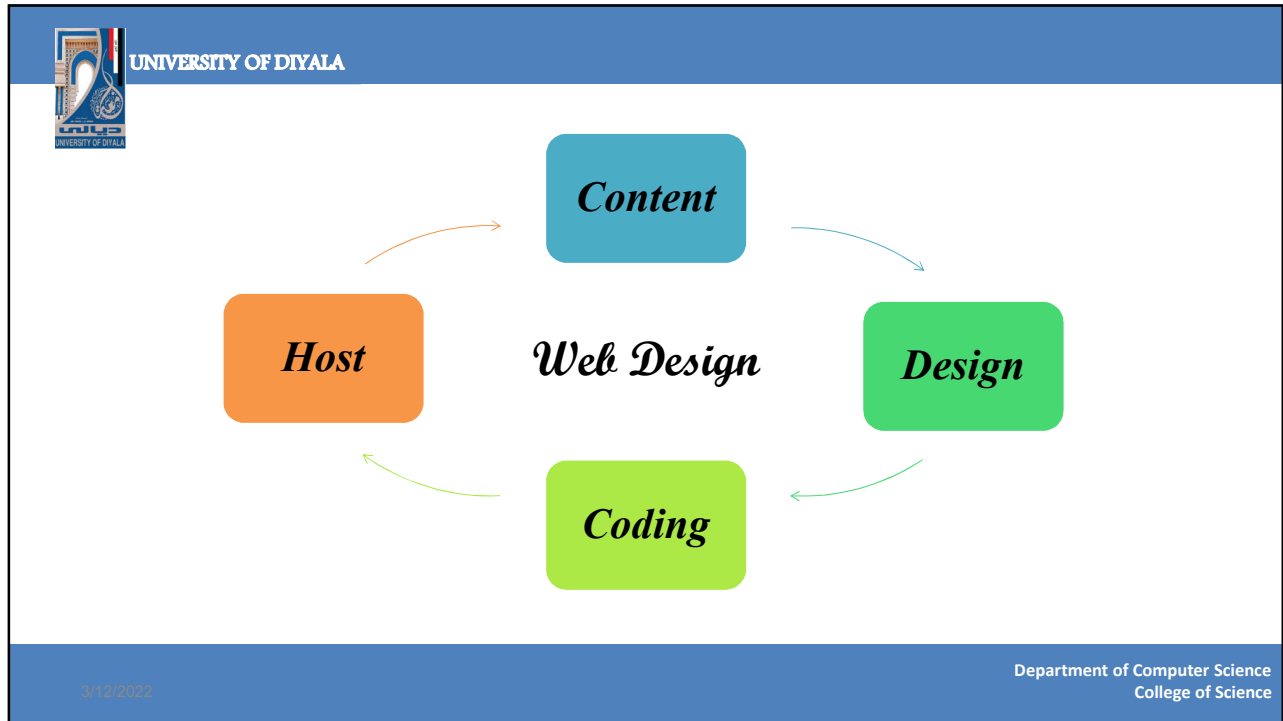
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Web-related Technologies

- The following is a list of technologies associated with web development. Which languages and technologies you learn will depend on the role you see yourself in within the web design process.
 1. *Hypertext Markup Language (HTML)*
 2. *Cascading Style Sheets (CSS)*
 3. *JavaScript and DOM (Document Object Model) scripting*
 4. *Server-side programming and database management.*

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Good vs. Bad Design

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Good vs. Bad Design

- Most successful web designs have a few things in common:
 1. *They are accessible.*
 2. *Most users have little problem finding the information they need.*
 3. *They are easy to read.*
 4. *There are good clean fonts laid out appropriately.*
 5. *They are visually-appealing.*



HTML & XHTML

- HTML stands for *Hyper Text Markup Language*. HTML is not a programming language; it is a markup language, which means it is a system for identifying and describing the various components of a document such as *headings, paragraphs, and lists*.
- XHTML stands for *Extensible Hypertext Markup Language*. XHTML is aimed to replace HTML . XHTML is almost identical to HTML 4.01. *XHTML is a stricter and cleaner version of HTML.* (*XHTML* is case-sensitive but the *HTML* were not case-sensitive)



