

Database Systems

CO226 – Lab 01

HTML Basics

Kalani Udayanthi
kalaniu@eng.pdn.ac.lk

Course Content

- Introduction to database systems (HTML, CSS, MYSQL and PHP)
- Data modelling, RDBMS concepts, Database query languages, Database programming techniques,
- Introduction to indexes and query optimization, Introduction to transaction processing,
- Database Project.

Lecture Outline

- Introduction-HTML
- HTML Tags
- Structure of HTML page
- More about Tags

Introduction - HTML

HTML stands for **Hypertext Markup Language**.

Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.

HTML is a **Markup Language** which is used to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

Introduction - HTML

Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers.

Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

HTML Tags

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph</p>

</body>
</html>
```

- HTML tags are **keywords** (tag names) surrounded by **angle brackets**
- HTML tags normally come in **pairs** like <p> and </p>.
- The end tag is written like the start tag, but with a **forward slash** inserted before the tag name
- Nested tags
 - <p> bold the Text</p>
 - ~~<p> bold the Text</p>~~
- W3C recommends lowercase tags

HTML Tags

- Logical vs. Physical Tags –
 - Physical tags provide specific instructions on how to display the text they enclose.
 - `` make text bold ``
 - `<big>` : Makes the text usually one size bigger than what's around it.
 - Logical tags are designed to describe (to the browser) the enclosed text's meaning.
 - `` this is important `` tag •
 - these tags are telling the browser that the text has some greater importance.

Logical Tags

Tag	Description
<abbr>	Defines an abbreviation
<acronym>	Defines an acronym
<address>	Defines an address element
<cite>	Defines a <i>citation</i>
<code>	Defines <code>computer code</code> text
<blockquote>	Defines a long quotation
	Defines text
<dfn>	Defines a <i>definition</i> term
	Defines <i>emphasized</i> text
<ins>	Defines inserted text
<kbd>	Defines keyboard text
<pre>	Defines preformatted text
<q>	Defines a short quotation
<samp>	Defines sample computer code
	Defines strong text
<var>	Defines a <i>variable</i>

Physical Tags

Tag	Description
	Defines bold text
<big>	Defines big text
<i>	Defines <i>italic</i> text
<small>	Defines small text
<sup>	Defines ^{superscripted} text
<sub>	Defines _{subscripted} text
<tt>	Defines teletype text
<u>	Deprecated. Use styles instead

Tag Attribute

- Tags can have attributes.

<body> → <body bgcolor = “blue”>

- Attributes can provide additional information about the HTML elements on your page.
- The <tag> tells the browser to do something, while the attribute tells the browser how to do it.
 - For instance, if we add the **bgcolor** attribute, we can tell the browser that the background color of your page should be blue.
 - **<body bgcolor = “blue”>**

<!DOCTYPE html>

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph</p>

</body>
</html>
```

- The very first thing in your HTML document, before the <html> tag.
- It is an instruction to the web browser about what **version of HTML** the page is written in

<!DOCTYPE html>

HTML5

2014

```
<!DOCTYPE html>
```

HTML 4.01

1999

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"  
"http://www.w3.org/TR/html4/loose.dtd">
```

XHTML 1.0

2000

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

<html>

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph</p>

</body>
</html>
```

← Encloses the complete HTML document.

Mainly comprises of document header and document body
`<head>...</head>`
`<body>...</body>` tags.

<head>

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph</p>

</body>
</html>
```

- This tag represents the document's header.
- This data is not displayed
- header can keep other HTML tags like
 <title>, <style>,
 <meta>, <link>,
 <script>, <base>

<body>

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>
```

This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc.

