

# Introduction To Web Programming I (CSC 211)

## Lecture Note 2

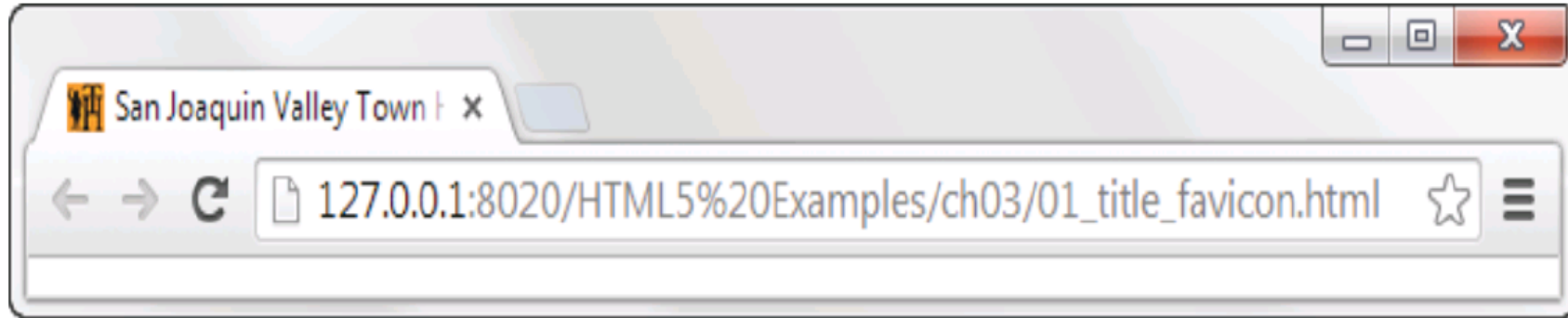
### How to Structure a Web Page

16<sup>th</sup> September, 2021

# How to code the head section

- ▶ The title element specifies the text that is displayed in the browser's tab for the web page.
- ▶ The title is also used as the name of a favorite or bookmark for the page.
- ▶ A custom icon, called a favicon, is typically named favicon and must have the extension .ico to work correctly with Internet Explorer. A favicon typically appears to the left of the title in the browser's tab for the page. It may also appear to the left of the URL in the browser's address bar, and it may be used in a favorite or bookmark.
- ▶ To create an ico file, you can use an icon editor, a program that converts an image to an ico file, or a web-based converter. You may also be able to find an icon on the Internet by searching for "web icons".
- ▶ **Internet Explorer note.**
- ▶ A favicon is not displayed in older versions of Internet Explorer if the page is served from your local file system. It is only displayed if the page is served from the web server.

## A browser that shows the title and favicon



## A head section that specifies a title and links to a favicon

```
<head>  
  <title>San Joaquin Valley Town Hall | speakers and luncheons</title>  
  <link rel="shortcut icon" href="favicon.ico">  
</head>
```

- ▶ **SEO guidelines for the title tag**
- ▶ Always code a title tag in the head section.
- ▶ The title should accurately describe the page's content, and it should include the one or two keywords that you want the page ranked for.
- ▶ The title should be interesting enough to entice the reader to click on it when it is shown in the search results for a search engine.
- ▶ The title should be unique for each page in your website.
- ▶ Limit the length of your title to around 65 characters because most search engines do not display more than in their results.

# How to Include metadata

- ▶ The meta element provides information about the HTML document that is called metadata.
- ▶ The charset metadata is required for HTML5 validation.
- ▶ All part of the description metadata may be displayed in the search results of some search engines.
- ▶ Although the keywords metadata has been de-emphasized by some search engines, it is still a good practice to include this data.
- ▶ **SEO guidelines**
- ▶ Code the description metadata for each page of your website. It should summarize the contents of the page, it should be unique for each page, and it can be longer than the title tag. When it is displayed in the search-engine results, it should encourages users to click on your link.
- ▶ Code the keywords metadata for each page of your website. It should consist of no more than 10 keywords or phrases, and it should be unique for each page.

