

Study Unit 3: HTML ELEMENTS AND CSS STYLING

Outline

- Students will learn more about HTML Elements CSS in practice with standards and debugging techniques.
- More HTML Elements
- More Basic CSS
- CSS in Practice with standards

Learning Outcomes of Study Unit 3

Upon completion of this study unit, you should be able to learn more basic HTML and CSS in practice.

1.1: More HTML Elements

- Meta
- dl, dt, dd
- blockquote, q
- HTML character entities, HTML-encoding text
- code, pre

1.2: More Basic CSS

- Grouping style
- Comments
- Text properties: text-align, text-decoration
- list-style-type

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1.3: CSS in practice

- body styles
- Cascading vs. inherit
- Conflict resolve
- W3C CSS validator
- Background properties: background-image, background-repeat, background-position
 - repeat, background-position
- Favorites icon

Outline

- **More HTML Elements**
- More Basic CSS
- CSS in practice

Web Page Metadata: **<meta>**

Metadata is data (information) about data.

The <meta> tag provides metadata about the HTML document. Metadata will not be displayed on the page, but will be machine parsable.

Meta elements are typically used to specify page description, keywords, author of the document, last modified, and other metadata.

The metadata can be used by browsers (how to display content or reload page), search engines (keywords), or other

Examples

Example 1 - Define keywords for search engines:

```
<meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript">
```

Example 2 - Define a description of your web page:

```
<meta name="description" content="Free Web tutorials on HTML and CSS">
```

Example 3 - Define the author of a page:

```
<meta name="author" content="John Doe">
```

Example 4 - Refresh document every 30 seconds:

```
<meta http-equiv="refresh" content="30">
```

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <meta name="description" content="Free Web tutorials">
  <meta name="keywords" content="HTML,CSS,XML,JavaScript">
  <meta name="author" content="John Doe">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>

<p>All meta information goes in the head section...</p>

</body>
</html>
```

Table: `<table>`, `<tr>`, `<td>`, `<th>`, `<caption>`

```
<table>
  <caption>Smart Guys</caption>
  <tr><th>name</th><th>gender</th></tr>
  <tr><td>Bill</td><td>male</td></tr>
  <tr><td>Susan</td><td>female</td></tr>
```

HTML

Smart Guys

output

- **Never use Table for layout~!**

dl A description list (*block*)

dt represents each term, and **dd** its definition

A description list, with terms and descriptions

```
<html>
<body>

<h1>The dl, dd, and dt elements</h1>

<p>These three elements are used to create a description list:</p>

<dl>
  <dt>Coffee</dt>
  <dd>Black hot drink</dd>
  <dt>Milk</dt>
  <dd>White cold drink</dd>
</dl>

</body>
</html>
```

The dl, dd, and dt elements

These three elements are used to create a description list:

Coffee
 Black hot drink
Milk
 White cold drink

Inside a **<dd>** tag you can put paragraphs, line breaks, images, links, lists, etc.

A lengthy quotation (*block*)

```
<p>As Lincoln said in his famous Gettysburg Address:</p>  
<blockquote>
```

```
  <p>Fourscore and seven years ago, our fathers brought forth on this  
  continent a new nation, conceived in liberty, and dedicated to the  
  proposition that all men are created equal.</p>
```

```
</blockquote>
```

HTML

As Lincoln said in his famous Gettysburg Address:

*Fourscore and seven years ago, our fathers brought forth
on this continent a new nation, conceived in liberty, and
dedicated to the proposition that all men are created equal.*

output

Inline Quotations: **<q>**

A short quotation (*inline*)

```
<p>Quoth the Raven, <q>Nevermore.</q></p>
```

HTML

Quoth the Raven, “Nevermore”.

output

- Why not just write the following?
 - `<p>Quoth the Raven, "Nevermore."</p>`
- We don't use “ mark for two reasons:
 - XHTML shouldn't contain literal quotation mark characters; they should be written as **"**;
 - Using **<q>** allows us to apply CSS styles to quotation

Computer Code: `<code>`

Code: a short section of computer code (usually rendered in a fixed-width font)

```
<p> The <code>ul</code> and <code>ol</code> tags make lists.  
</p>
```

HTML

The ul and ol tags make lists.

output

Preformatted Text: **<pre>**

A large section of pre-formatted text (*block*)

<pre

```
Steve Jobs speaks loudly  
    reality distortion  
    Apple fans bow down
```

</pre

HTML