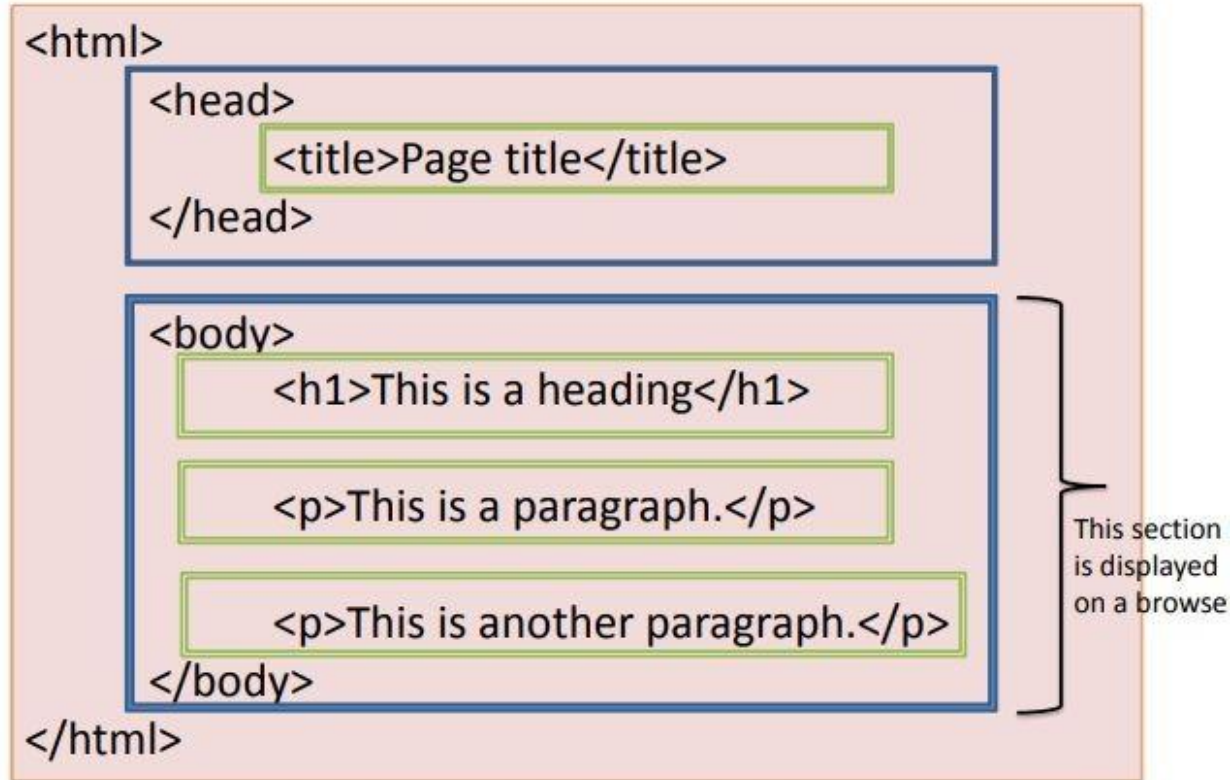
```
<h1>My First Heading</h1>
<p>My first paragraph</p>
```

This tag represents the heading.

```
</body>
</html>
```

This tag represents a paragraph.

Structure of HTML page



Headings

```
<!DOCTYPE html>
<html>
<body>
<h1>Heading Type 1</h1>
<h2>Heading Type 2</h2>
<h3>Heading Type 3</h3>
<h4>Heading Type 4</h4>
<h5>Heading Type 5</h5>
<h6>Heading Type 6</h6>
</body>
</html>
```

Heading Type 1

Heading Type 2

Heading Type 3

Heading Type 4

Heading Type 5

Heading Type 6

Headings Attribute

- align

`<h2 align="left">I can align headings </h2>`

`<h2 align="center">This is a centered heading </h2>`

`<h2 align="right">This is a heading aligned to the right </h2>`

Outputs:

I can align headings

This is a centered heading

This is a heading aligned to the right

Paragraph Tag

html code

```
<p>Think of a paragraph  
as a block of text. You can  
use the align attribute  
with a paragraph tag as  
well. </p> <p>Paragraph2.  
Think of a  
    paragraph as a  
block of text. You can use  
the align attribute with a  
paragraph tag as well.  
</p>
```

Output

Think of a paragraph as a
block of text. You can use
the align attribute with a
paragraph tag as well.

Paragraph2. Think of a
paragraph as a block of
text. You can use the align
attribute with a paragraph
tag as well

Paragraph Tag

html code

```
<p align="left">Think of a  
paragraph as a block of text.  
You can use the align  
attribute with a paragraph  
tag as well. </p> <p  
align="right">Paragraph 2.  
Think of a  
    paragraph as a block  
of text. You can use the align  
attribute with a paragraph  
tag as well. </p>
```

Output

Think of a paragraph as a
block of text. You can use
the align attribute with a
paragraph tag as well.