Basic Structure Of An HTML Document

- Well structured HTML documents come in these three parts:
 1. *A head that identifies a document as HTML and establishes its title.*
 2. *A body that contains the content for a Web page. This part holds all displayed text on a page, as well as most links to graphics, multimedia, locations inside the same file, and to other Web documents.*
 3. *A footer that labels a page by identifying its author, date of creation, and version number.*



XHTML Page Structure

- The entire document is contained within an *html* element. The *html* element is called the *root element* because it contains all the elements in the document, and it may not be contained within any other element. It is used for both *HTML and XHTML* documents.
- Within the *html* element, the document is divided into a *head* and a *body*. The *head* element contains descriptive information about the document itself, such as its *title*, the *style sheet(s) it uses, scripts, and other types of “meta” information.*
- *Finally, the body element contains everything that we want to show up in the browser window.*



XHTML Page Structure

`<html >`

`<head>`

`<title> Title here </title>`

`</head>`

`<body>`

Page content goes here.

`</body>`

`</html>`



Tag Attributes

- Some tags work in conjunction with *attributes*. Attributes live on the opening tag of an element and provide extra information about the element that carries them.
- All attributes consist of a *name* and a *value*; the name reflects a property of the element the attribute is describing, and the value is a value for that property.
- There are *three groups* of attributes that many of the XHTML elements can carry:
 1. *Core attributes: The class, id, and title attributes*
 2. *Internationalization attributes: The dir, lang, and xml:lang attributes*
 3. *UI events: Attributes associated with events on click, on doubleclick.*



XHTML Syntax Rules

The following general syntax rules will help you use XHTML:

1. ***Tag and attribute*** names are given in lower case. Attributes are always given in the form, where the value is case sensitive.

`<tag attribute1="value" attribute2="value" ... >`

2. ***Unrecognized tags and attributes are ignored by browsers.***
3. ***Elements must be well-formed.*** It means no missing begin or end tags and no improper element nesting. For example,

`<p>Learning XHTML</p>`
`<p>Learning XHTML</p>`



XHTML Syntax Rules

4. ***Attributes can be required or optional and can be given in any order.***
5. ***Extra white space and line breaks are allowed between the tag name and attributes.***
6. ***Freestanding texts (not enclosed in block elements) or inline elements are not allowed directly in the body element.***
7. ***Certain tags are only allowed within their permitted context. For example, a <tr> (table row) element can only be given inside a <table> element.***



Basic Text Formatting

1. Creating Headings Using `<h>` Elements

- Most documents have headings in some form or other. Headings can help to structure a document. XHTML offers six levels of headings, which use the elements `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, and `<h6>`. The `<h1>` element is the largest of the six and `<h6>` as the smallest.

Heading Level 1

Heading Level 2

Heading Level 3

Heading Level 4

Heading Level 5

Heading Level 6



Basic Text Formatting

2. Creating Paragraphs Using the `<p>` Element

- The `<p>` element offers another way to structure your text. Each paragraph of text should go in between an opening `<p>` and closing `</p>` tag, as in this example

`<p>Here is a paragraph of text.</p>`

`<p>Here is a second paragraph of text.</p>`

- When a browser displays a paragraph, it usually inserts a new line before the next paragraph and adds a little bit of extra vertical space.
- The `<p>` element can carry all of the universal attributes.



Basic Text Formatting

3. Creating Line Breaks Using the `
` Element

- Whenever you use the `
` element, anything following it starts on the next line.
- The `
` element is an example of an empty element, where you do not need opening and closing tags, because there is nothing to go in between them.
- The `
` element has a space between the characters `br` and the forward slash. If you omit this space, older browsers will have trouble rendering the line break, whereas if you miss the forward slash character and just use `
`, it is not valid *XHTML*.



Basic Text Formatting

4. Creating Preformatted Text Using the `<pre>` Element

- Sometimes you want your text to follow the exact format of how it is written in the XHTML document such as: If we don't want the text to wrap onto a new line when it reaches the edge of the browser; and if we don't want it to ignore multiple spaces; and you want the line breaks where you put them.
- Any text between the opening `<pre>` tag and the closing `</pre>` tag will preserve the formatting of the source document.
- Two of the most common uses of the `<pre>` element are to *display tabular data without the use of a table* and to *represent computer source code*.



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The End