جامعة برج العرب التكنولوجية
BORG AL ARAB TECHNOLOGICAL UNIVERSITY

Lecture Two:

HTML5 and CSS Basics

COURSE TITLE: WEB PROGRAMMING 1

TOPIC: HTML5 AND CSS BASICS

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Introduction to HTML5

What is HTML5?

HTML5 is the latest version of Hypertext Markup Language, for creating web pages and web applications.

It is a major upgrade to HTML4, and comes with a new features and improvements to enhance the web development experience.

Introduction to HTML5

Key Features and Improvements over HTML4

HTML5 introduces several elements that provide more important structure to web documents.

These elements are designed for a better description of the contents.
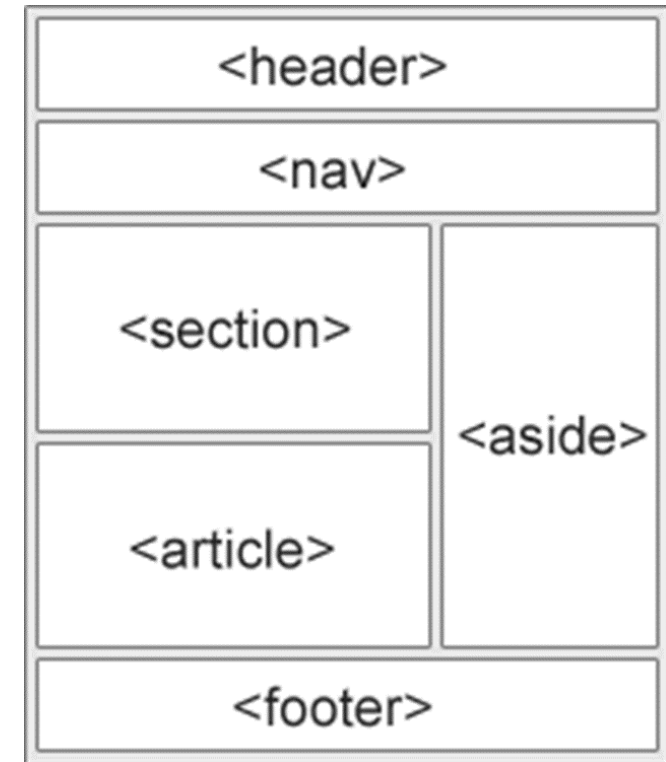
Introduction to HTML5

Audio and Video Support:

HTML5 support for embedding audio and video content directly into web pages, using:

The <audio> and <video> elements.

HTML Layout Elements

`<header>` - Defines a header for a header for a document or a section

`<nav>` - Defines a set of navigation links

`<section>` - Defines a section in a document

`<article>` - Defines an independent, self-contained content

`<aside>` - Defines content aside from the content (a sidebar)

`<footer>` - Defines a footer for a document or a section

`<details>` - Defines additional details that the user can open and close on demand

`<summary>` - Defines a heading for the `<details>` element

HTML Document Structure

The basic structure of an HTML5 document

An HTML5 document follows three main components:

- ◦ <!DOCTYPE> declaration,

- ◦ <html> element,

- ◦ <head> and <body> sections.

HTML Basic Example

```html
<!DOCTYPE html>
<html>
<body>

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

</body>
</html>
```

HTML Elements

<!DOCTYPE html>

Declares the document type and version of HTML.

```
<!DOCTYPE html>
```

```
<html>
    <!-- other HTML content -->
</html>
```

<html>
Root element of an HTML document.

HTML Elements

<head>

Contains meta information, link to CSS files, and other head elements.

```
<head>
    <title>Page Title</title>
</head>
```

HTML Elements

<title>

Sets the title of the web page (visible in the browser's title bar or tab).

```
<title>This is a title</title>
```

HTML Elements

<body>

Contains the content of the HTML document.

HTML elements

<h1>, <h2>, ... <h6>

Headings, where <h1> is the highest (and largest) level of heading and <h6> is the lowest.

```
<h1>This is a heading level 1</h1>
<h2>This is a heading level 2</h2>
```

HTML elements

\<p\>

Represents a paragraph.