```
Steve Jobs speaks loudly  
    reality distortion  
    Apple fans bow down
```

output

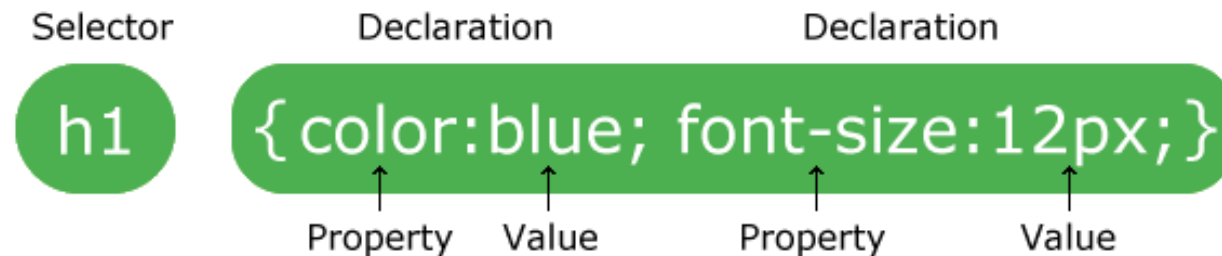
- Displayed with exactly the whitespace / line breaks given in the text
- Shown in a fixed-width font by default
- How would it look if we had instead enclosed it in code tags?

Outline

- More HTML Elements
- **More Basic CSS**
- CSS in practice

A CSS rule consists of a selector and a declaration block.

CSS Syntax



The selector points to the HTML element you want to style.

The declaration block contains one or more declarations separated by semicolons.

Each declaration includes a CSS property name and a value, separated by a colon.

Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

Grouping Styles

```
p, h1, h2 {  
    color: green;  
}  
h2 {  
    background-color: yellow;  
}
```

CSS

This paragraph uses the above style.

This h2 uses the above style.

output

- A style can select multiple elements separated by commas
- The individual elements can also have their own style (like **h2** above)

CSS Properties for Text

Property	Description
<u>text-align</u>	alignment of text within its element
<u>text-decoration</u>	decorations such as underlining
<u>line-height</u> , <u>word-spacing</u> , <u>letter-spacing</u>	gaps between the various portions of the text
<u>text-indent</u>	indents the first letter of each paragraph
<u>Complete list of text properties</u>	

text-align

```
blockquote { text-align: justify; }  
h2 { text-align: center; }
```

CSS

The Emperor's Quote

[TO LUKE SKYWALKER] The alliance... will die. As will your friends. Good, I can feel your anger. I am unarmed. Take your weapon. Strike me down with all of your hatred and your journey towards the dark side will be complete.

output

- `text-align` can be `left`, `right`, `center`, or `justify` (which widens all full lines of the element so that they occupy its entire width)


```
p {  
  text-decoration: underline;  
}
```

CSS

This paragraph uses the style above.

output

- Can also be overline, ~~line-through~~, blink, or none
- Effects can be combined:
 - text-decoration: overline underline

```
ol { list-style-type: upper-roman }
```

CSS

- Possible values: none : No marker
 - I. disc (default), circle, square
 - II. decimal : 1, 2, 3, etc.
 - III. decimal-leading-zero : 01, 02, 03, etc.
 - IV. lower-roman : i, ii, iii, iv, v, etc.
 - V. upper-roman : I, II, III, IV, V, etc.
 - VI. lower-alpha : a, b, c, d, e, etc.
 - VII. upper-alpha : A, B, C, D, E, etc.
 - VIII. lower-greek : alpha, beta, gamma, etc.
 - IX. Others: hebrew, armenian, georgian, cjk-ideographic, hiragana, katakana, hiragana-iroha, katakana-iroha

- More HTML Elements
- More Basic CSS
- **CSS in practice**

Body Styles

```
body { font-size: 16px; }
```

CSS

- To apply a style to the entire body of your page, write a selector for the **body** element
- Saves you from manually applying a style to each element

-
- It's called Cascading Style Sheets because the properties of an element *cascade* together in this order:
 - Browser's default styles
 - External style sheet files (in a `<link>` tag)
 - Internal style sheets (inside a `<style>` tag in the page's header)
 - Inline style (the style attribute of the HTML element)

```
body { font-family: sans-serif; background-color: yellow; }  
p { color: red; background-color: aqua; }  
a { text-decoration: overline underline; }  
h2 { font-weight: bold; text-align: center; } CSS
```

This is a heading.

A styled paragraph. Previous slides are available on the web site.

- a bulleted list

output

- When multiple styles apply to an element, they are **inherited**
- A more tightly matching rule can override a more general inherited rule
- Not all properties are inherited (notice link's color above)