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## Three attributes of the <meta> tag

Attribute	Description
<b>charset</b>	A required tag in HTML5 that specifies the type of character encoding to be used for the page. UTF-8 is the encoding that's commonly used for the World Wide Web.
<b>name</b>	Specifies the type of metadata being added to the document. The values “description” and “keywords” can be used to specify content that's used by some search engines.
<b>content</b>	Specifies the value to be used for the item specified by the name attribute.

# How to code text elements

- ▶ Block elements are the main building blocks of a website and can contain other elements. Each block element begins on a new line.
- ▶ The base font size and the spacing above and below heading and paragraphs are determined by the browser, but you can change these values by using CSS.
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## Common block elements for headings and paragraphs

Element	Description
<b>h1</b>	Creates a level-1 heading with content in bold at 200% of the base font size.
<b>h2</b>	Creates a level-2 heading with content in bold at 150% of the base font size.
<b>h3</b>	Creates a level-3 heading with content in bold at 117% of the base font size.
<b>h4</b>	Creates a level-4 heading with content in bold at 100% of the base font size.
<b>h5</b>	Creates a level-5 heading with content in bold at 83% of the base font size.
<b>h6</b>	Creates a level-6 heading with content in bold at 67% of the base font size.
<b>p</b>	Creates a paragraph of text at 100% of the base font size.

# How to code special block of text

- ▶ In addition to the elements for headings and paragraphs, HTML provides some elements that you can use to code special block of text.
- ▶ These block elements identify the type of content that they contain they contain. That is consistent with the way the HTML5 semantic elements are used.

## Block elements for special types of text

Element	Description
<b>pre</b>	Used for portions of code that are formatted with line breaks and spaces. Creates a block of preformatted text that preserves whitespace and is displayed in a monospaced font.
<b>blockquote</b>	Used for quotations. Can be used with the cite and <q> elements of figure 3-5.
<b>address</b>	Used for contact information for the developer or owner of a website.

# How to code special block of text

- HTML that uses the block elements

<p>How to use JavaScript to display the year:</p>

<pre>

```
var today = new Date();
```

```
document.writeln( today.getFullYear() );
```

</pre>

<p>Ernest Hemingway wrote:</p>

<blockquote>Cowardice, as distinguished from panic, is almost always simply a lack of ability to suspend the functioning of the imagination.

</blockquote>

<p>How to contact Mahshellsoft & Limited:</p>

<address>1-800-221-5528<br>

<a href="mailto:[admin@mahshellsoft.com](mailto:admin@mahshellsoft.com)">Mahshellsoft Limited</a>

</address>

# How to code inline elements for formatting and identifying text

- ▶ In contrast to a block element, an inline element does not start on a new line. Instead, an inline element is coded within a block element.
- ▶ The formatting elements should be used when no special meaning is implied.
- ▶ The content elements should be used to convey meaning. Then, you can use CSS to format them.
- ▶ **Inline elements for formatting text**

Element	Description
<b>i</b>	Displays the content in italics.
<b>b</b>	Displays the content in bold.
<b>sub</b>	Displays the content as a subscript.
<b>sup</b>	Displays the content as a superscript.
<b>br</b>	An empty element that starts a new line of text.



## ► Inline elements for formatting text

Element	Description
<b>abbr</b>	Used for abbreviations.
<b>cite</b>	Used to indicate a bibliographic citation like a book title.
<b>code</b>	Used for computer code, which is displayed in a monospaced font.
<b>dfn</b>	Used for special terms that can be defined elsewhere (definitions).
<b>em</b>	Indicates that the content should be emphasized, which is displayed in italics.
<b>kbd</b>	Used for keyboard entries, which is displayed in a monospaced font.
<b>q</b>	Used for quotations, which are displayed within quotation marks.
<b>samp</b>	Used to mark a sequence of characters (sample) that has no other meaning.
<b>strong</b>	Indicates that the content should be strongly emphasized, which is displayed in bold.
<b>var</b>	Used for computer variables, which are displayed in a monospaced font.