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

HTML elements

\<a\>

Defines a hyperlink.

```
<a href="https://www.example.com/">Visit Example</a>
```

HTML elements

\<img\>

Embeds an image.

```
<img src="path/to/image.jpg" alt="Description of Image">
```

HTML elements

** and **

Represents an unordered list and list items.

```
<ul>
    <li>Item 1</li>
    <li>Item 2</li>
</ul>
```

<ol>

Represents an ordered list.

```
<ol>
    <li>First item</li>
    <li>Second item</li>
</ol>
```

HTML elements

<table>, <tr>, <th>, and <td>

Represents

a table,

table row,

table header,

and table cell respectively.

```
<table>
    <tr>
        <th>Header 1</th>
        <th>Header 2</th>
    </tr>
    <tr>
        <td>Data 1</td>
        <td>Data 2</td>
    </tr>
</table>
```

HTML elements

<div>

A block-level container used to group content.

```
<div>
    <!-- some content -->
</div>
```

HTML elements

<span>

An inline container used to style or script specific parts of text.

```
This is <span style="color:red;">colored text</span>.
```

HTML elements

**
**

Represents a line break.

<hr>

Creates a break or horizontal line.

HTML attributes

\<a\> -

The anchor element with href (destination link) and target (where to open the link) attributes.

```
<a href="https://www.example.com/" target="_blank">Open Example in a new tab</a>
```

HTML attributes

<img> - The image element with src (source of the image),
alt (alternative text),
and width & height (dimensions) attributes.

```
<img src="path/to/image.jpg" alt="A beautiful view" width="300" height="200">
```

HTML attributes

<meta> - Within the <head> section,

The charset attribute specifies the character encoding.

```
<meta charset="UTF-8">
```

HTML attributes

<link> - Used for linking external resources.

Here, **rel** specifies the relationship and href the path.

```
<link rel="stylesheet" href="styles.css">
```

HTML Styles - CSS

What is CSS?

Cascading Style Sheets (CSS) is used to format the layout of a webpage.

With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more!

Using CSS

CSS can be added to HTML documents in 3 ways:

Inline - by using the style attribute inside HTML elements

Internal - by using a <style> element in the <head> section

External - by using a <link> element to link to an external CSS file

Inline CSS

```
<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>
```

Internal CSS

```html
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

External CSS

```css
body {
  background-color: powderblue;
}
h1 {
  color: blue;
}
p {
  color: red;
}
```

Styles.css

```html
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Index.html

Using The class Attribute

```html
<!DOCTYPE html>
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
}
</style>
</head>
<body>

<div class="city">
  <h2>Tokyo</h2>
  <p>Tokyo is the capital of Japan.
</div>

</body>
</html>
```

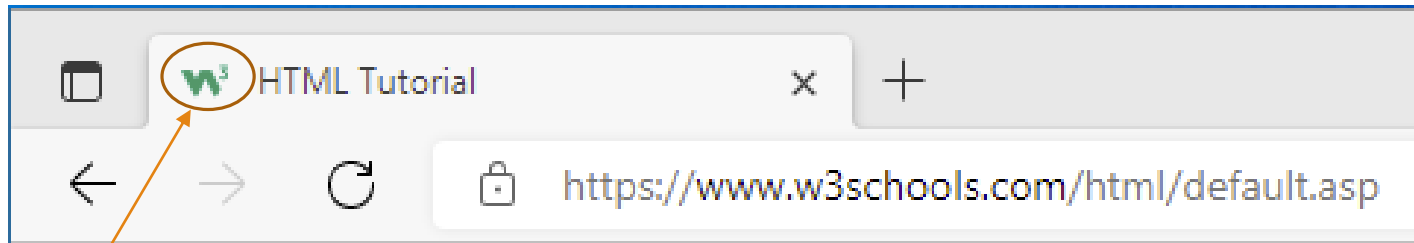# Using The id Attribute

```
<!DOCTYPE html>
<html>
<head>
<style>
#myHeader {
  background-color: lightblue;
  color: black;
}
</style>
</head>
<body>

<h1 id="myHeader">My Header</h1>

</body>
</html>
```

Favicon in HTML

like this:

How To Add a Favicon in HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>My Page Title</title>
  <link rel="icon" type="image/x-icon" href="/images/favicon.ico">
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

References

- Mozilla Developer Network (MDN) - developer.mozilla.org

- W3Schools - www.w3schools.com