Paragraph 2. Think of a
paragraph as a block of text.
You can use the align
attribute with a paragraph
tag as well

align Attribute : Left, right, center, justify

html code

<p>tag is used when you want to start a new line,
 but don't want to start a new paragraph.
 No closing tag</p>

Output

tag is used when you want to start a new line, but don't want to start a new paragraph.
No closing tag

Horizontal rules and Comments

Horizontal rules

The `<hr>` element is used for horizontal rules that act as dividers between sections,

```
<hr width="50%" align="center">
```

Comments

A comment can be placed anywhere in the document and the browser will ignore everything inside the brackets.

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


The Most Common Character Entities

Three parts:

- **an ampersand (&):** beginning a special character.
- **an entity name or an entity number:** an abbreviation
- **a semicolon (;)** : ending a special character

Entities are case sensitive.

easier to remember

EN support
almost all
browsers

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	quotation mark	"	"
'	apostrophe	' (does not work in IE)	'

Non-breaking space -

- `<p> This code would appear as this.</p>`

Output:

This code would appear as this.

- `<p> This code would appear as this.</p>`




Output:

This code would appear as this.

HTML Backgrounds

- background-color
 - `<body bgcolor="#000000">` (a hexadecimal number)
 - `<body bgcolor="rgb(0,0,0)">` (an RGB value)
 - `<body bgcolor="black">` (color name)
- background-image
 - `<body background="clouds.gif">`
 - `<body background="http://profdevtrain.austincc.edu/html/graphics/clouds.gif">` (URL of the image)
 - If the image is smaller than the browser window, the image will repeat itself until it fills the entire browser window.

HTML Colors

Color	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#FF0000	rgb(255,0,0)
	#00FF00	rgb(0,255,0)
	#0000FF	rgb(0,0,255)
	#FFFF00	rgb(255,255,0)
	#00FFFF	rgb(0,255,255)
	#FF00FF	rgb(255,0,255)
	#C0C0C0	rgb(192,192,192)
	#FFFFFF	rgb(255,255,255)

Color	Color HEX	Color Name
	#F0F8FF	AliceBlue
	#FAEBD7	AntiqueWhite
	#7FFFD4	Aquamarine
	#000000	Black
	#0000FF	Blue
	#8A2BE2	BlueViolet
	#A52A2A	Brown

Lists

- HTML provides a simple way to show unordered lists (**bullet lists**) or ordered lists (**numbered lists**).

An Unordered List:

- Item
- Item
- Item
- Item

An Ordered List:

1. First item
2. Second item
3. Third item
4. Fourth item

Unordered Lists

- An unordered list is a list of items marked with bullets (typically small black circles).
- An unordered list starts with the `` tag.
- Each list item starts with the `` tag.

HTML code	Would Display
<pre> Coffee Tea Milk </pre>	<ul style="list-style-type: none">• Coffee• Tea• Milk

Ordered Lists

- The list items are marked with numbers.
- An ordered list starts with the `` tag.
- Each list item starts with the `` tag.

HTML code	Would Display
<pre> Coffee Tea Milk </pre>	<ol style="list-style-type: none">1. Coffee2. Tea3. Milk

Lists

- Inside a list item you can put **paragraphs** `<p>`, **line breaks** `
`, **images** ``, **links** `<a>`, **other lists**, etc.

HTML code	Would Display
<pre> <p>Coffee is my favourite drink. Coffee is my favourite drink. </p> Tea Java Tea Silver Tea Milk Highland Ratthi </pre>	<ul style="list-style-type: none">• Coffee is my favourite drink. Coffee is my favourite drink.• Tea<ol style="list-style-type: none">1. Java Tea2. Silver Tea• Milk<ul style="list-style-type: none">• Highland• Ratthi

Definition Lists

- Consist of two parts:
 - a **term**
 - a **description**.
- To mark up a definition list, you need three HTML elements;
 - a **container** `<dl>`
 - a **definition term** `<dt>`
 - a **definition description** `<dd>`
- Inside a definition-list definition (the `<dd>` tag) you can put **paragraphs, line breaks, images, links, other lists, etc**

Definition Lists

HTML code	Would Display
<pre><dl> <dt>Cascading Style Sheets</dt> <dd>Style sheets are used to provide presentational suggestions for documents marked up in HTML. </dd> </dl></pre>	<p>Cascading Style Sheets</p> <p>Style sheets are used to provide presentational suggestions for documents marked up in HTML.</p>

Reference

https://www.w3schools.com/html/html_basic.asp

Summary

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