# HML that uses some of the inline elements

```
<!Doctype html>
```

```
<html>
```

```
<head><title>Inline Elements</title></head>
```

```
<body>
```

```
<p> If you don't get 78% or more on your final, <em>you won't pass.</em></p>
```

```
<p>Save a bundle at your <strong>big year end sale</strong>.</p>
```

```
<p>When the dialog box is displayed, enter <kbd>brock21</kbd>.</p>
```

```
<p>The chemical symbol for water is H<sub>2</sub>O.</p>
```

```
<p><q>To sleep, perchance to dream-ay, there's the rub.</q></p>
```

```
</body>
```

```
</html>
```

# How to code character entities

- ▶ Character entities can be used to display special characters in an HTML document. HTML5 provides a variety of character entities in addition to the ones above. The following table lists common character entities:

Entity	Character	Entity	Character
<code>&amp;amp;</code>	&	<code>&amp;deg;</code>	°
<code>&amp;lt;</code>	<	<code>&amp;plusmn;</code>	±
<code>&amp;gt;</code>	>	<code>&amp;lsquo;</code>	' (opening single quote)
<code>&amp;copy;</code>	©	<code>&amp;rsquo;</code>	' (closing single quote or apostrophe)
<code>&amp;reg;</code>	®	<code>&amp;ldquo;</code>	" (opening double quote)
<code>&amp;trade;</code>	™	<code>&amp;rdquo;</code>	" (closing double quote)
<code>&amp;cent;</code>	¢	<code>&amp;nbsp;</code>	non-breaking space

# Examples of character entities

```
<!Doctype html>  
<html>  
  <head><title>Inline Elements</title></head>  
  <body>  
    <p>'s time to start facing your books this session!</p>  
    <p>President John F. Kennedy said, "And so, my fellow Americans, ask not what your  
country can do for you; ask what you can do for your country."</p>  
    <p>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&Turning fear into hope, medical futurist Dr. Alan J. Russell will  
discuss the science of regenerating damaged or diseased human body parts, while offering real hope for  
the future of human health.</p>  
    <p>&copy; 2021 Mahshellsoft Limited</p>  
  </body>  
</html>
```

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# How to code the core attributes

- ▶ Besides the attributes you have learned about so far, HTML provides some core attributes that can be used with most elements.
- ▶ ID and class names are case sensitive, should start with a letter, and can include letters, numbers, underscores, hyphens, colons, and periods.
- ▶ The lang attribute is typically used to assist screen readers to read content correctly and to provide for searches that are restricted by language.
- ▶ **Accessibility guideline**
- ▶ Always code the lang attribute on the HTML element to identify the language for the page.

# Core HTML Attributes

Attribute	Description
<b>id</b>	Specifies a unique identifier for an element that can be referred to by CSS.
<b>class</b>	Specifies one or more class names that can be referred to by CSS, and the same name can be used for more than one element. To code more than one class name, separate the class names with spaces.
<b>title</b>	Specifies additional information about an element. For some elements, the title appears in a tooltip when the user hovers the mouse over the element.
<b>lang</b>	Identifies the language that the content of the element is written in.

# How to structure the content of a page

- ▶ HTML5 provides semantic elements that can be used to structure the contents of a web page. The use of these elements can be referred to as HTML5 semantics
- ▶ All of the HTML5 elements listed below are supported by the modern browsers.
- ▶ **Accessibility guideline**
- ▶ Always use the HTML5 semantic elements to structure your web pages.

# The primary HTML5 semantic elements

Element	Contents
<b>header</b>	The header for a page.
<b>main</b>	The main content for a page.
<b>section</b>	A generic section of a document that doesn't indicate the type of content.
<b>article</b>	A composition like an article in the paper.
<b>nav</b>	A section of a page that contains links to other pages or placeholders.
<b>aside</b>	A section of a page like a sidebar that is related to the content that's near it.
<b>footer</b>	The footer for a page.