```
p, h1, h2 { color: blue; font-style: italic; }  
h2 { color: red; background-color: yellow; } CSS
```

This paragraph uses the first style above.

This heading uses both styles above.

- When two styles set conflicting values for the same property, the latter style takes precedence
(later we will learn about more specific styles that can override more general styles)

```
<p>  
  <a href="http://jigsaw.w3.org/css-validator/check/referer">  
      
  </a>  
</p>
```

HTML*output*

- jigsaw.w3.org/css-validator/
- It checks your CSS to make sure it meets the official CSS specifications
- More picky than the web browser, which may render malformed CSS correctly

Property	Description
<u>background-color</u>	color to fill background
<u>background-image</u>	image to place in background
<u>background-position</u>	placement of bg image within element
<u>background-repeat</u>	whether/how bg image should be repeated
<u>background-attachment</u>	whether bg image scrolls with page

background-image

```
body {  
    background-image: url("images/draft.jpg");  
}
```

CSS

This is the first paragraph
This is the second paragraph...
It occupies 2 lines



draft.jpg

- Background image/color fills the element's content area

```
body {  
  background-image: url("images/draft.jpg");  
  background-repeat: repeat-x;  
}
```

CSS

This is the first paragraph

This is the second paragraph...

It occupies 2 lines

- Can be **repeat** (default), **repeat-x**, **repeat-y**, or **no-repeat**

background-position

```
body {  
  background-image: url("images/draft.jpg");  
  background-repeat: no-repeat;  
  background-position: 370px 20px;  
}
```

CSS

This is the first paragraph

This is the second paragraph...

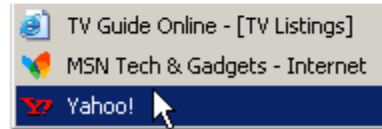
It occupies 2 lines

DRAFT

- Value consists of two tokens, each of which can be **top**, **left**, **right**, **bottom**, **center**, a percentage, or a length value in **px**, **pt**, etc.
- Value can be negative to shift left/up by a given amount

```
<link href="filename" type="MIME type" rel="shortcut icon" /> HTML
```

```
<link href="yahoo.gif" type="image/gif" rel="shortcut icon" />HTML
```



output

- The **link** tag, placed in the HTML page's **head** section, can specify an icon for a Web page.
- IE6: this doesn't work;

Self-Review Questions (SRQ) For Study Session 3

Now that you have completed this study unit, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting or Online interactive sessions. You can also check your answers at the Self-Review Answers section which is located at the end of this Module.

1: what is webpage metadata? Describe in a HTML document?

2: what is the purpose of table in web page?

3: List definitions all html tags and css properties we learned this course in a web page with explanations of their purposes and usages

- dl, dt, dd for definitions
- blockquote, q for quoted sentences from w3 school
- code, pre for examples
- Applying style with a standalone css file (External CSS)

Self-Review Answers (SRA) for Study Unit 3

1: what is webpage metadata? Describe in a HTML document?

The <meta> tag defines metadata about an HTML document. Metadata is data (information) about data. ... Metadata will not be displayed on the page, but is machine parsable. Metadata is used by browsers (how to display content or reload page), search engines (keywords), and other web services.

Examples

Example 1 - Define keywords for search engines:

```
<meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript">
```

Example 2 - Define a description of your web page:

```
<meta name="description" content="Free Web tutorials on HTML and CSS">
```

Example 3 - Define the author of a page:

```
<meta name="author" content="John Doe">
```

Example 4 - Refresh document every 30 seconds:

2: what is the purpose of table in web page?

Tables traditionally show the relationship between two or more items in rows and columns. But in the early days of the internet, Web designers and developers commonly used tables to control the layout of webpage content as well because they Couldn't easily do so with HTML.

3: List definitions all html tags and css properties we learned this course in a web page with explanations of their purposes and usages

- dl, dt, dd for definitions
- blockquote, q for quoted sentences from w3 school
- code, pre for examples
- Applying style with a standalone css file

For practice purpose use following link

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

References and Additional Reading Materials

- List of all HTML tags: <http://www.w3schools.com/tags/default.asp>
- List of HTML character entites: http://www.w3schools.com/tags/ref_entities.asp
- XHTML 1.1 Spec. <http://www.w3.org/TR/xhtml11/>
- W3 List of all CSS properties: <http://www.w3.org/TR/CSS21/propidx.html>
- W3 CSS 2.1 Specifications: <http://www.w3.org/TR/CSS21/>