CMPT 165

INTRODUCTION TO THE INTERNET AND THE WORLD WIDE WEB

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UNIT2: MARKUP AND HTML

TOPICS

ATTRIBUTES

attributes are used to change

the meaning or behaviour of tags

- the attr. is placed in the opening tag, before the ">".
- it has a value which follows the attribute in quotes

CITE TAG

we can indicate what language is being used in a citation using the <cite> element and the lang attribute for it

```
<p>In his work
<cite lang="la">Principia Mathematica</cite>,
Newton introduced...</p>
```

* the attribute "lang" indicates that the language of the content is Latin.
This could be used by a browser to offer an automatic translation,
or by a speech browser to change pronunciation rules to read the content correctly

ABBR TAG

the <abbr> tag is used to indicate an abbreviation, or other short-form or contraction.
The title attribute is used to provide an expansion of the abbreviation

```
<p>In this course, we are using
<abbr title="HyperText Markup Language">HTML</abbr>
to create web pages.</p>
```

* when a browser displays this content, it can use the value of the "title" attribute
to offer the reader an expansion of the abbreviation

there is one tag (and attribute to go with it) that is very important to make the Web what it is
it creates links

ANCHOR TAG

the <a> tag is is used to create links.
the "href" attribute gives the destination for the link

```
<p>Some popular web browsers are
<a href="https://www.mozilla.org/en/firefox/">Firefox</a> and
   <a href="https://www.google.com/chrome/">Chrome</a>.</p>
```

* the contents of the <a> element are styled like a link, and
if you try clicking on the links, you will go to the URLs given by the "href"

HORIZONTAL RULE TAG

is one of the *empty tags* which is in charge of putting a horizontal line in the parent container

```
<p>And the long day was finally over.</p>
                    <hr />
<p>The next day, they woke up and...</p>
```

And the long day was finally over.

The next day, they woke up and...

 is another *empty tag* which is in charge of putting a line break after the previous content

```
<p>And the long day was finally over.</p>

<br />

<p>The next day, they woke up and...</p>
```

And the long day was finally over.

The next day, they woke up and...

* image from http://www.cs.sfu.ca/CourseCentral/165/common/study-guide/figures/complete-page.png

HTML BASICS

We have now learned some basics of HTML: tags and attributes. There is more to learn, but that's enough to get us started.

MORE TO LEARN

We have more to work on: entities, validation, and how everything fits together. We'll look at that soon. We will also talk about how CSS and JavaScript relate to HTML.

NOT IN THIS COURSE

There are some aspects of HTML that we won't cover in this course, but not many. We won't cover some of the more advanced aspects of embedding content or interaction.

```html
1  <!DOCTYPE html>
2  <html lang="en">
3      <head>
4          <meta charset="UTF-8" />
5          <title>HTML Basics</title>
6      </head>
7      <body>
8          <h1>HTML Basics</h1>
9          <p>
10             We have now learned some <a href="http://en.wikipedia.org/wiki/HTML">
11             basics of <abbr title="HyperText Markup Language">HTML</abbr></a>:
12             tags and attributes. There is more to learn, but that's enough to get
13             us started.
14         </p>
15         <h2 id="future">More to Learn</h2>
16         <p>
17             We have more to work on: entities, validation, and how everything
18             fits together. We'll look at that soon. We will also talk about how
19             CSS and JavaScript relate to HTML.
20         </p>
21
22         <h2 id="not-covered">Not In This Course</h2>
23         <p>
24             There are some aspects of HTML that we won't cover in this course,
25             but not many. We won't cover some of the more advanced aspects of
26             embedding content or interaction.
27         </p>
28     </body>
29 </html>
```

DIFFERENT MARKUP TYPES

- Semantic Markup
- Visual/Presentational Markup

SEMANTIC MARKUP

aims to describe the semantics of content (e.g. HTML)

- what that content means
- what kind of content it is
- or what its purpose or role is on the page

VISUAL/PRESENTATIONAL MARKUP

aims to specify the appearance of content directly (e.g MS Word Visual Formatting)

example discriptor:

this text is on a new line, left justified, in a 12pt font

with Visal Markup

- we will not be able to easily re-style everything
- we would have to change each "paragraph" separately

if the markup is well written, the search engines can extract lots of meaning (semantics) just from our markup (e.g. the page outline)

1. HTML Basics
    i. More to Learn
    ii. Not In This Course

* the extracted outline based on the semantic markup of the complete webpage example of slide 12

Since HTML is a **semantic markup language**, we should be keeping the meaning of our content in mind as we are creating the pages

EXAMPLE SENTENCES TO MARK UP

Why do *you* think that is interesting?

You must **never** let that happen.

I used the `<li>` tag for each item.

EXAMPLE MARK UP CODE

```
<p>Why do <em>you</em> think that is interesting?</p>
<p>You must <strong>never</strong> let that happen.</p>
<p>I used the <code>&lt;li&gt;</code> tag for each item.</p>
```

the **class** and **id** attributes can be used to give extra semantic information about elements.

e.g. we can continue to use `<p>` for most paragraphs,
but `<p id="copyright">` for the one that is semantically different from the others

The value of class and id can be any word, but should be meaningful (i.e. something about the meaning, not the appearance)

what is the important difference between
the **class** and the **id** attributes ?

there is no way we could add HTML tags to match every kind of content that everyone ever uses

that is why we need *Generic Tags*: `<div>` and `<span>`

BLOCK-LEVEL ELEMENTS

- hold block-level content (or sometimes flow content)
- it can go directly inside the <body> and is displayed below the previous block
- Most commonly used: **<div> element**
- Other block-level elements we have seen include <p>, <h1>, <h2>, <ul>, and

INLINE-LEVEL ELEMENTS

- hold inline content (or sometimes phrasing content)
- inline content goes inside a block
- it needs to be part of a paragraph, heading, list item, or other block
- Most commonly used: **<span> element**
- Other inline elements include
  <em>, <a>, and <abbr>

Because they don't have any meaning on their own,
<div> and <span>
should always be given a **meaningful class or id value** that indicates their purpose on the page

Any Questions?